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LABOUR MARKET INEQUALITY IN BRAZIL AND INDIA

A comparative study, carried out by the Brazilian Centre for Analysis and Planning (Cebrap), São Paulo and the Institute for Human Development (IHD), New Delhi, with support from the Canadian International Development Research Centre (IDRC)

Project Description

High inequality in income and welfare is a major policy concern in both Brazil and India, for it undermines efforts to reduce poverty and promote inclusive growth. Over the last decade, the connections between inequality and growth, and between inequality and poverty reduction, have been receiving increasing attention in both national and international development communities. There are many sources of income inequality – production structures, the distribution of assets, the relative power of capital and labour, political forces and social hierarchy, as well as differences in education and capability. But among these many factors, labour market structures and institutions are of central importance. Understanding the pattern of labour market inequality and its determinants is therefore essential.

The Cebrap-IHD research project aims to address these issues and their implications for development policies in both Brazil and India. Policy choices in the two countries intersect, but operate in different historical and social contexts, and have had differing degrees of success. Today in particular, the trends in labour market inequality in the two countries are different, and it is important to understand why, how far this results from underlying social and economic institutions and relationships, and how far from policy choices and their implementation. Relying on extensive existing literatures in both countries, but also contributing to these literatures by bringing together historical, macro and micro perspectives, the project aims to add to knowledge and contribute to policy choice through in-depth comparisons of the relationships and outcomes in the two countries.

The methodology of the project combines three difference approaches. The first is a long term historical analysis of the social, institutional and economic changes that affect labour market inequality; the second is an empirical analysis of survey data, which investigates the patterns and determinants of inequality and their changes over time; and the third is a process of policy dialogue that brings together social actors and researchers to examine policy implications.

The project teams include Alexandre de Freitas Barbosa, Maria-Cristina Cacciamali, Fabio Tatei and Ian Prates from Cebrap, São Paulo; and Taniya Chakrabarty, Nandita Gupta, Gerry Rodgers, Janine Rodgers and Vidhya Soundararajan from the Institute for Human Development, New Delhi.

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VOCATIONAL EDUCATION AND TRAINING AND THE INEQUALITY CHALLENGE IN BRAZIL AND INDIA: A POLICY REVIEW

Inequalities in labour markets are entrenched in both Brazil and India, though different in nature and degree. Over the last decade, vocational training has gained prominence in policy discourse and is seen as a facilitator of employment and social mobility. This review looks at the VET policies and institutions in Brazil and India, in order to understand the potential of VET as a tool for inequality reduction in the labour market.

This paper is one output of a project on labour market inequality in India and Brazil, carried out by the Institute for Human Development in New Delhi (IHD) and the Brazilian Centre for Analysis and Planning in São Paulo (Cebrap), and funded by the Canadian International Development Research Centre (IDRC). It does not stand on its own, but should be read in conjunction with other papers which examine the growth regimes of the two countries and their patterns of inequality. More details and full references to publications may be found on the project website, www.ihdindia.org/lmi. This paper was mainly prepared by Nandita Gupta from IHD, and Alexandre de Freitas Barbosa, Maria Cristina Cacciamali, Ian Prates and Priscila Vieira from Cebrap. It includes contributions by Gerry Rodgers from IHD and also draws on comments by other team members and participants in a policy dialogue held in Delhi on March 14, 2015.

1. ROLE OF VOCATIONAL EDUCATION AND TRAINING AND ITS RELATION WITH INEQUALITY

All jobs require skills, in the sense of the abilities and knowledge that are applied on a regular basis at work. Even workers who are often considered as unskilled, such as agricultural labour or construction workers, in reality need a variety of specific skills. Some skills can be acquired fairly quickly, many require long periods of training, some can be learnt on the job, and others need significant theoretical learning. Skills can be generic or specific, and include not only technical abilities but also "soft" skills and social skills.

Skills are an important determinant of position in a hierarchy of jobs. They provide a way of differentiating the workforce and so are linked to inequality. Skill recognition is an important thread connecting skills and jobs; recognition can be formal (such as degrees, attestations etc.) or informal (through contacts and networks) or both (such as in the case of apprenticeships).

The actual skills and practical know-how however may not always be directly recognized, but rather evaluated or weighted in the form of credentials. Such accreditations (or the lack of them) permit or restrict access to different rungs of the labour market. Access to accreditations (of varying levels) is spread unevenly through the population – leading to unequal access within the hierarchy of occupations and jobs.

Inequality and skills are also related through wages. The standard economic view is that the reward for work (the wage) is connected on the one hand with the addition to productivity provided by skill; and on the other with the investment required to acquire the skill, so that there is a return on human capital. If this is the case, wage differences are essentially the reflection of productivity differences between workers, and these depend on their skills and qualifications. But there are also more structural views of wage differentials, for these have an important social component, which values white collar work above manual labour, men's work above women's, manufacturing above agriculture. Differences in qualifications provide legitimation for these inequalities, but do not necessarily determine them. They are embedded in society. So market mechanisms cannot fully explain the differences in rewards; at most it can explain a part.

Inequality takes a variety of forms in education and vocational training structures and systems. Usually higher-level jobs are reached through the upper reaches of the educational system and not through job-specific training. The vocational training system itself has multiple gradations with respect to the mode of teaching (formal, informal, traditional, on-the-job), value of accreditations, and the amount of time spent on the training (from a few weeks to several years).

In many industrialized countries, the divide between vocational education and training on the one hand, and an academic education (above a certain level of schooling) on the other, corresponds to a divide in the labour market and a class division in society. Vocational education has played the role of a second class track for those who fail to reach academic standards (which will be related to the class origins of the children concerned). There are of course many young people who get neither adequate education nor vocational training.

In India and Brazil, on the other hand, even the formal vocational education and training system only reaches a small fraction of the population concerned, so there is a threefold division between those with academic education, those with a vocational qualification of some sort – a group within which there is a variety of situations as well, in terms of the type and quality of the training provided - and those with neither. Of course, most of those without formal qualifications acquire skills of some sort, but they do so in informal ways, usually on the job.

Over the last years, in both Brazil and India, vocational education has moved up the political agenda. It is seen as a key mechanism in facilitating entry in the labour market, including for social groups that are excluded from the market, or are at its base and earn lower incomes. It is, thus, seen as a social mobility tool, one that is all the more effective when the economy generates better jobs with increasing productivity levels. Training therefore has to be accompanied by industrial and development policies that create opportunities to apply the skills. But while it is a facilitator of opportunities, training creates institutional and individual differences and incentives that may exacerbate different facets of inequality in the labour market and in society in general.

Building on this broad picture, the present paper has five sections after this introduction. The second section describes and compares the main VET policies and institutions in both

countries, their overall design and how effectively they are implemented. The third section examines the coverage of these policies, who is excluded and who is included, and what impact these policies seem to have on labour markets and inequality. The fourth section follows the more recent changes in the VET regimes in both countries in the 2000s, attempting to draw some contrasts between these experiences. The last section highlights some challenges that arise from an analysis of VET in Brazil and India through the lens of inequality reduction.

2. VOCATIONAL EDUCATION AND TRAINING IN BRAZIL AND INDIA: HISTORICAL EVOLUTION AND INSTITUTIONAL ARRANGEMENTS

The System in Brazil

The Brazilian VET system has three pillars: two are mainly focused on technical training and one, more recent, on shorter and non-comprehensive vocational courses.

Nascent forms of the vocational education system existed in Brazil even during the 19th century, such as the School of Apprentices and Artisans created in 1873. But it is only with the acceleration of industrialization in the mid-1930s that the debate began over the need to build the workforce's capacity; until then Brazil's economy was dominated by agriculture and was marked by illiteracy and poor schooling (Araújo and Lima, 2014). Over time, the assumption spread that one of the main barriers to the transition from a traditional agrarian society to an urban industrial one was a poorly-skilled workforce. It was in the 1940s that the two cornerstones of the VET system in Brazil were developed: the S System and the Federal Vocational and Technological Education Network, under the responsibility of the Ministry of Education. A third pillar of the system was the development of alternative skills-building policies, which was put in place in the 1990s, even though other initiatives, smaller in scope, can be found in the previous decades.

The Federal Vocational and Technological Education Network, later changed into the Federal Institutes of Vocational Education, was established in 1942. It was the first government funded technical and vocational school programme, the main target of which was lower-strata teenagers, the offspring of the rising working class. The School of Apprentices and Artisans was also integrated into this system in 1942. Given the quality of teaching, and small number of places, the schools had limited reach.

At first, the S system comprised two organizations, the SENAI (from the Portuguese Serviço Nacional de Aprendizagem da Indústria) and the SENAC (from the Portuguese Serviço Nacional de Aprendizagem do Comércio). SENAI was created in 1942 to provide VET focused on industrial occupations; while SENAC was initiated in 1946 to cater to the commerce and service sector. The S system now includes nine institutions[1] covering occupations related to each economic sector, which provide vocational education and social

1. The entities that make up the S System today are SENAI (Serviço Nacional de Aprendizagem Industrial), SESI (Serviço Social da Indústria), SENAR (Serviço Nacional de Aprendizagem Rural), SENAC (Serviço Nacional de Aprendizagem Comercial), SESC (Serviço Social do Comércio), SESCOOP (Serviço Nacional de Aprendizagem do Cooperativismo), SEST (Serviço Social de Transporte), SENAT (Serviço Nacional de Aprendizagem do Transporte), and SEBRAE (Serviço Brasileiro de Apoio às Micro e Pequenas Empresa).

assistance – the latter is supplied by SESI and SESC, for instance. The S System is publicly funded through payroll-related levies on the formal sector enterprises: 1.5 per cent aimed at vocational training and 1 per cent at social assistance. It is managed by entities representing business and the workers have a seat in the Board of Directors. It functions in a decentralized way, with funds being distributed to the state-level bodies, without systematic supervision from the central government.

This has been, since its inception, a key workforce skills-building and training programme. It provides free courses at all VET levels, although, more recently, paid courses have expanded substantially. It targets workers within a given industrial association and young people aged 14. It is of good quality and promises good labour market outcomes, but is difficult to access for the unemployed and informal workers (Rios-Neto and Oliveira, 2000).

The Ministries of Labour and Education are both responsible for VET in Brazil. The S-system and the Federal Network are the responsibility of the Ministry of Education. Since the 1990s the Ministry of Labour has been offering or contracting out short-term, non-comprehensive courses for the purpose of updating or completing skills. The ministry has occasionally formulated VET policies, such as the PIPMPO (from the Portuguese Preparação da Mão-de-Obra Industrial) in 1963 which were intensive courses for workers in manufacturing industry. But these actions were limited in scope (Cacciamali, Ligiéro, Matos, 2008, p. 8). The key limiting factor has been the fact that they lacked stable and earmarked funding (IPEA, 2007; Amorim et al, 2006).

The Ministry of Labour became much more active in the realm of employment policy after the creation of a stable fund, the Workers Support Fund (FAT, from the Portuguese Fundo de Amparo ao Trabalhador), in 1990. FAT is a public fund that provides financing to employment policies, including vocational training. A major FAT source of funding comes from taxes levied on state and private organizations. The fund is managed by a tripartite body, made up of labour, business, and government representatives. It finances unemployment insurance as well as active employment policies. In the framework of the Public System of Employment and with FAT funds, 1995 saw the establishment of a national vocational education plan, PLANFOR (from the Portuguese Plano Nacional de Educação Profissional), when the Ministry of Labour was given a bigger role in the institutional design of vocational education policy making. The programme was centred on the provision of free, basic vocational education (short courses for individuals with any level of education, especially the lesser skilled). The goal was to build the skills of 20 per cent of the Brazilian workforce every year so that in five years 100 per cent of the workforce would be covered. Another goal was to promote the inclusion of groups facing greater difficulty in entering the labour market, i.e., the unemployed, women, youths, and blacks (Cacciamali, 2005; Ramos, 2009; Rios-Neto and Oliveira, 2000).

The Plan relied on a wide range of educational institutions (public and private), NGOs, and trade unions. The assessments conducted show that the goal of training 20 per cent of the Brazilian workforce proved infeasible, in addition to putting pressure to deliver quantity rather than quality. Among other problems faced by the programme were the courses'

poor quality and short duration. Nor did PLANFOR succeed in the mission of enabling the more socially vulnerable groups to enter the labour market, while also failing to connect with other employment and education policies (Araújo and Lima, 2014). A study of the programme's impact on professional life shows that, for those who were unemployed at the time of training, participation in the programme had no significant effect in terms of job generation and stability (Oliveira, Rios-Neto, 2007).

In 2003, PLANFOR was reformulated and renamed PNQ (from the Portuguese Plano Nacional de Qualificação). But PNQ operated much in the same way as the PLANFOR (Marinho et al, 2010). During the 2000s, Ministry of Labour training policies lost financing and momentum. Hence, there was a sharp drop in the number of beneficiaries: in 1999 the number of PLANFOR beneficiaries was 2.9 million, while in 2006 PNQ reached a mere 116,000 (Ramos, 2009). From 2002 to 2012, FAT expenditure on vocational training programmes also decreased sharply (DIEESE, 2014).

Among the new lines of action adopted by the federal government in the 2000s, we can mention the agreement between the federal government and the S System (signed in 2008), which establishes that two thirds of SENAI and SENAC revenues must be channeled to free courses for low-income workers and students. At the same time, due to the youth unemployment problem, in 2008 the federal government launched the ProYouth (ProJovem) programme, a skills-building programme for young adults aged 18 to 29 who are jobless and are members of households with a monthly per capita income of no more than one minimum wage. The initiative was short-lived and had meagre results in terms of number of participants. Only with PRONATEC, discussed below in section 4, was a new policy aimed at the most disadvantaged implemented.

In the 2000s, according to working documents of the Brazilian Ministry of Education, VET had two main purposes. The first was to provide knowledge and skills in line with the requirements of national productive strategies (such as production of oil, gas and minerals), as well as of local productive arrangements. The second was to train teachers in fields where that was a lack of qualified professionals, especially in the area of sciences (such as chemistry and biology) (MEC/SETEC, 2015 b).

In 2007, a Federal Decree established the integration of all kind of VET schools and Technological Universities into a new organization called Federal Institutes of Education, Science and Technology. The new system offers high school and undergraduate courses oriented to the manufacturing, trade and service sectors (BRAZIL/MEC, 2007).

Between 2005 and 2010, the number of VET schools rose from 140 to 310. The implementation of the system has not been evaluated yet. But the first figures are positive. All regions have important vocational training institutes, especially in the poorest parts of Brazil, where usually there are no private schools. In 2014, the Brazilian Federal VT Network had about 500 thousand enrolments spread over 787 high school courses and 331 undergraduate courses.

The System in India

In India formal vocational training is largely delivered through the Industrial Training Institutes (ITIs), Industrial Training Centres (ITCs) and Polytechnics; vocational education is also imparted through schools. In addition there are private training institutes, as well as initiatives of the non-profit sector (frequently associated with or supported by the government). Training in India is also delivered through some of the public employment programmes, mainly in rural areas. More lately, since the mid-2000s, new coordinating bodies, skill-specific boards, and a greater role for the private sector have been introduced into the VET landscape in India.

A process of formalization of vocational education and training in India started soon after Independence. In 1950, the Directorate General of Employment and Training initiated the Craftsman Training Programme (CTS) to meet the requirement of a skilled workforce. The Apprenticeship Act, which was instituted in 1961, laid down rules for apprenticeship opportunities in selected industries. In 1966 the Kothari commission envisaged that about 25 per cent of those who complete secondary education should follow the VET stream. In 1985, the Kulandiswamy Committee reduced it to 15 per cent, to be achieved by the year 2000 (Agrawal 2012). The National Policy on Education, 1986, like the Kothari commission, envisaged that about 25 per cent of higher secondary students would undergo vocational training. It was revised in 1992, and included plans for a systematic and rigorous VET system to enhance employability and to address the mismatch between the demand and supply of labour. The plan included courses at higher secondary level that were not too specific (allowing for occupational mobility). Many ministries have a role in VET in India, but the Ministry of Labour and Employment and the Ministry of Human Resource Development are the most important.

In the mid-2000s, VET became a buzzword in Indian policy discourse; and in the past decade, many institutions, committees and initiatives have been seeded which are discussed below.

Since VET falls into the concurrent list in India, both the central government and state governments are responsible for its delivery. In many cases the central government designs the programme, and the responsibility for execution lies with the state governments. The state governments also have autonomy to design their own programmes. Given this and the inherent regional and state level differences, VET, its design, implementation and impact have been variable across states and regions.

The number of institutes imparting vocational training has increased over time. The population (of those 15-19 years) per institute has fallen from 132 thousand in 1965 to 13 thousand in 2010 (see Table 2.1). However the distribution and quality of institutions is regionally imbalanced. In Kerala there are approximately 6000 people per institute, in Gujarat, approximately 12,000, in Bihar about 23,000 and in West Bengal about 115,000 (Agrawal 2012). Specific state level policies also vary, some having significant impact; Gujarat for instance initiated the Kaushalya Vardhan Kendras (KVKs) in the late 2000s and it has been appreciated and awarded for its very effective delivery of VET.

Table 2.1
Growth of ITIs and ITCs in India

Year	*No. of ITCs and ITIs*	*Population (15-19 years, in millions)*	*Population per Institute (in thousand)*
1965	356	47	132
1970	357	55	153
1975	356	64	178
1980	831	71	86
1985	1447	79	55
1990	2137	86	40
1995	2911	90	31
2000	4274	101	24
2005	5114	107	21
2010	8687	112	13

Source: Agarwal (2010)

The ITIs, ITCs and polytechnics deliver vocational training that is different from the vocational education imparted within the public school system, usually after completion of secondary schooling (i.e. from class XI and XII). There are about 10,000 schools that provide vocational education and these cater to about 1 million students per year.

There are some 9000 ITIs and ITCs. The ITIs are publicly run, and the ITCs are run by the private sector. They were started in the 1950s. They provide training in more than 50 engineering and non-engineering trades (such as carpentry, plumbing, and dairy occupations). There are some courses for which eligibility is completion of middle school; but for the most part, completion of secondary education is required. The programmes range from 2-3 months to 1-2 years. Trainees are sometimes also provided a week-long orientation in relevant industries (Goel, 2014).

There are about 1700 polytechnics in India. They provide longer and usually three year-long diploma programmes in engineering disciplines. Those trained are prepared for taking up roles between technicians and engineers. Traditional engineering courses include civil, electrical and mechanical engineering, but some polytechnics also offer diplomas in leather technology, garment technology, textile design and others and some of the programmes are exclusively for women. Some polytechnics also offer 1-2 year advanced programmes after completion of the diploma (Goel, 2014).

While not traditionally seen as a VET instrument, employment policies in India have also had training components. Self-employment programmes, especially the rural self-employment programmes, have contributed to training through capacity-building of self-help groups. In fact some initiatives have been particularly successful, such as dairying enterprises, which have had significant participation of women (Sudarshan, 2012).

While skill development institutions have been in place since Independence, they have leapt into greater prominence since the mid -2000s. The National Skill Development Mission, launched in 2008, was a watershed in terms of resource allocations as well as setting up of new institutions. It is discussed ahead.

Along with the public sector, the private sector has been critical in providing skill training involving both soft skills and technical skills. There are private language training centres, computer centres, beauty technician training centres, hospitality industry training, and communications related training courses. There are three kinds of non-public bodies that work in the training environment; private industries, social businesses and non-profit institutions. These centres have courses ranging from a few weeks to a year – some providing placements or having linkages with employers. Some of these courses are significantly more expensive than the ITIs, but many are free or low cost (where supported by businesses and philanthropists; Dasra, 2014). However, many private training institutes charge a premium for good training and in this way the better-off are able to buy superior, more relevant skills.

Some private corporations have their own training institutes such as Larsen and Tubro, Ambuja Cement, Tata Motors. These corporations conduct short training courses (of 1-3 months), often for internal placement. While some formally train, there are many which have apprenticeships and on-the job training opportunities. But in-service formal training is very limited in India; overall about 7 per cent of employees receive any kind of formal in-service training in India in a given year, including the unorganized sector; however, this figure is much higher at about 17 per cent for formal sector firms (see King 2007). Learning on-the-job has been a predominant form of training in India in all kinds of sectors, perhaps due to the low cost of the model.

Since the mid-2000s, social businesses offering low-cost but high quality training have emerged as a significant player in vocational training. They often partner with private industries for placements and curriculum setting; and with grassroots organizations for community mobilization. They also depend on industry, individual philanthropic and government financial contributions; and many are able to offer free or subsidized courses (see Dasra, 2014).

As mentioned above a large part of India's skilling occurs through informal channels – which includes intergenerational transfer of skills at home through family members and relatives. Informal training can be on-the-job as well as self-learned. Of the workers having received VET, a majority, 70 per cent, have generated their skills informally – half of them on the job. Given the low levels and poor quality of basic education, many VET aspirants are unable to meet the criteria for access to formal VET in terms of examinations and minimum schooling requirements (Pina et al, 2012).

As in other countries in south Asia, small enterprises hire unskilled casual labourers, and over the years they retain the more productive ones and place them with even more skilled older workers. Often trainees are paid nothing. Such traditional apprenticeships are the main sources of training along with learning on the job.

The ITIs have very little or no connection with the informal workers and with the self-employed (King, 2007). However NGOs and other private bodies have tried to bridge this gap. Organizations such as NASVI (National Association of Street Vendors in India) provide training to street vendors as in negotiation skills, organizational development and leadership. Pratham (an NGO working largely in the field of education) also provides foundational

skill support and technical training (Pina et al, 2012), and some are trained through public self-employment programmes. However, these initiatives cover a small fraction of the very large unorganized sector.

Problems and Issues in the Two Countries

Both countries have a diverse set of well-established training institutions covering both engineering and non-engineering trades, but which only reach a small proportion of the workforce. Most formal training programmes require a minimum level of general education (completion of secondary schooling in India, and a similar level – the completion of fundamental education in Brazil). These criteria are often seen as exclusionary since many are unable to attain these credentials or have received only low quality education. The poorer and less educated essentially rely on informal training and are also concentrated in informal work thereafter, especially in the case of India. In Brazil, even if they access formal jobs, they lack basic skills and face high turnover rates.

In India, there are many challenges surrounding vocational education and training, including issues of quality of delivery, shortage of teachers and trainers and inadequate infrastructure. In addition, there are problems of inflexibility in revising course-curriculum or in introduction of relevant courses that respond to fast-changing market demands, and problems of accreditation of skills and recognition of prior learning and informally gained skills.

In Brazil, formal training is either provided by private enterprises, mostly for formal jobs and workers who are already skilled, or by the more-often-than-not difficult-to-access S System, even though central government has tried in recent years to ease some of the barriers to entry. The main challenge here is related to the gap between the high quality institutions – but with few vacancies and restricted to some skills - and the poor conditions faced by most workers.

In both countries the VET system has been designed to provide skilled workers for industrial jobs, and has been to some degree successful in achieving that goal. But usually higher-level jobs are reached through the upper reaches of the educational system and not through job-specific training. The vocational training system in both countries is itself hierarchical with respect to formal-informal differences, quality of teaching, level of education, value of accreditations and linkages with employment. In addition, recent institutional reforms seem insufficient to address the new challenges posed by labour market changes, such as the increasing numbers of service sector workers in new occupations.

Overall, there are some similarities in the problems and challenges faced in the two countries. But there are also some salient differences, such as the size of the informal sector and the proportion of agrarian population. Partly as a result, but also because of political priorities and choices, the policies and strategies adopted in the two countries have also differed.

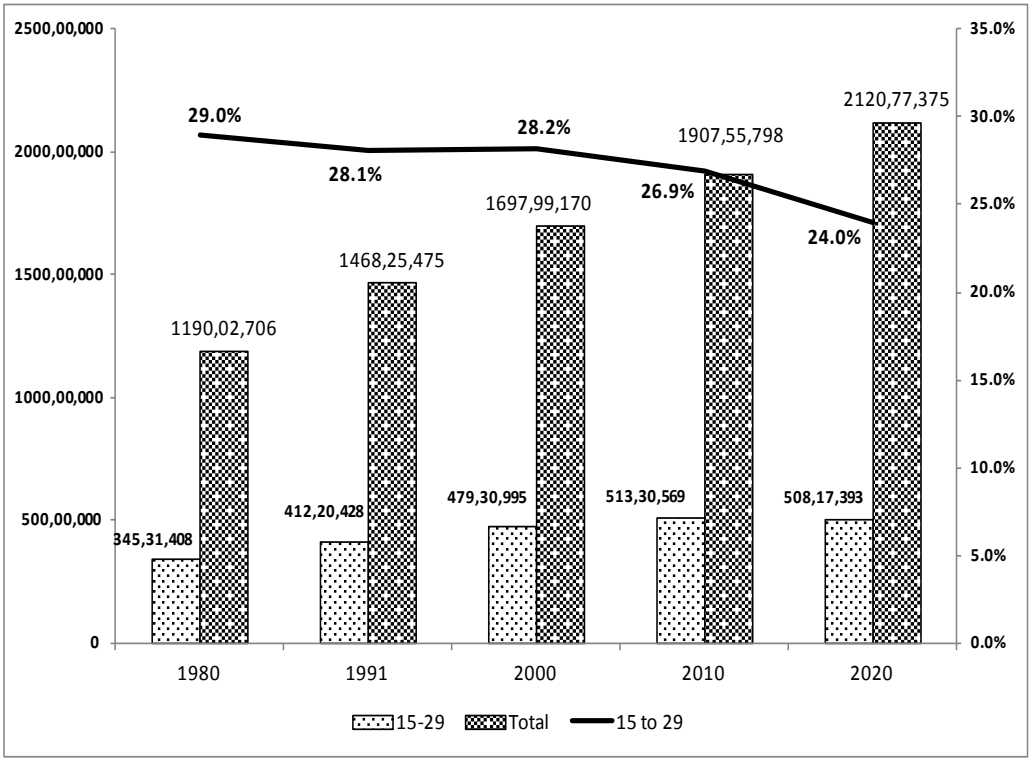
3. ACCESS TO VET IN BRAZIL AND INDIA: ADDRESSING THE INEQUALITY OF THE SYSTEMS WITH A FOCUS ON YOUTH

Youth Populations in Brazil and India

Around one-fourth of both Brazil's and India's population is comprised of young people. In Brazil in 2010, young persons aged 15 to 29 – the potential beneficiaries of vocational education programmes – constituted 26.9 per cent of the population, some 51 million people. From 1980 to 2010, the annual rate of increase of this age group was 1.3 per cent. Due to the demographic transition, the share of the youth population is declining, and is projected to account for 24 per cent of the population in 2020 (graph 3.1). From 2010 and 2020, in absolute numbers, the total number of youths in Brazil will remain almost the same.

Graph 3.1

Youth Population in Brazil: Absolute Numbers and Per cent of Total from 1980 to 2020*



Note: 2020 data is a projection.

Source: Demographic Census and IBGE.

In 2010, almost 60 per cent of India's population was below the age of 29, and about 27.5 per cent in the age group 15 to 29, very close to Brazil's figure of 26.9 per cent. And like in Brazil, this proportion of young people in the population has now peaked, and will start to decline (Krishnamurty 2014) – according to UN population projections, to 26.1 per cent in 2020 and 24.1 per cent in 2030. The decline is slightly slower than the trend in

Brazil but the pattern is similar. Even so, on average about 25 million young people will be entering the working age group each year for the next 15 years, while about 11 million will be leaving this group, a net addition of 14 million. Of course, in both India and Brazil, rising school enrolment rates, especially up to age 19, will reduce the flow into the labour force.

Educational Attainment of Youth in Brazil and India

In Brazil, among those in the 19-29 age bracket, about 3 per cent were illiterate in 2012, and 25 per cent had not completed fundamental education. This means that about 13 million of Brazil's youth had very low levels of education. Another 15 million (29 per cent of the youth) had only completed fundamental school (Table 3.1).

Table 3.1
Schooling Level of Youth Aged 14 to 29 in Brazil, 2012

Age	*Illiterate*	*Fundamental School (not-completed)*	*Fundamental School (completed)*	*High-School*	*Higher-Education*
14 to 18	335.756	7.445.116	8.017.731	1.517.666	-
	1.9%	43.0%	46.3%	8.8%	-
19 to 29	1.130.040	5.665.940	7.199.186	17.793.714	3.057.453
	3.2%	16.3%	20.7%	51.1%	8.8%
14 to 29	1.465.796	13.111.056	15.216.917	19.311.380	3.057.453
	2.8%	25.1%	29.2%	37.0%	5.9%

Source: PNAD, 2012

Nevertheless, educational attainment has improved over time, especially since attainment of middle school education has been made compulsory. Among those aged 14-18 years, an average of 80 per cent was attending school and the percentage of illiteracy was very small: 1.9 per cent.

Across regions, while school attendance rates vary only slightly, the same is not true for the schooling level attained, since young people in the Southeast, South, and Centre-West achieve significantly higher levels of schooling. Approximately 60 per cent of 14 to 18 year olds managed to complete Fundamental School in these regions, whereas this percentage does not reach 50 per cent in the North and Northeast.

We have then a very mixed picture in the Brazilian case. An increasing percentage of the young population have already finished high school[2] – around 18 million people, that is, half of the 19-to-29 years-olds - for whom training could be a route into good jobs in the labour market. However, a high percentage of the Brazilian youth still have at best completed fundamental education, posing huge challenges for training policies. And educational disadvantage is significantly greater in the Northeast and North of the country.

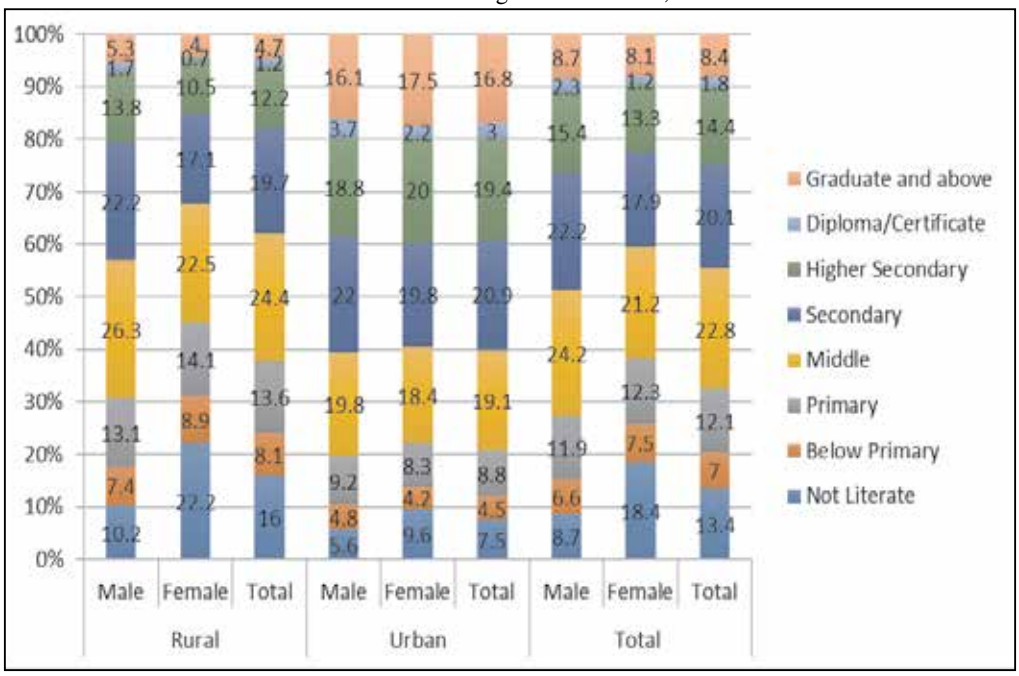
In India, among those aged 15-29, 13.4 per cent were illiterate in 2011-12 (graph 3.2).

2. It should be mentioned that the quality of this education varies widely across the country, especially in public schools in which the poor students are concentrated.

More than 55 per cent of this age group had below secondary level education, or none. About 20 per cent had completed secondary education, 14 per cent had higher secondary education; and in total about 10 per cent had a diploma/ certificate or graduate degree or above (see Graph 3.2). Only half of those eligible to be studying in secondary school were enrolled (Kotamraju, 2014). Among women, educational attainments are lower. Illiteracy among female youth is more than double of that of male youth (less than 9 per cent among males, and more than 18 per cent among females), though the gap between male and female educational achievements is declining.

Graph 3.2

Education Levels among Youth in India, 2011-12



Source: National Sample Survey of India (68th round), 2011-12

In both Brazil and India there is a sizeable youth population that does not have the requisite educational levels to access most of the formal vocational training options. The dimension of the problem is greater in India, but it is present in both countries.

Coverage of Vocational Education:
Inclusion, Exclusion and Distribution of VET across the population

The reach of formal VET is much larger in Brazil; more than one-fifth of young people have had vocational training. In India (in 2011) only about 2.5 per cent of youth have received formal VET. The distribution of vocational training is also uneven in both countries, and there are clear cleavages in terms of caste, race, gender and region.

In the Brazilian case, the last country-wide data available on vocational training comes from a survey conducted by PNAD in 2007. The survey identifies people who are receiving VET, have received VET in the past or have never received vocational training. Types of vocational training include government programmes, technical schools and technological universities, the S System, private institutions or private and public enterprises.

In 2007 around three-fourths of total population in the working age had never received formal vocational training of any sort. About 4 per cent of the population was currently receiving training, while 22 per cent had access to formal vocational training in the past. Those currently receiving training were unsurprisingly concentrated in the 15 to 29 year age group, where the proportion reached 6.5 per cent (see Table 3.2), still quite low.

Table 3.2
Distribution of Working Age Population by
Vocational Training Status, Brazil, 2007 (in per cent)

VET education	*Never Received*	*Receiving*	*Received*	*Total*
15 to 29 years old	71.4	6.5	22.2	100.0
30 to 59 years old	75.5	2.6	21.9	100.0
Total	73.8	4.2	22.0	100.0

Source: PNAD

Out of the young population who had received or were receiving vocational training, 82 per cent was through public programmes, the S System, private schools or enterprises. But if we consider just those receiving VET at the moment, the percentage of the high school and university institutions was much higher (29 per cent), reflecting the expansion of this modality of education and vocational training (table 3.3).

So the difference between the two age groups – youth and adults - lies not so much in the percentage of the people who have had some training in the past, but rather in the higher percentage of youth currently receiving vocational training (12.4 per cent), compared to 5.7 per cent of those aged 30 to 59. Around 5 per cent of 15 to 29 year olds were receiving vocational education at the high school level or technological education in universities, almost three times higher than for 30 to 59 year olds (see table 3.3).

Table 3.3
Distribution of those received or receiving VET by Age Group and
Type of Vocational Training and Education, Brazil, 2007 (in per cent)

Age Strata	*Receiving VET*	*Received VET*	*Receiving HighSchool VET*	*Received High School. VET*	*Receiving VET Undergrad*	*Received VET Undergrad*	*Total*
15 to 29 years	12.4	69.5	4.7	12.5	0.4	0.4	100.0
30 to 59 years	5.7	72.4	1.6	19.5	0.2	0.6	100.0
Total	8.8	71.1	3.0	16.4	0.3	0.5	100.0

Source: PNAD

Table 3.4 breaks down vocational training status for 15 to 29 year olds by sex and urban/rural areas. In the case of the rural youth, almost 90 per cent of the population never received any kind of formal training or education. In urban areas, this percentage falls a little below 70 per cent. Interestingly enough, women have a higher percentage either receiving or having received training in the past (30 per cent, against 28.7 per cent for men). And this gap is considerably higher for rural women if compared to their male counterparts.

Table 3.4
Distribution of Youth Population by Vocational Training Status by Sex and Area, age 15 to 29, Brazil, 2007 (in per cent)

		Never Received	*Receiving*	*Received*	*Total*
Rural	Male	88.8	2.9	8.3	100.0
	Female	84.2	4.1	11.7	100.0
	Total	86.6	3.5	9.9	100.0
Urban	Male	69.5	6.8	23.7	100.0
	Female	67.4	7.3	25.2	100.0
	Total	68.4	7.1	24.5	100.0
Total	Male	72.8	6.1	21.1	100.0
	Female	69.9	6.8	23.2	100.0
	Total	71.4	6.5	22.2	100.0

Source: PNAD

As expected, the percentage of the total population who never received vocational training is higher for black that for white populations, for both youths and adults. In the case of black youths, 74.3 per cent never received any formal vocational education or training, as opposed to 68 per cent per cent for whites. However, it seems that VET does not amplify, but mirrors the already unequal access of these groups to education (see Table 3.5).

Table 3.5
Distribution of Youth and Adult Population by Vocational Training status by Race/Colour, Brazil 2007 (in per cent)

		Never Received	*Receiving*	*Received*	*Total*
15 to 29 years	Black	74.3	5.8	19.9	100.0
	White	68.0	7.3	24.7	100.0
30 to 59 years	Black	78.1	2.3	19.6	100.0
	White	73.0	2.8	24.1	100.0
Total	Black	76.5	3.8	19.7	100.0
	White	71.1	4.6	24.4	100.0

Source: PNAD

In relation to family income, the divide in terms of access to VET is even greater. Of the population considered to be poor – up to half a minimum wage as family income per capita – 86.2 per cent never had any training, while 68.8 per cent of those above this level were receiving or had received vocational training in the past (Table 3.6). Also the

relationship between income and training seems to work in both directions: not only are workers with training better off, but also those who come from less poor families and have better educational qualifications are more likely to benefit from VET policies.

Table 3.6
Distribution of Youth and Adults by Vocational Training Status by Family Income Level, Brazil 2007 (in per cent)

		Never Received	*Receiving*	*Received*	*Total*
15 to 29 years	Not CadÚnico	65.4	7.6	27.0	100.0
	CadÚnico*	84.0	4.1	11.8	100.0
30 to 59 years	Not CadÚnico	71.0	3.0	26.0	100.0
	CadÚnico*	88.1	1.5	10.5	100.0
Total	Not CadÚnico	68.8	4.8	26.4	100.0
	CadÚnico*	86.2	2.7	11.1	100.0

Note: * CadÚnico = poor population.
Source: PNAD

In India, most formal VET courses are designed for those having education up to secondary education, though there are some programmes for those with basic primary education. There are also within-school programmes for those studying at the secondary school level. While it is not explicitly stated that these programmes are intended for poorer groups, they are self-selecting as they cater to the lesser educated.

In 2011-2012, almost 1.9 percent of the population aged 30 to 59 had received formal VET and 9.5 percent informal VET. That is, almost 10 per cent of the adult population had generated skills through self-learning, through family occupation or learning on the job. Only 0.5 per cent of this age group was receiving formal training or vocational education at the time of the survey.

On the other hand, in the case of young people aged 15 to 29, in 2011-12 2.4 per cent had received formal training, 7.3 percent informal and another 1.4 per cent were receiving formal VET training at the time of the survey (Table 3.7). So the coverage of formal VET seemed to have improved compared with the previous generation, even though the levels were still very low.

In Table 3.7 we can see that in both rural and urban areas, women had lower formal and non- formal training than men. Approximately 9 per cent of men and 5 per cent of women had non-formal training in rural areas; among urban men the percentage was higher at 11.7 per cent, but urban women had lower rates of informal training than rural women. On the other hand, there is much less formal VET among rural than urban residents.

Table 3.7

Population by type of VET by Sex and Location, India, 15-29 years

	Rural			*Urban*			*Total*		
	Male	***Female***	***Total***	***Male***	***Female***	***Total***	***Male***	***Female***	***Total***
Receiving Formal VET	1.2	0.6	0.9	2.7	2.1	2.4	1.7	1.1	1.4
Received Vocational Training: Formal	1.9	1.3	1.6	4.4	4.1	4.3	2.7	2.1	2.4
Received Non-Formal: Hereditary	3.4	1.9	2.7	1.7	0.7	1.2	2.9	1.5	2.2
Received Non-Formal: Self-Learning	1.3	1.2	1.3	2.1	1.1	1.6	1.6	1.2	1.4
Received Non-Formal: Learning on the Job	4.0	1.4	2.7	7.5	1.4	4.6	5.1	1.4	3.3
Received Non-Formal: Others	0.3	0.4	0.4	0.4	0.7	0.5	0.3	0.5	0.4
Have not received or are not Receiving VET	87.8	93.2	90.5	81.2	89.9	85.3	85.7	92.2	88.9
Total	100	100	100	100	100	100	100	100	100

Source: National Sample Survey of India (68th round), 2011-12

Table 3.8

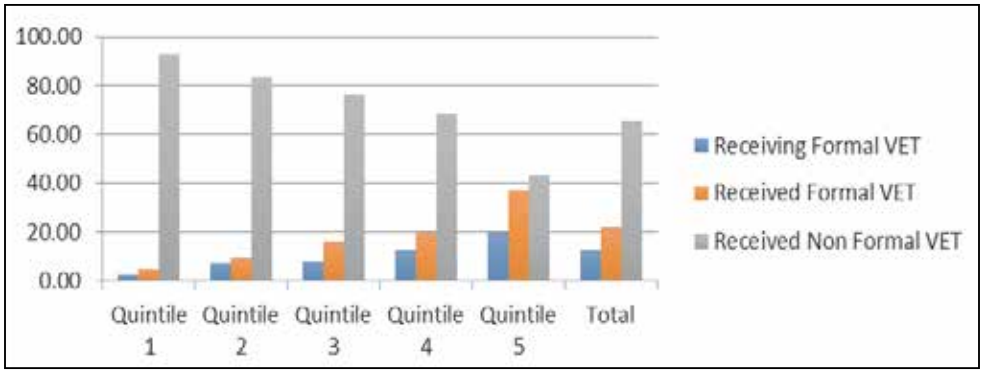
VET by Social Group, Sex and Location, India , 15-29 years

		Rural			*Urban*			*Total*		
		Male	*Female*	*Total*	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*
Scheduled Tribe	Receiving Formal	0.6	0.3	0.5	2.0	2.8	2.3	0.8	0.6	0.7
	Received Formal	1.1	0.7	0.9	3.6	1.9	2.9	1.5	0.9	1.2
	Received Non Formal	8.7	6.2	7.5	11.0	4.8	8.2	9.1	6.1	7.6
	No VET	89.5	92.8	91.1	83.4	90.4	86.6	88.6	92.5	90.5
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Scheduled Caste	Receiving Formal	1.4	0.7	1.1	2.4	2.7	2.5	1.7	1.2	1.5
	Received Formal	1.3	1.0	1.2	3.4	2.6	3.0	1.8	1.4	1.6
	Received Non Formal	9.3	4.4	6.9	11.0	3.2	7.3	9.7	4.1	7.0
	No VET	87.9	93.8	90.8	83.2	91.5	87.2	86.7	93.3	89.9
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
OBC	Receiving Formal	1.1	0.5	0.8	2.3	1.6	2.0	1.4	0.8	1.1
	Received Formal	1.9	1.3	1.6	4.2	4.1	4.2	2.6	2.2	2.4
	Received Non Formal	9.0	4.6	6.8	11.7	4.1	8.1	9.8	4.4	7.2
	No VET	88.0	93.6	90.8	81.8	90.2	85.8	86.2	92.6	89.3
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Others	Receiving Formal	1.5	0.8	1.2	3.1	2.4	2.8	2.2	1.5	1.9
	Received Formal	2.9	1.7	2.3	5.1	4.8	5.0	3.8	3.0	3.4
	Received Non Formal	9.1	5.4	7.3	12.2	3.8	8.2	10.5	4.7	7.7
	No VET	86.5	92.2	89.3	79.6	88.9	84.0	83.5	90.8	87.0
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Sample Survey of India (68th round), 2011-12

Graph 3.3

Type and Status of VET by Expenditure Quintiles in India, 2011-12 (in per cent)



Source: National Sample Survey of India (68th round), 2011-12

There is also a strong correlation between education level and socio-economic background. Those with lower education tend to be economically poorer and to belong to backward or excluded groups. This is directly reflected in the pattern of VET, as can be seen in table 3.8. It can be seen that the incidence of formal VET is lowest among STs (1.2 per cent), followed by SCs (1.6 per cent), then OBCs (2.4 per cent), and is highest among the 'other' (mainly upper caste groups) (3.4 per cent). This is despite the fact that VET is a second tier career option.

While VET programmes are open to all groups, in practice they are self-selecting. In general there are less VET takers among the richest groups, as those having sufficient means prefer to invest in higher secondary education and above. By design, VET in its early forms was a pathway for readying less educated and backward youth for jobs in industries. The envisaged function of VET policy in the Indian context is largely the same even today. But access to formal VET does not extend all the way down the income hierarchy, as graph 3.3 shows. The dependence on formal training increases with an increase in expenditure quintiles, and the percentage of formally trained and informally trained are both around 40 per cent amongst the highest quintile. On the other hand, non-formal training has the highest share among the poorest segments (reaching more than 90 per cent of those trained in the bottom quintile).

We can conclude that access to VET in both countries is discriminatory vis-à-vis caste, race and income, and in the case of India also sex; and as we see in the next section, also in terms of education level. This means that VET policies – as they are currently devised and implemented - increase the segmentation of the labour market in both countries, although in different ways. For the Brazilian case, we do not have data on non-formal training, but it is most likely that, as in India, it is concentrated in the poorest segments of the workforce.

Vocational Training and Levels of Education

While the S-system of vocational training and the federal system of technical high-schools and technical undergraduate courses in Brazil tend to lead to good jobs in the formal sector, they have exclusionary entry requirements. As a consequence, a large sector of the labour market is left unattended by the skills-providing institutions, despite the recent effort of the Brazilian government to increase enrolments in both systems.

In this regard, inequality in access to training and labour market outcomes are interconnected in Brazil. That is the case for skills in good jobs, mostly acquired by workers who already have higher levels of education. On the other hand, poor jobs (worse-paid, less-skilled and with a higher turnover rate) – both in the formal and informal sectors – are largely occupied by workers with low social-economic starting conditions, making it much harder to improve their skills. Moreover, the skewed pattern of training tends to mirror, and sometimes even to reinforce the disparities in terms of education.

This can be seen in table 3.9. Young people with complete high school are most likely to be receiving or to have received training, around 45 per cent, even higher than for the population with a college degree (34 per cent), while the figure is 28 per cent for young people who have completed primary school, and much lower for those with less than primary education. So with the exception of tertiary education, the higher the level of education, the higher is the level of vocational education or training obtained.

Table 3.9
Distribution of Youth aged 15 to 29 by Vocational Training Status by Level of Education, Brazil, 2007 (in per cent)

VET by education	*Never Received*	*Receiving*	*Received*	*Total*
Illiterate	96.7	0.8	2.5	100.0
Not completed primary	90.9	2.2	6.9	100.0
Completed primary	72.4	9.0	18.6	100.0
Completed secondary	54.4	8.6	37.0	100.0
Completed tertiary	65.7	5.5	28.9	100.0

Source: PNAD

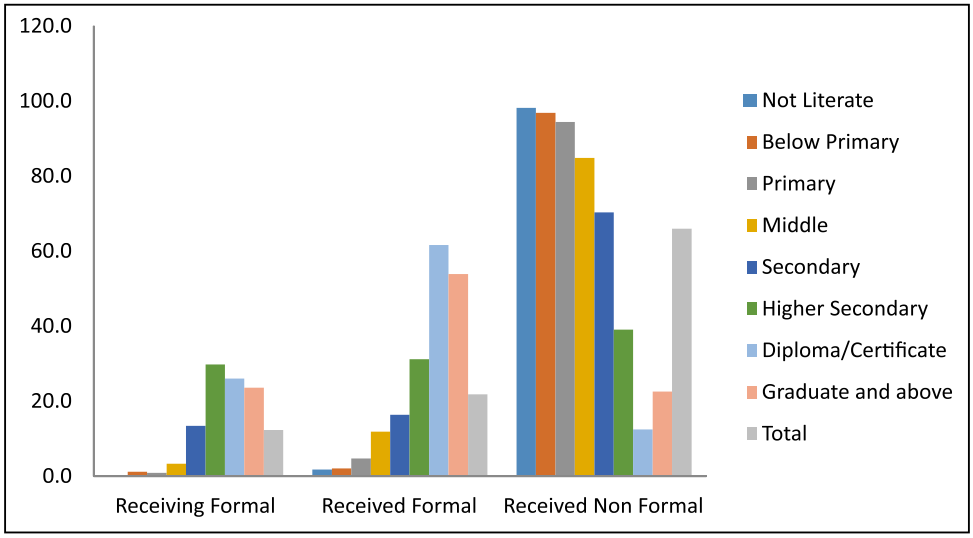
In India, while we do not have data on VET by education level comparable to Brazil, there is little doubt that the pattern is similar. Graph 3.4 shows that the proportion of those formally trained increases as the educational attainment of the group increases. Non-formal VET is the predominant form of VET among the lesser educated, above 90 per cent for the

population who had at best completed primary education. Even among those with secondary education, more than two thirds had received non-formal VET. On the other hand, among those who had higher education or graduation degree only between 12 and 40 per cent had received non-formal VET (see Graph 3.4).

While the data for the two countries are not directly comparable, it is clear that in both Brazil and India formal VET is concentrated among the better educated. This is of course a natural consequence of the use of educational qualifications as a way to restrict access to VET.

Graph 3.4

Distribution of Youth (15-29 years) who have received or are receiving VET by Level of Education, India, 2011-12 (in per cent)



Source: National Sample Survey of India (68th round), 2011-12

Vocational Education and the Labour Market

In Brazil, wage earners and employers – mostly small businesses owned by people with some skills – are the segments of the labour force more likely to have had some vocational education or training, both for youth and adults. For instance, more than 1/3 of wage earners aged 15 to 29 had received or were receiving some sort of training at the time of the survey (table 3.10).

In the case of the self-employed in Brazil, 27.2 per cent were receiving/had received some kind of training, lower than the proportion found in the formal labour market but higher than the percentage found for the subsistence economy, located basically in rural areas. However, the gap between the wage earners and the self-employed is less than might have been expected. One possible explanation is that these self-employed workers are mostly in skilled occupations in the services sector.

Table 3.10
Distribution of Young Occupied Workers by
Vocational Training status by Work Status, Brazil 2007 (in per cent)

VET by Work status		*Never Received*	*Receiving*	*Received*	*Total*
15 to 29 years old	Wage earners	65.8	6.1	28.1	100.0
	Employer	61.1	4.6	34.3	100.0
	Self-employed	72.8	4.3	23.0	100.0
	Non-paid workers*	85.6	4.2	10.3	100.0

Note: *Mostly in family-based low productivity activities.
Source: PNAD

In India, among workers who had received or were receiving some vocational training, three-fourths had informal training, and one-quarter had received or were receiving formal training (see Table 3.11). This is more or less in proportion to the distribution of the formally

Table 3.11
Vocational Training in the Labour Force (UPSS)
in the age group 15-59 in India, 2009-10

	Estimated Number in 1000	*Percent-age*	*Share in the labour force in the age group of 15-59 (i.e. 431 mn)*	*Share in the labour force for all age groups (i.e. 470 mn)*	*Percentage of non-agricultural Workforce*	*Percentage of Industrial Workforce*
Receiving formal vocational training	1892	4.3	0.4	0.4	0.9	1.9
Received vocational training: Formal	9006	20.6	2.1	1.9	4.2	9.1
Received vocational training non-formal, of which:	32719	75.1	7.6	6.9	15.2	33.0
Received vocational training non formal: Hereditary	11897	27.3	2.8	2.5	5.5	12.0
Received vocational training non-formal, Self-learning	7130	16.3	1.7	1.5	3.3	7.2
Received vocational training non-formal: Learning on the Job	11511	26.4	2.7	2.4	5.3	11.6
Received vocational training non-formal: others	2181	5.0	0.5	0.5	1.0	2.2
Total (first three rows)	43617	100.0	10.1	9.3	20.3	44.0

Source: Mehrotra et al (2013), computed from NSS 66th round, 2009-10

and informally trained in the population. But the proportion of the vocationally trained is much higher in the industrial manufacturing sector, with about 44 per cent of the workforce having formal or informal VET; and informal VET on its own reaches 33 per cent of the industrial workforce, of which hereditary learning, self-learning and learning on-the-job are all significant components. It can also be seen from the table, by comparing the last two columns, that the proportion of the vocationally trained (formally or not) is much lower for the agricultural and the services sectors.

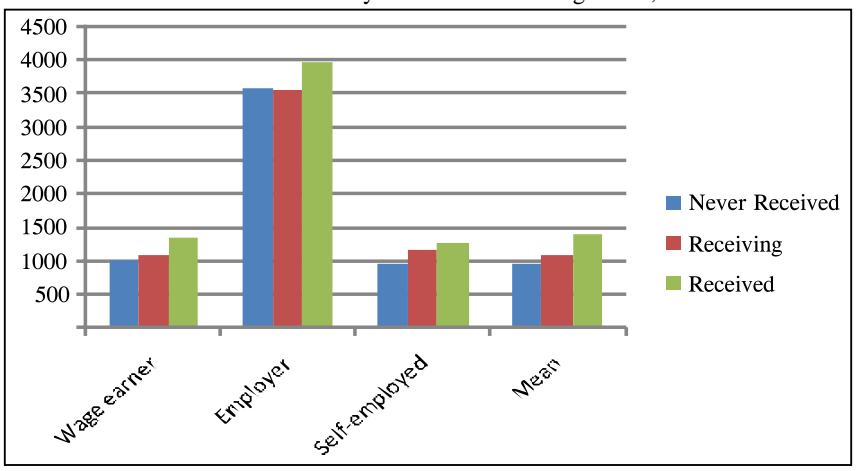
Wages, Income and Returns to Vocational Education and Training

In Brazil, in terms of wages, the pattern is clear as depicted in graph 3.5. For all the different work categories, labour income for those who have received training is higher than for those currently undergoing training, and this is again higher compared to workers who have received no training. Comparing both extremes – having received and having never received training - the average income gap reaches 45 per cent.

These findings should not be read as if training were a panacea. The relationship between training and labour market performance works both ways. Having access to training is key for holding a good job. But also holding a good job is a crucial condition in order to have access to training, either provided by an enterprise or by any of the institutions belonging to the S System.

Graph 3.5

Income Levels of Workers by Vocational Training status, Brazil 2007



Note: In reais of September 2012.
Source: PNAD

In India, there is good reason for the policy emphasis on formal VET. The returns to formal VET are significant (see Table 3.12). Among those who are not literate, having formal VET can more than double wages in comparison with those who have non-formal or no VET. Among those who have completed primary education, formal VET was advantageous in both

regular and casual jobs. Even those who had still not completed their formal VET training received higher wages in the regular job category (than those with no VET or non-formal VET). Among those who had completed middle and secondary education, too, additional formal VET leads to significantly higher wages. This difference starts to narrow down for those having completed higher secondary education and graduation, but does not disappear. On the other hand, having non-formal VET brings little advantage, and the advantage is confined to casual jobs, which are also largely informal. In regular work non-formal VET is actually associated with lower wages in most educational categories.

Overall these patterns tend to support the view, expressed above, that in segmented labour markets like those of Brazil and India, the present vocational training policies tend to reinforce labour market inequality.

Table 3.12

Average Wage per Day by Educational Attainment and VET Status in India for 15-29 years) (in rupees at current prices) 2011-12

	Illiterate		*Completed Primary*		*Completed Middle*		*Completed Secondary*		*Completed Graduation*	
	Casual	***Regular***	***Casual***	***Regular***	***Casual***	***Regular***	***Casual***	***Regular***	***Casual***	***Regular***
Receiving formal VET	NA	NA	144	296	144	299	137	302	82	352
Received formal VET	200	270	218	374	221	377	225	394	150	489
Received non formal VET	129	147	157	202	162	214	158	240	126	403
Neither received nor receiving VET	126	123	139	282	142	299	145	343	164	484

Note: Subsequent categories of education level, do not include the preeceding levels.
Source: National Sample Survey of India (68th round), 2011-12

4. RECENT POLICY CHANGES IN VET: MAIN OBJECTIVES, SOME OUTCOMES

The previous sections presented the basic contours of institutions providing vocational training and of workers accessing vocational training in Brazil and India. This section reviews some new policies and approaches developed in both countries in recent years and considers their impacts in terms of inequality reduction.

Brazil and the Case of Pronatec

In Brazil, while the Ministry of Labour withdrew from funding training programmes, the training system was enlarged through the expansion, by the Ministry of Education, of the federal system of technical schools (at the high-school and undergraduate levels) and the signing of a free tuition agreement between the federal government and the S System, reserving resources to be used to cover training costs for low-income workers and students since 2009. The next move was the creation of Pronatec in 2011.

Pronatec is a public policy that brings together a wide range of government initiatives with the aim of strengthening vocational education and training in Brazil and promoting the

productive inclusion of targeted social groups, like youth, unemployed workers and the poorest and more vulnerable segments of the population (those registered within the conditional cash-transfer Bolsa Família programme). Pronatec is financed by the federal government and carried out by several ministries, with the Ministry of Education coordinating, supervising, and assessing the programme. Its core activity is the provision of free vocational training courses.

The S System and the Federal Vocational and Technological Education Network are central to the institutional design of vocational education under Pronatec. The S System, apart from the aforementioned free-tuition courses, has maintained its traditional range of courses, but now also provides Pronatec-funded courses. The Federal Vocational and Technological Education Network is currently being expanded with Pronatec funding. This programme's main components are:

- Expansion of the Federal Network: creation of new units of the Technical Education Schools
- "E-Tec Brasil" Programme: expansion of number of distance education places.
- S System free courses: Investing two thirds of revenues in free basic and technical courses for students and workers.
- "Professionalized Brazil" Programme: support to state vocational education networks aiming to rebuild, enlarge, and renovate schools; setting up, furnishing, and equipping laboratories.
- FIES Técnico e Empresa: Public fund for financing technical and both initial and continuing education programmes in private institutions.
- Pronatec-Scholarship (Bolsa Formação): Free technical and initial and continuing technical courses coordinated by ministries, educational institutions, and municipalities.

Although encompassing several initiatives under the same programme, the "Pronatec-Bolsa Formação" is the main recipient of funding and the most demanding in terms of institutional and administrative effort. The programme comprises two, free vocational training modalities:

1. "Bolsa-formação Estudante": vocational technical-level education (long-term courses, minimum 800 hours) for high school students or undergraduates;
2. "Bolsa-formação Trabalhador": basic-level vocational education. Initial and continuing education for workers with any level of schooling (short-length courses, minimum 160 hours).

The first modality caters mostly to youths, while the second targets a wide age range. The courses are free for beneficiaries, including teaching materials and uniforms, and a stipend for transportation and food. This programme is to be interconnected with other public policies, like unemployment insurance and social assistance and cash-transfer programmes, for example the "Bolsa Família" Programme.

According to official evaluations (MDS, 2014), the profile of the beneficiaries of the programme's core modality, the initial and continuing education Pronatec-Bolsa Formação courses (2,490,120 beneficiaries from 2012 through June 2014), was as follows: 60 per cent were women, 64.5 per cent teenagers and young adults in the 14-29-year-old age bracket;

61.7 per cent belonged to the poor and vulnerable population (Single Registry - Cadastro Único); 32.1 per cent were beneficiaries of Bolsa Família; 40 per cent of the participants had been formally employed at least once between 2012 and 2014. With these data, it is already possible to see an increase in the provision of vocational education to vulnerable groups (women, youth, unemployed, and casual workers).

Programme implementation is carried out by municipalities in dialogue with educational institutions. The ministries are responsible for institutional and financial support. The main ministries involved are the Ministries of Social Development, Tourism, Defense, Labour and Employment, the Human Rights Secretariat, and the Ministry of Agrarian Reform. Key institutions offering courses include the Federal Vocational and Technological Education Network, State Education Networks, the S System, and private universities. Assessments conducted by the Ministry of Education show that the S System is still the top provider of Pronatec courses, followed by the public federal network (MEC, 2014).

Since 2012, payment of employment insurance has been contingent upon enrollment in and attendance at a Pronatec course, if the worker has filed for insurance more than three times over the ten previous years, making vocational training mandatory for workers with a recurrent unemployment track record. But the Ministry of Labour operates only 5 per cent of all Pronatec course places (MEC, 2014).

As mentioned before, an important breakthrough in relation to earlier policies is that Pronatec's priority is to provide vocational education and training to the poor and vulnerable population, especially the portion of the population benefitting from the Bolsa Família programme. Accordingly, a programme axis was created, the Pronatec/Brasil Sem Miséria (Pronatec BSM), under the responsibility of the Ministry of Social Development. From 2012 to June 2014, Pronatec/Brasil Sem Miséria had 1,537,530 enrollments (MDS, 2014). Women and blacks made up the majority of the programme's beneficiaries - 68 per cent of women and 68 per cent of blacks (MDS, 2014-c). Most of the enrollments in Pronatec/Brasil Sem Miséria in 2014, were in the Northeast (32 per cent, or nearly 500,000 people), followed by the Southeast (24.1 per cent), South (23.6 per cent), Centre-West (11.6 per cent), and North (8.6 per cent) (Costa et al, 2014).

The target group of this part of the Pronatec programme are the beneficiaries of Bolsa Família, that is, those who have been identified as poor; by June 2014 there had been 799,397 Pronatec-BSM enrolments among this group. 71.9 per cent of them were women, 65.9 per cent were teenagers and young adults aged 14 to 29 years, and only 25 per cent had had at least one formal job between 2012 and 2014 (MDS, 2014). This indicates that the programme had succeeded in reaching the poorest and most socially vulnerable groups.

The programme also contains initiatives for women (Pronatec Mulheres Mil), young persons subject to sexual abuse/exploitation, and physically disabled persons, plus some local initiatives for other vulnerable groups, like the homeless and migrants.

To summarize this policy's key breakthroughs and challenges:

Breakthroughs

- Pronatec stands out for being highly decentralized, for its scale – in 2014 more than 3,000 municipalities – and for its volume – the Ministry of Education created 8 million places in vocational training courses between 2011 and 2014.
- The federal technical and technological network is expanding, as funding increases, new facilities/schools are created, and enrollments rise (Castione, 2013; MEC, 2014); even though the main provider of vocational education is still the S System (MEC, 2014).
- Pronatec is reformulating its relations with the educational institutions. Instead of offering programmes that are already available in these institutions, the so-called 'ready-made courses', the programme seeks to drive course supply so that it may actually meet local labour market demand and/or adjust to candidate profile. The MDS created a digital tool for characterizing and mapping labour market opportunities in each municipality. The orientation given is for municipalities to negotiate with the educational institutions for courses offered to be adapted to local realities and student profiles. Still, municipalities meet with resistance by course providers, the S System for example (Cassiolato and Garcia, 2014, MDS, 2014-b).
- Targeting vulnerable social groups (the poor, less educated, women, and youth) and coordinating with social and cash-transfer policies are highlights of the programme. It has also managed to reach out to those social groups that have been excluded from the formal labour market; 60 per cent of all places in short-term courses were taken by individuals with no record of formal employment over 2012 to 2014 (MDS, 2014).
- Other positive aspects are the effort to adapt courses to poorly-educated participants (Pronatec/Brasil Sem Miséria), dispensing with mandatory schooling certification (self-declared schooling, instead); priority is also given to evening courses.

Challenges

- The programme is focused on short-term courses (70 per cent of enrolments from 2011 to 2013), yet there is no strategy to integrate them with long-term education (MEC, 2014). Vocational training lacks quick degree-certifying courses, while supply is mostly focused on basic level courses. The Vocational Education Census (INEP, 1999) showed that in 1999 more than two thirds of total vocational education enrollments were concentrated at the basic level.
- There is a failure to coordinate with other employment policies, especially labour market interventions and internship programmes for youths (Castione, 2013; MDS, 2014-b).
- So far there has been no systematic assessment of course quality, causes of dropout, and the effect of training on the employment history of those attending the programme; however, some evaluation reports have just come out (Montagner and Muller, 2015).

There is no doubt about the importance of this recent expansion of vocational education policies in Brazil and, more especially the priority given to the low-income population. However, the data presented in table 4.1 show that much work remains to be done to expand the Programme's coverage. This in turn calls for a remodeling of the contents of the courses provided so that they meet the needs of groups who are lagging in terms of basic education.

For instance, it can be noted that the number of young people living in poor households (meeting the criteria of the Pronatec/Brasil Sem Miséria programme) is very high - in 2012, no less than 6.3 million 14-to-18-year olds and 8.4 million 19-to-29 year olds. In other words, the programme's potential audience is 14.7 million young people, considering only those in households with a per capita income of up to half a minimum wage (table 4.1).

Table 4.1 also shows that of these 14.7 million young people, over 7 million have not completed Fundamental School, and only 2.7 million finished high school. Moreover, 3.4 million were both out of the workforce and out of school. On the other hand, of the 1.5 million-plus enrollments in Pronatec/Brasil Sem Miséria, nearly 800,000 enrollments are from the Single Registry target audience, of which over 500,000 made up of youth. Of course, not all the young poor population should be included in Pronatec. Nonetheless, there is a huge gap between the potential and actual target audience served by the Programme.

Table 4.1

Comparison between the main features of the 14 to 29-year-old Single Registry Group (PNAD, 2012) and some data on the Pronatec/Brasil Sem Miséria beneficiaries

Young people from Single Registry, Pnad 2012					
Educational level (Single Registry)	Age	Total	Fundamental school (not completed)	Completed only Fundamental school	Completed only High School
	14 to 18	6,357,880	3,675,039	2,396,059	253,140
	19 to 29	8,399,378	3,394,687	2,369,733	2,509,094
	Total	14,757,258	7,069,726	4,765,792	2,762,234
Schooling and work activities (Single Registry)	Age	Not studying and not economically activity	Unemployed	Formalized	Average Family Per Capita Income (R$)
	14 to 18	714,777	493,026	7.5%	316
	19 to 29	2,699,686	1,015,990	32.6%	517
	Total	3,414,463	1,509,016	1,474,072	481
"Pronatec Brasil Sem Miséria"					
Official data (Pronatec Data)	Enrollments	Young people from 14 to 29 years old	Single Registry Audience	At least once in the formal market	In the Northeast
	1,537,530	540,000	799,397	201,187	503,041

Source: PNAD, 2012

The challenge is then not only to universalize training for the poorest segments of the Brazilian society – which implies also improving access to basic education. But there is also a second challenge – to ensure that the better trained can access jobs that correspond to their skills. This will be a difficult task, especially if we take into account the current conjuncture, for the on-going economic recession is having a large negative impact on the rate of job creation.

New Policies and Changes in Delivery of VET in India

The resurgence of interest in VET as a policy instrument in India came in the mid-2000s. The National Skill Development Mission, launched in 2008, was aimed at improving productivity, strengthening competitiveness and attracting investment for VET. The mission entails three main institutions; (1) The National Council for Skill Development (NCSD) which lays down the broad policy objectives, strategies and models of finance and governance; it reviews progress and coordinates collaborative initiatives between the public and private sector; (2) The National Skill Development Coordination Board (NSDCB) which integrates the efforts being made by the various Government ministries and departments; (3) The National Skill Development Council, a public-private-partnership which is entrusted with harnessing the role of the private sector in supplementing government efforts. This includes facilitating for-profit training centres, affordable funding for training, adopting some ITIs and developing 'models' as well as setting up of Sector Skills Councils (SSCs).

The SSCs in turn are responsible for establishing competency standards and qualifications, developing curricula, and setting up processes of examination, certification and accreditation (in a more comprehensive manner than previous institutions). The NSDC is also responsible for catering to the unorganized sector.

The mission has been far more ambitious than previous efforts devoted to skills generation, and hopes to train 500 million skilled workers by 2022. Before the 11th Five Year Plan, India's skill development capacity was 3.1 million persons per year. The 11th plan aimed to increase that capacity 5 fold by 2022 (Goel, 2014). The mission aims to be more inclusive, outcome driven and competitive, and to ensure than skills are bankable and fungible.

The NSDC has a large equity base, of which the private sector holds 51 per cent, while the Government of India controls 49 per cent. It is supported by the National Skill Development Fund (NSDF), a 100 per cent government-owned trust - which works in coordination to fulfill the NSDC's strategic objectives.

Many business organizations and companies have collaborated with government schemes through the Public-Private Partnership (PPP) model to upgrade and start training institutions. The FICCI (Federation of Indian Chambers of Commerce and Industry)-ITC initiative has invested in upgrading existing ITC facilities; FICCI has provided guidance to ITCs in developing more relevant skills, with a view to improving employability through curriculum development, which also includes soft skills. Similarly CII (the Confederation of Indian Industry) has also adopted more than 200 ITIs for upgrading. There have also been IT-related PPP collaborations with private sector organizations like NIIT and Infosys. Under the PPP scheme, NIIT is likely to

open 1500 IT training centres in 1000 Indian cities. By 2022 about 7 million youth are likely to have been trained under the PPP model. The Sector Skills Councils have been developed in order to synergize training streams, quality, and accreditations with industry demands. New ITIs and ITCs based on industry feedback have been sanctioned.

Until early 2015 the NSDC had trained 3.65 million people, and placed about 2.25 million (that is about 62 per cent of those it trained) (Table 4.2). This is a small number given the massive target, but it is important to note that the number of those trained has been more than doubling every year, although the percentage of those being placed has fallen somewhat compared with the beginning of the programme.

Table 4.2
People Placed and Trained by NSDC since Inception

Financial Year	Training Completed	Placement	Percentage Placed
2010-11	20,484	14,399	70
2011-12	181,691	144,238	79
2012-13	402,506	216,889	54
2013-14	1,005,074	647,188	64
2014-15	2,036,570*	1,228,299	60
Total	3,646,235	2,252,013	62

Note: * Does not include about 1.4 million people trained under the non-placement programmes.
Source: NSDC 2015

NSDC's own impact assessment study for the year 2014-15 finds that both individuals and industries have benefitted from the training undertaken so far. About 11 per cent of beneficiaries were unemployed prior to training; of these 64 per cent had found regular salaried jobs or were self employed. About 48 per cent of trainees, who had been casual labourers earlier, were now salaried workers; and those that continued with casual work were receiving higher wages post-training. About 68-81 per cent of alumni across regions (of NSDC operation) 'strongly agreed' or 'agreed' that they were able to get better terms of employment (i.e. type of contract and length of contract) after training. Industries also rated NSDC candidates as being better performers compared with others (NSDC 2015b).

Another programme, of a different type, is the Ajeevika Skill Development Programme (ASDP), launched in 2011 as a sub mission of the much wider National Rural Livelihoods Mission (NRLM). The ASDP caters to the training needs of rural youth; providing residential and non-residential courses that include soft-skills components, and food and transport requirements. It assures above minimum wage placement of 75 per cent of beneficiaries (MoRD 2015). Given that the programme was launched recently, a comprehensive evaluation of its achievements is not possible. But since inception, it has trained about 1 million youths (achieving more than 90 per cent of targets under the projects sanctioned thus far). About 80 per cent of those trained have been placed. Of the 1 million trained about 35 per cent have been women. Around 30 per cent have been SCs, 15.4 per cent STs, and about 8.9 per cent minorities (MoRD 2015b). This is significant, as these figures indicate that the

programme is reaching a much higher percentage of backward groups than their proportion in the population.

The apprentice system is seen as a significant component of training in India, and one with tremendous potential. Some believe that it is the most efficient tool among the various skilling programmes of the government; it has a short payback period, and the hands-on-training is an advantage compared with institutional training (see Rai 2015). It has the ability to engage with both supply issue and demand issues. However, it also suffers from similar problems to the ITIs and ITCs such as shortage of trainers, lack of modern and relevant infrastructure, and inability of the system to respond to new and immediate requirements. In addition, it has its unique problems such as low stipends, regulatory requirements and penalties binding employers. There are also few apprenticeships in the service sector, and there is lack of mobility into higher level qualifications (see ILO and World Bank 2013).

A significant development in 2014 has been the amendment of the Apprenticeship Act. The Act, which dates from 1961, made it essential for employers of selected industries to provide apprenticeship opportunities. This included basic skills, and on-the-job or shop floor training as per the standards set by the government in consultation with the Central Apprenticeship Council. Later amendments in the 70s and 80s expanded the act to include training of graduates and diploma holders in engineering and technology, as well as those passing out of vocational higher secondary schools. In 1995-96 about 150,000 apprentices had been trained (Visaria 1998). In 2011, there were more than 180,000 apprentices on the roll under the trade apprenticeship scheme (DGET 2011).

The Act was amended in November 2014, increasing the minimum age of apprentices in hazardous industries, and expanding the act to non-engineering trades, IT services, and new trades; it allows for new courses to be developed. However the revised amendment has given much greater control to the employer with respect to attendance and leaves, and structuring of the programme; it has removed the possibility of imprisonment of the employer (in case of any violation) and has limited the penal liability. While earlier a government body was responsible for assessing and certifying the apprentices trained, the amendment has allowed other recognized institutions to assess and certify. The central government however is also empowered to make rules on qualifications, training duration, assessments and certification (PRS Legislative Research 2015, Firstpost 2014).

While the amendment widens apprenticeship to non-engineering streams, and aims to make apprenticeships more flexible, by removing restrictions on employers it also brings a risk of more exploitative apprenticeships.

To sum up the above, in recent years, the Indian government launched a coherent skills policy with clear goals and new institutions. Started under the UPA government, it has been reinforced by the BJP government since 2014, and so benefits from broad political support. But in sharp contrast to the Brazilian case, these initiatives do not explicitly target problems of inequality in access to training. In the case of the NSDC, its main objective is to reduce the mismatch of skills between the demand and supply of labour. This is an important goal, but it is likely that the programme will select the segments of the population with better education, reinforcing inequality.

On the other hand, the ASDP focuses on the rural youth, opening access to jobs above the minimum wage. Even though it is less important in terms of numbers of trained workers, it may be a way of assuring higher social mobility in rural areas. And there is some indication that access for disadvantaged groups has improved. Nevertheless, it lacks an explicit focus on unequal access to training or the specific skill deficits of poor households, and a much larger and broader based programme would be required to match the results of Pronatec in Brazil.

5. SOME CHALLENGES CONCERNING VET AND INEQUALITY

Widespread and equitable access to skills and capabilities would be an important step towards overcoming labour market inequality. But as we have seen above, the main training systems in Brazil and India have not been designed with this goal in mind. The primary goal has been to build a skilled labour force, in order to support a process of industrialization and economic growth. The priority has been given to industry, and to other dynamic sectors of the economy, and in particular to the formal labour market. But this accounts for only a small share of employment in India, and while the organized sector is larger in Brazil, there too a large informal economy exists in parallel. In practice, the principal, institutional training systems have only reached a fraction of the labour market.

Because the training system only reaches some of those entering the labour market, in both countries educational credentials have become an important criterion to obtain access to formal training. As a result the training systems have been exclusionary, since considerable numbers of youth in both countries still do not reach the requisite levels of education. So VET does not compensate for unequal access to education, but merely mirrors it, and may even contribute to increasing inequality further. In addition, on the whole VET does not serve the top stratum of the labour market, which is reached through higher educational qualifications. So the training systems merely reflect and continue the prevailing hierarchical structures in the labour market.

Alongside these official training systems, there is a great deal of informal training in both countries. Indeed, in India, many more workers gain their skills through informal learning than through vocational training. But the effectiveness of informal training is clearly extremely variable, and returns to such training are often small. Moreover, the cleavages and differentiations of each society – like race, caste, gender, region or other factors – are replicated in access to such training.

These problems are widely acknowledged, and various attempts have been made to overcome them in both countries, and to deliver skills training at the lower-income end of the labour market. This is a huge challenge as more often than not these segments of the labour market consist of unskilled, unproductive and poorly-paid jobs. There is actually no assurance that access to new skills would improve the insertion of these workers in the labour market. But if programmes which try to remedy these problems are not devised and implemented – reaching larger social groups and with a wider scope – inequality is likely to increase further.

An important initiative in Brazil has been the introduction of a targeted programme, Pronatec, aimed at youths belonging to poor households. While the impact of Pronatec is still to be fully assessed, it does demonstrate the feasibility of targeted VET programmes of this type. Nevertheless, up until now, it is far from clear that this programme has had an impact in terms of reducing inequality within the labour market, as most of the skills delivered seem to reinforce the position of the low-paid jobs in the occupational hierarchy. And although this is a large programme, it is still far from universal.

In India, while there is no programme on the scale of Pronatec, a variety of initiatives and programmes, not only in the public sector but also involving private groups, has aimed to reach lower income groups. One important such programme is the Ajeevika Skill Development Programme (ASDP), which delivers training to rural youth. There is also scope to incorporate VET into existing large scale social programmes such as MGNREGA. This has already been promoted, but on a much smaller scale, by ASDP. Nevertheless, informal training continues to dominate the labour market.

Programmes that specifically target low income groups face a variety of problems. They may be regarded as delivering second class skills, and have to overcome social resistance. They also need to be implemented on a very large scale. But above all they deliver skills into a labour market where there may not be any corresponding demand.

This is the Achilles heel of training programmes everywhere. In reality, it makes no sense to only tackle the supply side of the labour market. Skill development programmes devised for the poorest segments of the society need to be complemented by the creation of jobs that can actually lead to social mobility. And if such programmes function in an informal labour market, but deliver formal qualifications, then they have to be accompanied by measures to formalize the labour market itself. This has actually been the case in Brazil, where, contrary to a global trend, the labour market was formalizing until the recent recession. But it is now far from certain that this process will continue.

The more general point is that strategies for employment creation and skill development need to be coordinated. Complaints about poorly designed courses and curriculums, failure to link with industry demands, and other such problems are often a reflection of a gap between supply and demand. This is recognized in the Indian National Skills Development Mission, where there is coordination with the private sector to overcome a low-skill trap, and it is also a central issue in recent reforms of the VET system in Brazil. But this perspective needs to be extended to the labour market as a whole if vocational education and training efforts are to contribute in any meaningful way to a reduction in labour market inequality.

For VET to contribute to reducing inequality it also needs to be set within the broader framework of education policy. There has been progress towards universalizing schooling in both countries. But as average education levels rise, the differentiations occur further up the educational system. Educational qualifications for access to any particular occupation rise, and the inequalities persist. VET has a potentially important role here, if it delivers access to the labour market for those who cannot compete at the higher education level. In that case VET could help to reduce inequality, going beyond the limited goal of targeting the poor to

become a part of a wider strategy aiming at providing better jobs and social mobility. This is a central challenge for both countries, however different their labour market structures, educational profiles and VET systems may be.

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