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**INNOVATIVE SECONDARY EDUCATION FOR SKILLS  
ENHANCEMENT (ISESE)**

**Skills for Employability:  
The Informal Economy**

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# **Skills for Employability: The Informal Economy**

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**Results for Development Institute (R4D)** is a non-profit organization whose mission is to unlock solutions to tough development challenges that prevent people in low- and middle-income countries from realizing their full potential. Using multiple approaches in multiple sectors, including Global Education, Global Health, Governance and Market Dynamics, R4D supports the discovery and implementation of new ideas for reducing poverty and improving lives around the world.

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## Executive summary

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The term “informal economy” refers to all economic activities by workers and economic units that are – either in law or in practice – not covered or insufficiently covered by formal arrangements.<sup>1</sup> In developing countries, informal labour forces are primarily comprised of self-employed people working from home or street-vending. They have neither official nor permanent places of business. Typically, the incomes of informal workers are low, and are also unpredictable. In many developing countries, the informal economy is the main source of employment for as many as 9 out of every 10 workers.

Although once considered a temporary phenomenon, the informal economy has experienced broad growth in recent decades. Today, most experts agree that in most developing countries, the informal economy will continue to function as crucial economic forces for the foreseeable future.

The informal segment of the workforce is defined by a number of common characteristics: limited professional skills, low incomes, low productivity, and low capital investment. Developing new marketable job skills through education and training can disrupt cyclical poverty by increasing productivity and job opportunities in the informal economy and workers’ formal-sector employability.

This study reviewed market demand for informal economy work skills; the various types of education and training opportunities available to informal workers; the target populations of skills development initiatives; and the environments best suited to drive economic growth through the professional development of informal workers. It also includes a global literature review on the informal economies of developing countries, as well as in-depth case studies on efforts in Cambodia, India, Kenya, and Senegal.

Our research revealed a large, and frequently unmet, employer demand for better technical skills -- particularly in high growth industries like manufacturing and tourism.

Experts reported that current education and training programs, where they do exist, too often focus solely on technical skills without integrating non-cognitive skills. Across industries, abilities to communicate effectively, organize efficiently, and solve unanticipated problems are desired, and often required, in a valuable worker. Similarly, workers who remain informally-employed would benefit greatly from improved business and entrepreneurial skills. On the employer side, employers reported dissatisfaction with the qualifications they found within many pools of potential workers, and expressed desire for improved skills development programs.

Unfortunately, this study found that school-based education and training programs seldom penetrate the informal economy, resulting in weak cognitive skills among most informal workers.

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<sup>1</sup> (International Labour Organization (ILO), 2002b)

Moreover, secondary education programs too often underemphasize the non-cognitive skills now considered so vital to success in the workforce, and these school programs typically provide only limited opportunities for the application and practice of the theoretical principles taught.

To the extent that job training in the informal economy exists, it is most often outside of school, primarily in the form of traditional apprenticeships -- which are themselves often limited by master teachers' own limited training, overreliance on outdated technologies, and poor working conditions.

In seeking to address the shortfalls of current education and training models, governments and NGOs have launched pilot programs in various developing countries; however, they lack systematic, rigorous and quantitative impact evaluation.

Going forward, actions that address major skills gaps within the informal economy should focus on two goals: 1) reform school-based programs by redesigning curricula to maximize training effectiveness, strengthening collaboration with prospective employers, and improving outreach to the informal economy; 2) improve non-school programs with efforts such as reforming the traditional apprenticeship system, implementing targeted training programs for women and rural populations, and systematically evaluating the impact of new initiatives in these areas.

This study found that while improving skills training is a necessity, it is only one component among many that are required to foster a thriving and inclusive economy. Increasing the overall productivity of the informal economy in developing nations will require holistic approaches that complement training interventions with new government policies, regulations, and incentives.

# 1. Introduction

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## 1.1 Overview of the ISESE Project

Whether developing countries succeed at promoting large-scale economic growth depends largely on the ability of their workforces to compete effectively for jobs within an increasingly global economy. In many countries, large segments of these workforces will need to learn new skills, as well as hone existing ones. Skill acquisition and refinement can enable workers to take advantage of existing employment opportunities. Additionally, they will be better equipped to establish new businesses that will generate both wealth and additional jobs.

Within the purview of its mission to cultivate new ideas and spark high-impact actions aimed at reducing poverty in developing countries, the Results for Development Institute (R4D) is coordinating the Innovative Secondary Education for Skills Enhancement (ISESE) study. The ISESE study, funded with support from The Rockefeller Foundation, seeks to identify the skills secondary students in developing countries must learn in order to secure stable employment in the 21st century economies of sub-Saharan Africa and South and Southeast Asia. The central component of the ISESE project's objective is examining innovations in skill-instruction at the secondary education level, including specifying the resources and infrastructure necessary to replicate the most effective teaching models.

As part of the larger ISESE project, R4D engaged Dalberg Global Development Advisors to conduct a sub-study focused on the informal economy. This study's purpose is to identify and evaluate the skills that most valuably contribute to a developing country's informal economy growth and expansion of employment opportunities.

## 1.2 Objectives and Approach

This study will provide an overview of the skills needed to increase and improve employment opportunities among informal workers in developing countries, and will evaluate models and mechanisms for teaching students these skills. This study reviews literature on developing countries across the globe and provides in-depth case studies for Cambodia, India, Kenya, and Senegal. These four countries were selected based on the geographical focus of this study, the relevance of the informal workforce in those countries' economies, the existence of new approaches to skills development, and the availability of data sets, studies, and access to experts.

The three main questions that guided the literature review and case studies were:

1. What constitutes an "informal economy" and how can these characteristics be measured?
2. What skills are most crucial for informal-economy workers to meaningfully contribute to large-scale sustainable economic growth?
3. What are the most effective ways governments and NGOs can assist informal workers in developing these skills?

These questions were approached through a combination of literature reviews and desk research, interviews of experts and stakeholders with both global and country-level perspectives, and analysis of data sets with expert input.

## 2. Background and Context

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### 2.1 The Informal Economy

In 1993, the International Labor Organization (ILO) proposed this general definition of the informal sector: a group of household or unincorporated enterprises that includes informal self-employed workers as well as the business enterprises of informal employers.<sup>23</sup> This definition was adopted by the Fifteenth International Conference of Labor Statisticians (ICLS).

The ILO definition is commonly used in surveys on the informal sector, and reflects its economic reality. Unlike other approaches, which tend to focus on difficult working conditions and lack of taxation<sup>4</sup>, the ILO emphasizes employment and wealth generation. Nevertheless, the ILO framework also allows individual countries to adapt this basic definition and criteria in ways that best fit their specific circumstances.<sup>5</sup> And this flexibility can result in wide differences in measurement standards across various countries.

Agriculture is a major source of informal employment in many developing countries and, particularly, in the four focus countries of this study: in India, the proportion of active workers employed in agricultural jobs in 2011 was 54 percent; in Cambodia, 65 percent; and in both Kenya and Senegal, 70 percent.<sup>6</sup> Although the ILO definition allows for flexibility regarding the inclusion of agricultural work in the informal economy, this report will include agriculture in the discussion whenever data is available.<sup>7</sup> However, most countries do exclude agriculture from their measurements of informal economic activities.

In 2002, the ILO suggested moving away from the term "informal sector" and using instead "informal economy" to refer to the productive activities of informal workers and enterprises.<sup>8</sup> The rationale for this change was that informality is neither confined to particular enterprises nor to a specific segment of economic activity -- but rather that informality cuts across many different sectors and units of production.<sup>9</sup> Most country surveys and reports still use the term "informal sector" and therefore might underestimate the sizes of their informal economy. This report will primarily use "informal economy" -- recognizing that informal employment occurs across many sectors, and that it can also exist within formal enterprises. Variations in defined usage of the term "informal economy" will be highlighted as needed in this report.

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<sup>2</sup> An unincorporated enterprise is a producer unit which is not incorporated as a legal entity separate from the owner (OECD, 2012)

<sup>3</sup> (International Labour Organization (ILO), 2002a)

<sup>4</sup> (Wather, 2011)

<sup>5</sup> In particular, flexibility is allowed with respect to the upper limit on the size of employment, the introduction of additional criteria such as non-registration of the enterprise or its employees, the inclusion or exclusion of professionals or domestic employees and the inclusion or exclusion of the agricultural activities (International Labour Organization (ILO), 2002a)

<sup>6</sup> (FAO, 2012)

<sup>7</sup> (International Labour Organization (ILO), 2002a)

<sup>8</sup> (International Labour Organization (ILO), 2002b)

<sup>9</sup> (Becker, 2004)

Common characteristics of an informal economy are that it usually operates with little to no capital, requires minimal technology and few specially-trained skills, operates at a low level of productivity, generates small and unpredictable income, and is highly unstable as employment.<sup>10</sup>

In sub-Saharan Africa, household surveys show that nearly two-thirds of people working outside the agricultural sector are informally self-employed.<sup>11</sup> Typical self-employment jobs in the informal economy include tailoring, hairdressing, trading goods, and making and/or selling craft and food products -- jobs which are disproportionately held by women. In all, informal self-employment represents 10 to 25 percent of the total workforce in developing countries.<sup>12</sup>

As metrics measuring the informal economy, published research and data primarily use "contribution to national GDP" or "share of workers employed by the sector." The former is estimated through indirect methods, whereas the latter is calculated from direct household surveys. Applying either of these two metrics, however, the conclusion is the same: the informal economy is a crucial component of the economy in most developing countries, contributing significantly to both GDP and employment.

Figure 2.1 Figure 2.1 illustrates relevant data from a recent study by Buehn and Schneider that estimated the size of the informal economy in 162 countries.<sup>13 14</sup> Their study found wide disparities: in Vietnam, for example, informal economy contributions comprised just 15 percent of GDP, while in countries like Bolivia, Zimbabwe, and Tanzania the proportion was more than 50 percent. The weighted average for countries in sub-Saharan Africa was approximately 38 percent.<sup>15</sup>

In recent years the ILO estimated that informal workers comprised 49 percent of the total non-agricultural workforce in the 33 developing countries with available data.<sup>16</sup> In many sub-Saharan African countries, the informal economy employs nearly 9 out of every 10 people (when agricultural work is included in the definition).<sup>17</sup>

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<sup>10</sup> (Economic Institute of Cambodia (EIC), 2006b)

<sup>11</sup> (Johanson & Adams, 2004)

<sup>12</sup> (Becker, 2004)

<sup>13</sup> This study is based on the Multiple Indicators Multiple Causes (MIMIC) estimation method that assumes that the informal economy is an unobservable phenomenon (latent variable) that can be estimated using measurable causes of informality such as the tax burden and the intensity of regulation, and indicators reflecting these activities, for example, currency in circulation or official GDP.

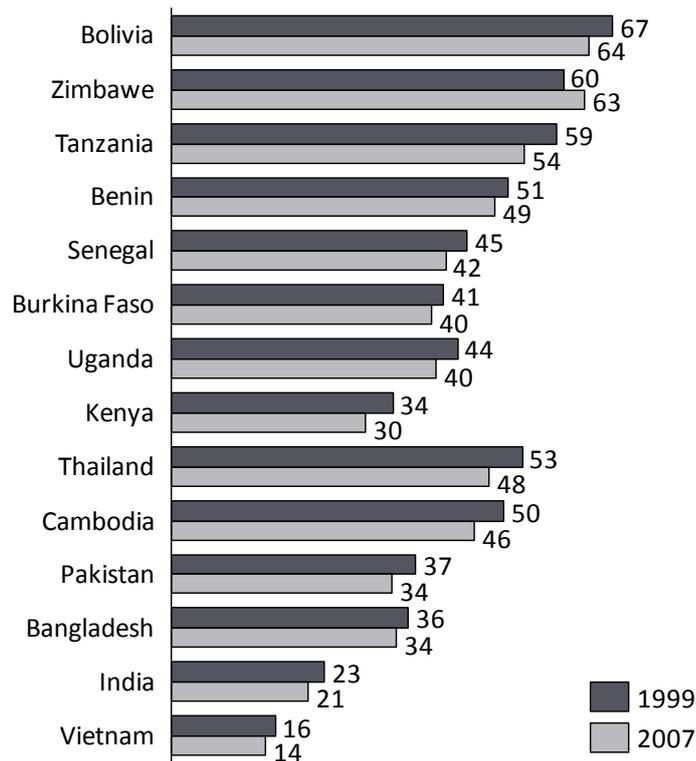
<sup>14</sup> (Buehn & Schneider, 2011)

<sup>15</sup> Ibid

<sup>16</sup> (International Labour Organization (ILO), 2011)

<sup>17</sup> (Wather, 2011)

Figure 2.1: Size of Informal Economy (% of Official GDP)<sup>18</sup>



Source Andreas Buehn and Friedrich Schneider, "Shadow economies around the world: novel insights, accepted knowledge, and new estimates," (2011) :

In relative terms, the size of the informal economy (as percentage of GDP) has decreased in most countries over recent decades. However, in absolute terms (the actual number of people employed or the monetary value of GDP contribution), the informal economy has grown substantially during that time.<sup>19</sup>

At the regional level, sub-Saharan African countries tend to have the largest informal economy, followed by Europe and Central Asia, Latin America and the Caribbean, the Middle East and North Africa, and South Asia. In contrast, not surprisingly, OECD countries show the lowest levels of informal economic activity.<sup>20</sup> The relative sizes of the informal economy tend to inversely correlate with countries' income levels; nevertheless, the informal economy remains a complex phenomenon that are notably present in developing, transitioning, and even highly developed economies.

<sup>18</sup> Agricultural activities are included as part of the informal economy in this data set

<sup>19</sup> (Becker, 2004)

<sup>20</sup> (Buehn & Schneider, 2011)

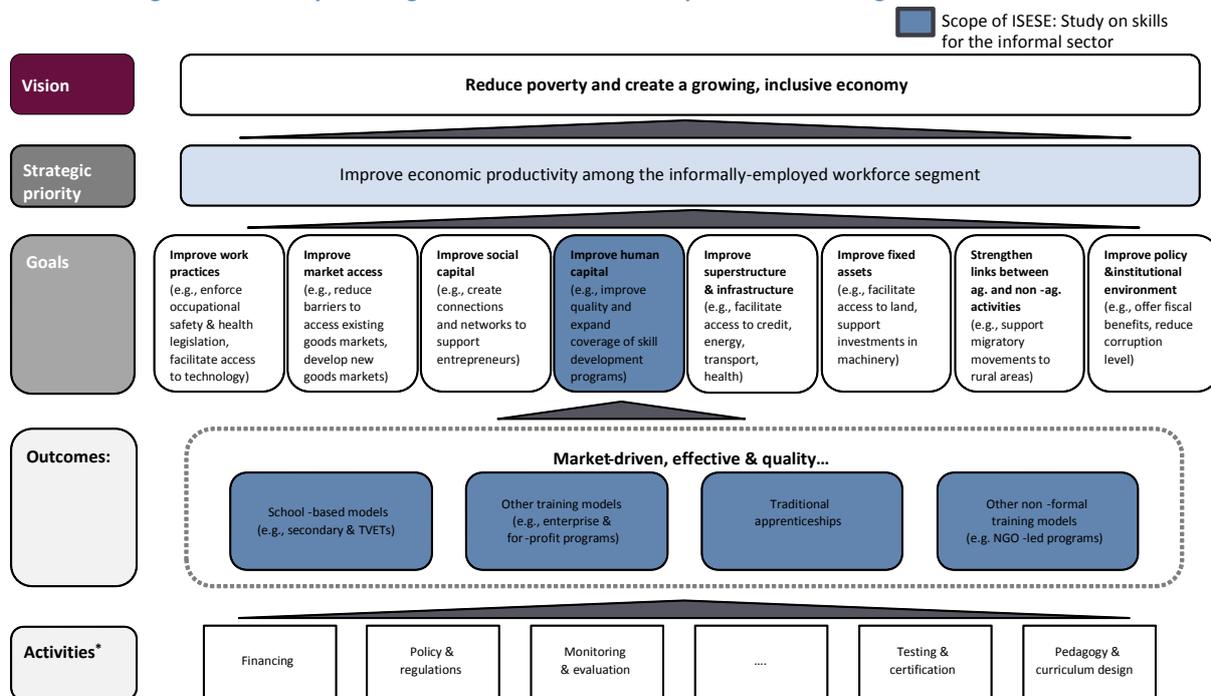
## 2.2 The Role of Human Capital in Contributing to Economic Development

Many workers in developing countries are confined to the informal economy because of limited educational opportunities and rudimentary work skills. The International Labor Organization described this workforce segment as “low skill, low productivity, low wage, low investment”.<sup>21</sup>

Unfortunately, simply improving worker skills is not, on its own, enough to spark meaningful and lasting impact. Investments in workforce education and training must be paired with a range of interventions that address the particular challenges of life in a developing country.<sup>22</sup>

This section articulates the bedrock assumptions and necessary conditions required to achieve economic improvements through development of a more skilled informal workforce. Figure 2.2 presents the “Theory of Change” that drives this project, highlighting links between economic vision, strategic priority and corresponding goals, and the specific outcomes and activities associated with improving human capital through skill development. The outcomes and activities included here are representative of what we found while conducting this study; however, they should be interpreted as illustrative examples rather than a comprehensive list.

Figure 2.2: “Theory of Change” – The Role of Human Capital in Contributing to Economic Growth



Source: ILO working paper on “Skills and productivity in the informal economy,” Dalberg analysis

\* To be finalized (for illustrative purposes only)

In developing countries it is common for working-age people to transition from agricultural to informal jobs, eventually moving into more formal jobs. National and local governments can accelerate these transitions with new policies and incentives.

<sup>21</sup> (International Labour Organization (ILO), 2007)

<sup>22</sup> Interviews; (Adams, 2011)

Government interventions, however, are often quite complex, and may require developing appropriate regulations, recruiting capital investment, addressing market failures, and implementing tax incentives -- and are often too complicated to make meaningful impact immediately.<sup>23</sup> As a result, while supporting individuals and enterprises making the transition from informal to formal economies, there is also an important need for investment within the informal economy -- to create better employment and income generation opportunities in this economic segment.

Current data indicates that the informal economy cannot be considered a temporary phenomenon. It has grown steadily in most developing countries, both in rural and urban areas. The non-agricultural share of the informal workforce is estimated to be 78 percent in Africa, 57 percent in Latin America and the Caribbean, and 45 to 85 percent in Asia.<sup>24</sup> The informal economy is expected to continue on as a core driving force within the economy of most developing countries.<sup>25</sup>

Even for many young professionals in developing nations, the informal segment of the economy remains their only employment option. In a qualitative survey of 110 youth association leaders from Central Africa, the French Development Agency (AFD) found that 60 percent entered the labour market by acquiring on-the-job experience or apprenticing in the informal economy -- even after earning bachelor's degrees or completing graduate-level studies.<sup>26</sup> Demographics in Africa will further exacerbate current trends: the region is now home to about 200 million people between the ages of 12 and 24 -- the continent's largest-ever youth concentration.<sup>27</sup>

One of several key arguments favouring investments toward productivity gains within the informal economy is the fact that, for the vast majority of the working poor, simply doing more work won't provide a path out of poverty. The work itself must be more productive.<sup>28</sup>

There are eight interrelated approaches governments most commonly use to improve informal economy productivity: (1) enhancing work practices; (2) improving access to markets; (3) developing social capital; (4) developing human capital; (5) developing overall infrastructure; (6) expanding firms' fixed capital; (7) addressing agriculture/non-agriculture employment dynamics; and (8) creating supportive policy and institutional environments.

Embedding new skills in a widely varied workforce is crucial for determining how productivity growth can translate into employment growth, and for whom.<sup>29</sup>

Developing human capital in the informal economy will require highly effective, market-driven education and training programs. Employers should specifically articulate their own needs to ensure their labour demand is correctly aligned with the newly-trained workforce supply. Complementary education and training programs include school-based education, on-the-job learning, and learning through non-governmental and for-profit private training centers and programs.

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<sup>23</sup> Interviews

<sup>24</sup> (Becker, 2004)

<sup>25</sup> Interviews

<sup>26</sup> (Wather, 2011)

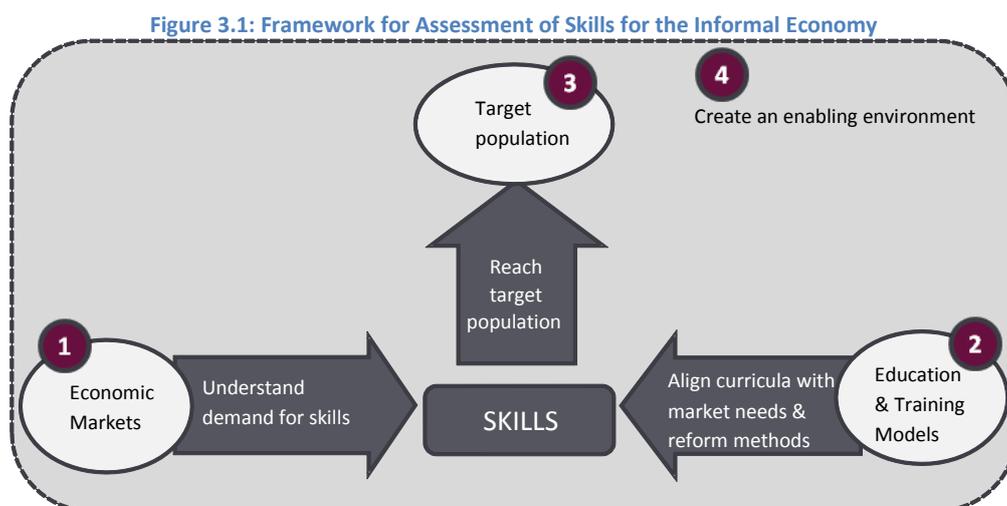
<sup>27</sup> (Garcia & Fares, 2008)

<sup>28</sup> (Palmer, Skills and productivity in the informal Economy, 2008)

<sup>29</sup> Ibid

## 3. Methodology

In order to increase informal economy productivity and growth through skills development, four key elements should be considered: (1) economic markets and their human capital needs and skills demands; (2) education and training models evaluated by the alignment of their curricula with market needs, and the effectiveness of their pedagogical methods; (3) clear identification of target populations so that inclusiveness and access to skills development initiatives may be evaluated; and (4) the overall enabling environments, including the sets of incentives, policies, coordination mechanisms, and financing tools required to achieve full impact. This conceptual framework is outlined in Figure 3.1.



This study explores these four components using the following taxonomy of skills and education/training models. First, the skills associated with human capital development have been divided into three broad categories<sup>30</sup>:

1. **Cognitive skills**<sup>31</sup> are the basic abilities we use to think, study, and learn. This category includes literacy and numeracy skills, and the abilities to understand and solve abstract problems through reasoning.<sup>32</sup> Cognitive skills are usually learned at primary and secondary school levels.
2. **Non-cognitive skills** are personality traits and characteristics that manifest across social, emotional, behavioral, attitudinal, and other domains. This category covers work habits like effort, discipline, and motivation; behavioral/personal traits like leadership, communication, confidence, and teamwork; and physical characteristics like strength, dexterity, and endurance. Behavioral traits are sometimes referred to as “soft skills.” Non-cognitive skills are most often acquired from parents, communities, and on-the-job training.

<sup>30</sup> This taxonomy is standard in the skills literature (Adams, 2011); (World Bank, 2011)

<sup>31</sup> Cognitive skills are often referred to as academic or subject-based skills and thinking skills.

<sup>32</sup> For our purposes, we define literacy as including reading, writing, comprehension and basic language skills.

3. **Technical or trade skills** are amalgams of specific knowledge and the relevant cognitive and non-cognitive skills that combine to help workers accomplish job-specific tasks. This category includes skills like equipment use and repair, product design, production techniques, computer skills, marketing, budgeting, market research, and business management. Technical and trade skills are primarily learned through tertiary education, formal technical and vocational education, and training programs and apprenticeships.

Education and training models have been classified in two groups:

4. **In-school models** are programs taught in a school environment. This report focuses primarily on lower and upper secondary schools, including both academic and technical or vocational streams. The term “Technical and Vocational Education and Training (TVET)” refers to the technical and vocational streams of in-school models.

In-school models are considered formal education and training because they follow systematic and structured curricula with precise learning objectives.<sup>33</sup> In-school models are often provided by governments as well as for-profit private education and training providers.

5. **Non-school models** are programs taught outside of schools. These programs include lecture-based trainings (for example, short-term technical trainings offered by non-profit organizations or private training providers); on-the-job trainings like formal internships; and non-formal training structures such as apprenticeships. Non-formal training refers to learning skills through the experiences of others, and is not usually associated with official certification. Non-formal training is often provided by employers, family members, or NGOs in collaboration with communities or other organizations.

Cognitive, non-cognitive, and technical skills can all be developed through either in-school or non-school educational and training models.

The methodology described here has been deployed to help us understand informal economy skills and to guide our case studies in Cambodia, India, Kenya, and Senegal. First, we analyzed economic markets, then we assessed existing educational and training models and identified target populations, and finally we examined the enabling environments that appear to be most globally effective -- and in many cases necessary -- for skills development initiatives to achieve full impact.

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<sup>33</sup> Categorizing education and training delivery in terms of formal and non-formal models is standard in the skills development literature (Johanson & Adams, 2004); (International Labour Organization (ILO), 2012)

## 4. Research Findings

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This section highlights the main findings of this study, integrating our global literature review with observations and conclusions based on the four country-specific case studies.

### 4.1 Economic Market

#### *Agriculture dominates the informal economy of many developing countries*

In the countries we studied, agriculture remains a significant source of employment and income within the informal economy. For example, agriculture accounted for 59 percent of Cambodia's total employment in 2007, and 31 percent of informal economy income in India in 2005-2006.<sup>34</sup> Our research revealed low productivity levels in this sector -- especially in sub-Saharan Africa, where the "green revolution"<sup>35</sup> has not been as successful as in Asia, pointing to the need for further investment in skills development. Since Africa is home to 60 percent of the world's non-cultivated arable land -- and thus has very significant agribusiness development potential -- developing worker skills appears most urgent on this continent.<sup>36</sup>

#### *However, the four countries studied are transitioning from agriculture to manufacturing and service-based economies, but at different paces*

Although agriculture still plays a central role in the economies of all four countries we studied, the relative importance of this sector -- both in terms of employment and contribution to GDP -- is decreasing as more jobs become available in the manufacturing and service industries. However, there are noticeable differences in the pace at which countries are effecting this transition: while the government of Senegal still includes agriculture as a key component of its economic growth strategy, India and Kenya have made it national priorities to expand their manufacturing and service industries. Market needs for agricultural skills differ between these countries, largely dependent on economic priorities set by their governments.

#### *Manufacturing, a high growth/high employment sector in all four countries, remains largely informal but shows sub-segment variations*

Manufacturing employs a large proportion of informal workers and is considered a promising sector in which to accelerate growth. But there are important country distinctions at the sub-segment level. For example, Cambodia relies heavily on textile and garment industries, whereas metals, machinery, and food products are the largest manufacturing revenue generators in India.

#### *Within the service sector, tourism is booming; retail trade and crafts can benefit*

The governments of the four countries we studied all consider tourism a key pillar of their future growth strategies. Retail trade, a high-employment but largely informal sector, can also benefit from tourism booms -- especially if the entrepreneurship and basic business skills of workers are

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<sup>34</sup> (Kulshreshtha, 2011); (World Bank, 2009)

<sup>35</sup> The "green revolution" refers to improvements in agricultural productivity resulting from the introduction of high-yield varieties of grains, the use of pesticides, and improved management techniques

<sup>36</sup> (Wather, 2011)

strengthened. In addition, the crafts industry, largely informal, can also benefit by investing in enhanced technical trainings as well as in entrepreneurship and business skills.

*Since the economies of these four countries are increasingly globalized, they require improved technical and second-language education*

Despite the differences in pace at which countries' economies are globalizing, there is a shared trend in that direction. And globalization requires enhancing workforces' technical skills. Current education and training programs often focus on saturated industries, forgetting those that still have high growth and employment-expansion potential.<sup>37</sup> Several experts interviewed for this study also noted that second-language skills -- especially English and French -- are increasingly important for workers.

*Entrepreneurial and business skills are also necessary to improve productivity and drive growth within the informal economy*

Most informal workers are self-employed and thus need to be able to work along the entire value chain, functionally running their own businesses. In order to improve productivity, education and training programs should cover a wide range of business and entrepreneurial skills, including lessons in financial management, market research, and marketing.<sup>38</sup>

*Along with improved technical education, the informal economies studied here each require improved integration of cognitive and non-cognitive skills development*

Cognitive skills are regularly cited as the core tools with which new technical and non-cognitive skills are acquired: "Basic education is a prerequisite for any initiative to improve productivity through skills."<sup>39</sup> Higher literacy levels are also needed to foster innovation in the informal economy.<sup>40</sup> Non-cognitive skills such as discipline, confidence, negotiation, communication, and decision-making are especially important for the large numbers of informal workers who are self-employed and thus, by necessity, more self-reliant than most formal workers.

## 4.2 Education and Training Models

*Informal workers in the countries studied have low education levels and therefore weak cognitive skills*

In many developing countries, the "Education for All" initiative has made significant progress in providing universal basic education and developing cognitive skills; however in the four countries we studied the education levels among informal economy workers remained notably low. This data suggests cognitive skills in these four countries remain weak among informal workers. Progress is also slowed by disparities in both access to and quality of major education initiatives.<sup>41</sup>

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<sup>37</sup> (Johanson & Adams, 2004); Interviews

<sup>38</sup> Interviews

<sup>39</sup> Interviews

<sup>40</sup> Interviews

<sup>41</sup> (UNESCO, 2010)

### *Secondary education rarely reaches the informal economy, limiting opportunities to develop technical and non-cognitive skills*

Our research showed that the percentage of workers who receive secondary education in many developing countries is particularly low in the informal economy: 77 percent of the total labour force in Cambodia has no more than a primary education; 89 percent of informal workers in Senegal never started secondary school. A minimal level of education as an admission prerequisite, the long duration -- usually 2-4 years -- of in-school programs, and the tuition costs, are all access barriers for most informal economy workers.<sup>42</sup> Also, cultural divides were mentioned in our interviews as one reason in-school trainings were often only targeted at prospective workers of the formal economy.

### *In-school technical and vocational education and training focuses on technical skills development, but is perceived as inferior to academic education*

Our research and interviews revealed that in many developing countries there is a common assumption that vocational and technical education is inferior. Technical and vocational tracks are seen as an option only for those who fail in academic tracks: in India less than 3 percent of secondary students chose the vocational stream in 2004-05, and in Kenya this proportion was less than 1 percent in 2002. As opposed to academic tracks, Technical and Vocational Education and Training is seen as offering minimal value.

### *In-school programs have made little curricular progress toward integrating non-cognitive skills*

Non-cognitive skills are often undervalued in terms of their impact on employment and earnings, and are also under-measured.<sup>43</sup> In recent years, education and training programs have started to incorporate elements of counseling, often provided in informal ways, as well as specific courses in life skills and entrepreneurship.<sup>44</sup> Our analysis of secondary school curricula in Cambodia and Kenya illustrates that life skills are being introduced in some programs, primarily in lower secondary schools. This is a valuable advancement, but these topics often aren't sufficiently integrated. In general, countries have made little progress promoting programs to develop non-cognitive skills.<sup>45</sup>

### *In-school programs focus mainly on theory; few existing models balance theory and practice to maximize learning effectiveness*

Our analysis of upper and lower secondary school curricula in Kenya and Cambodia showed that lessons are mostly theoretical. Even technical subjects are taught with limited exposure to actual practice. Meanwhile, traditional apprenticeships, the most common non-school training in the informal economy, largely ignore theoretical aspects.<sup>46</sup> Partnerships between school-based programs and craftspersons' workshops, such as those implemented as "dual apprenticeships" in Mali, the Ivory Coast, Senegal, and Tanzania, combine school-based education and on-the-job training -- thus balancing theory and practice as the most effective pedagogical methods.

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<sup>42</sup> (Lange, 2010)

<sup>43</sup> (Adams, 2011)

<sup>44</sup> (Lange, 2010); Interviews

<sup>45</sup> Interviews

<sup>46</sup> (Johanson & Adams, 2004)

### *Non-school programs through apprenticeships are the primary training available to informal workers -- apprenticeships are market-driven, but have significant limitations*

The informal economy relies on non-school training to develop work skills, primarily through apprenticeships. In 2007 Senegal had 10,000 young people enrolled in TVET programs, while the motor repair sector alone had 440,000 apprentices.<sup>47</sup> Traditional apprenticeships are private contracts between a master teacher and novice student in which the master agrees to provide training for a fixed period of time in exchange for the student's labour plus small fees. This method is market-driven and self-financed, but our research and interviews show that apprenticeships have major limitations. One key problem is that the quality of training is limited by the education and knowledge of the master teacher, as well as by the tools and technologies he uses -- which are often outdated. Moreover, apprenticeships are based on a pedagogical model of observation and imitation, often ignoring theoretical understanding as well as basic technical practices like precise measuring.<sup>48</sup> Our study showed a need to reform apprenticeships in order to better integrate practice and theory. A combination of off- and on-the-job training, which includes both theory and practice, maximizes effectiveness.<sup>49</sup>

### *NGOs have successfully outreached to the informal economy through non-school programs, but most of them remain small-scale*

NGOs have tried to fill gaps in skills development offerings with small non-school programs, but most lack the capacity to scale up so that they can reach larger populations. There are only a few examples of successful large-scale programs. Nevertheless, NGOs have succeeded in reaching out to the informal economy through initiatives such as community-based trainings, and the design of larger-scale programs should draw on their expertise.

### *Monitoring and evaluation of skills development programs remains limited*

Experts agree there is a scarcity of systematic, rigorous data evaluating the impact of skills development programs. Most evaluations are conducted qualitatively or with very limited data sets. Both monitoring and evaluation need improvement.

## **4.3 Target Population**

### *Young, highly qualified new entrants in the labour market are being absorbed by the informal economy*

The capacity of the formal economy to absorb new entrants in the labour force is much more limited than that of the informal economy. For example, in 2010 in Kenya 440,600 new jobs were created in the informal economy, compared to 62,600 in the formal economy. In Senegal the size of the job pool in the formal economy has stagnated over the past 15 years. As a result, there is a large cohort of young people joining the informal economy even after completing secondary and tertiary education. This trend is particularly worrisome in Africa: in this region the proportion of youth will

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<sup>47</sup> (Wather, 2011)

<sup>48</sup> (Johanson & Adams, 2004)

<sup>49</sup> (Lange, 2010)

continue to rise. By 2030 Africa is projected to have as many young people as East Asia, and by 2050 could also exceed the youth population in South Asia.<sup>50</sup>

***Rural dwellers are largely informally employed, tending to have lower income and education levels than urban populations***

Surveys on the informal economy do not always reflect the particular realities of the rural worker. The great majority of the rural population in developing countries works in some part of the informal economy, most often in agriculture. Income, literacy rates, and educational levels tend to be lower in rural than in urban areas. In addition, in the four countries we studied, many of the urban workers employed in the informal economy are former rural dwellers who migrated to cities. Investing in developing work skills in rural areas, particularly for agricultural activities, can help contain these migration flows and offer better employment alternatives for rural populations.

***Women overwhelmingly work in the informal economy, with less education and generating lower incomes than men***

In developing countries women tend to face more barriers than men in accessing education and training programs, as well as employment opportunities. As a result, the informal economy accounts for most women's employment: in Kenya only 26 percent of working women are in the formal economy, compared to 40 percent of men. Within the informal economy, men tend to be wage-workers, whereas many women are part of global value chains and work from their homes.<sup>51</sup> Examples of common employment for women are housekeeping, agricultural activities, wholesale and retail trading, and in some countries manufacturing. Coinciding with low literacy rates and education levels, incomes tend to be much lower for women than men. Also, a large proportion of women work for no pay at all, either caring for family members or as their unpaid employees.

## **4.4 Enabling Environment**

***Better alignment of market needs and training programs is possible by engaging employers; industry and informal sector associations can help create economies of scale***

Given the nature of the informal economy, most employers do not have the resources to engage in skills development, and often lack awareness of the benefits of education and training.<sup>52</sup> Experts interviewed believe that industry and informal sector associations can help by organizing the informal economy and providing a unified voice. Our research found examples where government or other education and training providers partnered with employers to align education and training programs with labour market needs, including those in the informal economy: in India, there is a newly created public-private partnership, The National Skill Development Corporation India; in Kenya, with the help of a World Bank initiative, there is the Kenya Youth Empowerment Program.

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<sup>50</sup> (Garcia & Fares, 2008)

<sup>51</sup> (Bertulfo, 2011)

<sup>52</sup> Interviews

*In the countries studied, governments tend to focus on providing training, while a stronger case supports their engagement in implementing appropriate financing and regulation, economic incentives, and institutional mechanisms*

One expert commented, “the government often thinks about itself as the sole training provider; it has a role to play in skill development, but often this is not that of a training provider but rather that of a policymaker and finance provider.” The economic rationale for public provision of training is considerably weaker than it is for public financing of training.<sup>53</sup>

*Increasing informal economy productivity requires a holistic approach*

Raising informal economy workers’ education and skill levels can contribute to economic growth, wealth creation and added value in a developing country. However, merely investing in workforce programs doesn’t necessarily result in greater productivity. The effect skills development can have on the productivity of informal workers cannot be separated from other changes in their economic environments. A host of other factors, including capital market failures, infrastructure constraints, and outdated technology can also limit productivity.

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<sup>53</sup> (Asian Development Bank (ADB), 2004)

## 5. Potential Actions to Address Barriers and Gaps

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Based on the findings of this study, several potential actions could support better alignment of market demands with skills development programs, thus improving productivity in the informal economy, preparing people for better employment opportunities, and contributing to inclusive economic growth. Potential actions to address the barriers and gaps identified in previous sections can be grouped within three main objectives:

### 1. Reform in-school programs to better address the needs of the informal economy and enable productivity growth through the following potential actions:

- a. Reach out to prospective informal workers by
  - Incorporating flexibility in the programs in terms of entry requirements, duration, cost, and schedule, and financial support for poor families
  - Designing targeted programs for rural women to address gaps in income and education levels
  - Creating demonstration programs to showcase the impact that skills development can make on employment and income generation, with a goal of increasing awareness within the informal economy
- b. Redesign curricula to maximize education and training effectiveness by
  - Accommodating changing needs of the economy and focusing on improved technical education and training in high growth, high employment sectors as a means to transfer technical knowledge and improve productivity
  - Reinforcing programs specific to the agricultural sector, especially in rural areas
  - Providing a comprehensive toolkit of skills to informal workers, and in particular to “job-creators” (self-employed workers) that
    - expands the range of skills developed, including topics like business management, especially in upper secondary education
    - strengthens problem solving, critical thinking, and creativity skills as a means to foster innovation in the informal economy, starting at lower secondary education
    - develops non-cognitive skills like communication, negotiation and teamwork, especially in upper secondary education
    - addresses work habits like motivation and discipline, starting at lower secondary education
  - Integrating off-the-job and on-the-job education and training to maximize learning effectiveness
- c. Actively engage the labour market, in particular industry and informal sector associations, in curriculum-development and achievement monitoring

**2. Complement in-school programs with effective non-school programs through the following potential actions:**

- a. Establish linkages between formal and non-formal education and training programs to leverage the benefits of both approaches by
  - Reforming traditional apprenticeships to improve working conditions, incorporate theory education, and improve quality through master-craftsman training and certification system
  - Offering basic education programs to strengthen cognitive and critical thinking skills, to provide a foundation for more effective training
- b. Target the rural population as well as women to address gaps in income and education levels by implementing specific programs adapted to their needs
- c. Improve testing, certification, and accreditation systems for education and training programs

**3. Foster enabling environments conducive to informal economy productivity improvements through the following potential actions:**

- a. Expand government's role in facilitating connections between employers and training providers, supporting training programs financially, and defining clear quality standards along with program monitoring and evaluation
- b. Complement training interventions with appropriate economic policies, incentives, and support

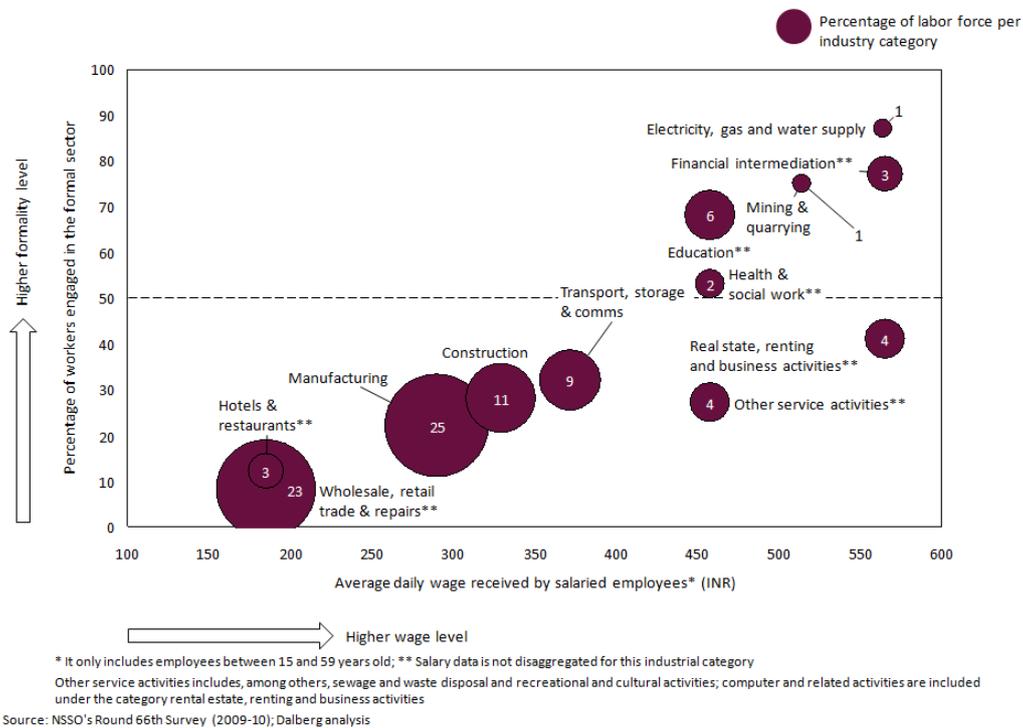
# Appendix A – India Case Study

## Economic Market

As one of the world’s fastest-growing economies, India has averaged 8 percent annual economic growth during the last five years, with a projected growth of 7 percent in 2012.<sup>54</sup> Yet nearly three-quarters of India’s working-age population work in the informal economy.<sup>55,56</sup>

Figure A.1 breaks down the non-agricultural jobs in India by sector, formality level and average wage, illustrating the vast gulf between the formal and informal economy. Typically, employment categories with higher informality levels pay the lowest, average daily wages, making it difficult to advance to the middle class. As one of the interviewees said: “There is systemic exploitation in every sector, and at the bottom is always the informal worker.”

Figure A.1: Overview of Indian economy



Also noteworthy is the fact that wholesale and retail trade and repair, manufacturing and construction labour dominate the informal economy. That largely matches what we found during our interviews: street vendors, home-based workers producing and packaging for small retailers and construction workers are among the most common jobs in India’s informal economy.

<sup>54</sup> (Confederation of Indian Industry (CII), 2009); (International Monetary Fund, 2012)

<sup>55</sup> The Indian government defines the informal economy so that it includes proprietary and partnership enterprises as well as workers pursuing subsidiary economic activities, activities for a minimum of 30 days of work in the informal economy.

<sup>56</sup> (National Sample Survey Organisation, 2010)

The government of India has identified high-growth, high-employment economic sectors – areas the government should prioritize to maintain the nation’s economic growth – including manufacturing and production, with 78 percent of workers in the informal economy; construction, with 72 percent of workers in the informal economy; and the service industry.<sup>57</sup> Manufacturing in particular has the long-term potential to become India’s strong suit: It currently is responsible for about 15 percent of the nation’s GDP and almost half of the country’s exports.<sup>58</sup> The food product, basic metals, and electrical machinery industries are responsible for the largest shares of revenue in the Indian manufacturing sector.<sup>59</sup>

At the same time, the government acknowledges the importance of its service sector, which includes wholesale and retail trade and repairs, with 92 percent of workers in the informal economy. Research traces a common path for most booming economies, from agriculture to manufacturing, before growth becomes sustained primarily through the service industry.

In order to understand fully the skills needed to ensure growth in these sectors, a detailed analysis of the different roles, activities, and skills within each sector should be conducted. Figure A.2 illustrates this type of analysis for the construction sector in India. The results of the analysis show that a combination of cognitive, non-cognitive, and technical skills is required for both skilled and unskilled workmen. Moreover, unskilled workmen, who are often more numerous in the informal economy than skilled workmen, can benefit more from developing their non-cognitive skills.

Figure A.2: Analysis of skills needs for informal workers – Building and Construction

Industry (Role)	Employers' Perceptions of Needed Skills	Skill Type			
		Cognitive (C)	Non-cognitive (NC)	Technical/Trade (T)	
Building & Construction					
	Skilled workmen	Ability to coordinate with unskilled workmen		NC	
		Ability to operate key equipment such as cranes (including loading & unloading)			T
		Ability to work at heights (for high rise buildings, especially for crane operators)		NC	
		Ability to deliver quality output			T
		Adeptness in their own trades – e.g. plastering, painting, plumbing, etc.			T
		Knowledge of construction specific areas (e.g. for a carpenter working in construction)			T
		Understand machine operations and troubleshooting (including manuals/instructions)	C		T
		Ability to comply with safety and quality measures		NC	
		Basic knowledge of construction engineering	C		T
Unskilled workmen		Ability to help mason and perform the operations of excavation, carrying, cutting, etc		NC	T
	Ability to perform manual labor intensive work; medical fitness		NC		
	Ability to comply with safety requirements and workplace practices (e.g., timeliness)		NC		
	Ability to move material as required (with charts/manually); physical strength		NC		
	Understand and execute instructions from skilled workmen /supervisors / engineers	C	NC		
	Knowledge of material preparation / concrete mixing			T	

- Cognitive skills: some needed
- Non-cognitive skills: some needed
- Technical skills: heavily needed

- Cognitive skills: some needed
- Non-cognitive skills: heavily needed
- Technical skills: some needed

Sources: National Skill Development Corporation (NSDC), 2009. "Human Resource and Skill Requirements in the Unorganized Sector - Study on mapping of human resource skill gaps in India till". India

Our research and interviews confirmed the need for a balanced set of skills for other sectors as well. In addition to enhanced technical training in manufacturing and construction, the country also needs

<sup>57</sup> (Government of India, Planning Commission, 2007)

<sup>58</sup> (Boston Consulting Group(BCG)/Confederation of Indian Industry(CII), 2010)

<sup>59</sup> (Boston Consulting Group(BCG)/Confederation of Indian Industry(CII), 2010)

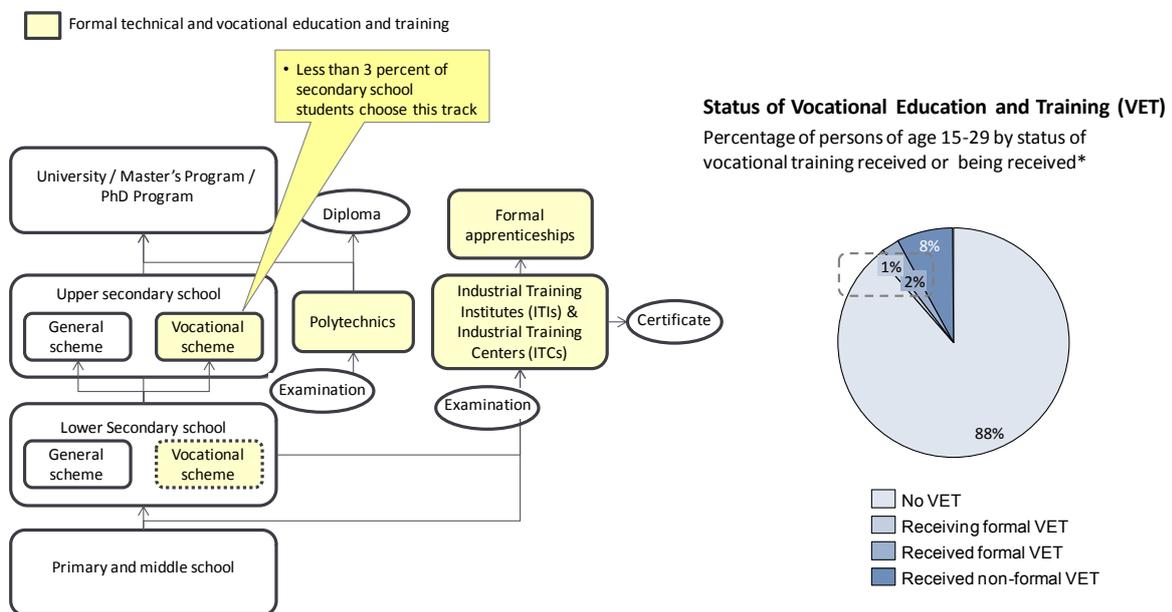
to improve “soft skills” (e.g. communication), especially for those working in the services sector, and to promote business knowledge among the large segment of informal-economy workers who are self-employed or work in their own micro-businesses.

In our interviews, experts said that it is crucial for employers to have workers with the ability to communicate clearly; yet those experts also noted relevant training programs are scarce. In a highly-competitive global market, they said, India’s long-term growth will depend on how well its workers can speak to – and be understood by – the rest of the world.

### Education and Training Models

Figure A.3 shows that the nation’s formal Technical and Vocational Education and Training (TVET) consists of three channels: vocational programs in secondary schools<sup>60</sup>, higher-level public Industrial Training Institutes (ITIs) or private Industrial Training Centers (ITCs), and polytechnics.<sup>61</sup>

Figure A.3: Structure of education and training in India<sup>62</sup>



\* Formal VET takes place in formal institutions and follows a structured training program leading to certificates, diplomas, or degrees; non-formal VET refers to acquiring the expertise to carry out an occupation through gradual exposure and significant “hands-on” experience from ancestors or other sources  
Source: National Knowledge Commission on Vocational Education and Training; NSSO’s Round 61<sup>st</sup> Survey (2004-05); Expert interviews

Yet just 2 percent of India’s young population between ages 15 and 29 have completed any of these in-school programs compared to 8 percent of young population that has received non-formal TVET, underscoring the fact that most Indian workers tend to acquire their skills on the job, outside of a school or training center.<sup>63</sup> The chief reason: Most Indians struggle to meet the formal TVET system’s admissions requirements, including entrance examinations and minimum education

<sup>60</sup> The vocational scheme is currently available only at upper secondary schools, but the government plans to offer it also at lower secondary schools

<sup>61</sup> (National Knowledge Commission, India, 2009)

<sup>62</sup> In India TVET is named as VET; both terms are equivalent in this case

<sup>63</sup> (National Sample Survey Organisation, 2005)

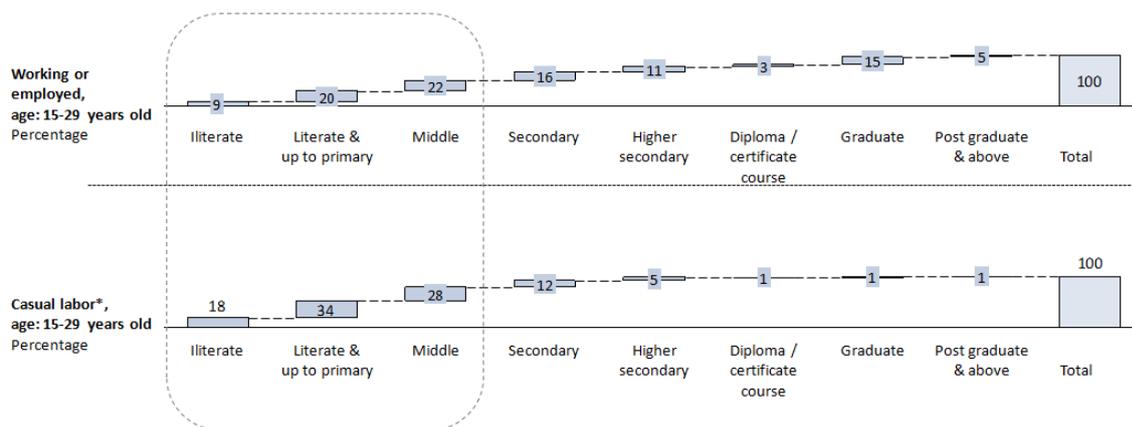
qualifications. Furthermore, from those attending secondary schools in 2004-05, only 3 percent chose the vocational scheme, highlighting the little value that most students place on this track.<sup>64</sup>

Interviews with experts also revealed significant problems with the TVET system: Its connections with employers and the private sector – relationships that could help land graduating students their first paying jobs – are weak, and its outdated curricula hasn’t adjusted to the rapidly changing needs of the labour market.

Our research found that the majority of TVET students are studying “computer trades,” while the next, most-popular areas of study are “electrical and electronic engineering trades,” “driving and motor mechanic work” and “mechanical engineering.”<sup>65</sup> Most of these students end up working for the formal economy.

In order to understand where India’s education level lies, consider Figure A.4 , which illustrates the distribution of workers, ages 15 to 29, in non-agricultural jobs according to their general education level.

Figure A.4: General education level of the labour force in India



\* It does not include those working in public works  
 Source: NSSO's Round 66th Survey (2009-2010); Dalberg analysis

In urban India, according to the research, about half of all non-agricultural workers did not attend secondary school;<sup>66</sup> for casual workers, typical of the informal economy, however, this percentage skyrockets to 80 percent.<sup>67</sup> This data suggests that India needs to reinforce basic logical and problem-solving skills among its workers – the first step toward delivering advanced training programs that can help workers improve their technical and non-cognitive skills.

Among non-governmental organizations, our research found different programs focused on holistic approaches to skill development among informal economy workers, including specific training for non-cognitive skills. For example, the National Alliance of Street Vendors in India (NASVI) offers

<sup>64</sup> (National Knowledge Commission, India, 2009)

<sup>65</sup> (National Sample Survey Organisation, 2005)

<sup>66</sup> (National Sample Survey Organisation, 2010)

<sup>67</sup> (National Sample Survey Organisation, 2010)

worker training in information technology, English fluency and leadership and negotiation workshops, among other skills (see Box 1).<sup>68</sup>

#### **BOX 1 - Negotiation training for street vendors**

NASVI organizes various types of training programs ranging from learning how to register street vendors' organizations to developing negotiation, leadership or organizational skills. Different trainings are offered for different objectives and participants.

Negotiation Skills Development Training is offered to vendor activists looking to engage in successful negotiations with institutions and agencies of governance. Participants form groups to role play assigned scenarios where negotiation is necessary.

Leadership Promotion and Negotiation Skills Development is offered to female street vendors who are taught to overcome adversities through better organization and improved negotiation and leadership skills. The training is based on the participative sharing of experiences.

Source: Interviews; <http://www.nasvinet.org/index.php>

Pratham also offers a comprehensive vocational training program that packages the provision of basic, foundational skills with market-relevant technical skills and entrepreneurship support; however this is not the core of its activities.<sup>69</sup>

### **Target Population**

In India, agriculture is still an important sector in the global economy as well as in the informal economy: 54 percent of the active population is employed in the agricultural sector, with more than 90 percent of the sector in the informal economy.<sup>70</sup>

The informal economy includes about 74 percent of non-agricultural workers in rural areas and 67 percent in cities and suburbs. However, non-agricultural activities only account for 32 percent of employment in rural areas, whereas in urban areas 92.5 percent of employment is in the non-agricultural sector.<sup>71</sup>

It is important to reinforce skill development programs in rural areas in both agricultural and non-agricultural activities because rural populations are particularly vulnerable to poverty: The data show that wages tend to be significantly lower in rural areas than in urban areas. In manufacturing, for example, the average daily salary is 290 Indian rupees (INR) in the cities, but just 155 INR in rural areas.<sup>72</sup>

We did not find types of informal employment differ significantly between rural and urban areas when agriculture is discounted: Informal workers in both areas tend to make a living in wholesale and retail trades, machinery repair, manufacturing and construction.

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<sup>68</sup> Interviews

<sup>69</sup> (Pratham, 2012)

<sup>70</sup> (FAO, 2012); (Kulshreshtha, 2011)

<sup>71</sup> (National Sample Survey Organisation, 2010)

<sup>72</sup> (National Sample Survey Organisation, 2010)

However, we did find significant gender differences between rural and urban informal employment. Indian women overwhelmingly work in the informal economy, but are concentrated in only a few sectors. For example, manufacturing is the largest employment source for rural and urban women, with higher proportions of female workers to male, followed by the wholesale and retail trade sector. There are also differences between urban and rural women: Education is a major source of employment for urban women, whereas rural women rely more on the construction sector.<sup>73</sup>

When it comes to general education, literacy rates and education levels tend to be higher for men than for women, and for urban than for rural areas. These data suggest that training programs should pay close attention to the development of basic education and thinking skills among the rural female population.<sup>74</sup>

### **Enabling Environment**

Both the government and non-governmental agencies in India recognize that the informal workforce needs major improvements to keep the country competitive in the modern economy. Accordingly, the country has taken steps to align all stakeholders with a single goal by creating links between the labour market and training providers.

One example is the National Skill Development Corporation India (NSDC), a public-private partnership established in 2010. Its goal is to bridge the gap between market demand and supply of skills by spurring the creation of large, quality, for-profit vocational institutions by providing funding, quality assurance and information systems, and “training-the-trainer” academies.<sup>75</sup>

Sector Skills Councils, coalitions that bring together industry, labour and academia, are also being established.<sup>76</sup> These initiatives attempt to address the needs of the informal economy, recognizing its potential for growth and job creation. It is still too early, however, to tell what kind of impact they are having.

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<sup>73</sup> (National Sample Survey Organisation, 2010)

<sup>74</sup> (National Sample Survey Organisation, 2005)

<sup>75</sup> (National Skills Development Corporation, 2009)

<sup>76</sup> (Confederation of Indian Industry (CII), 2009)

## Appendix B – Cambodia case study

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### Economic Market

After years of civil strife and conflict, Cambodia joined the United Nations in 1992 and elected its first democratic government in 1993. Yet even as the nation moved toward greater economic development, stability and global integration — with an average annual growth rate of 9 percent between 1999 and 2009 — many Cambodians were left behind, and low-wage, informal employment remained their only way to earn a living.<sup>77</sup>

Although estimates vary, most studies have pegged the informal economy's contribution<sup>78</sup> to Cambodia's GDP at well over half of the national GDP<sup>79</sup>. This figure has declined over the years, but nearly 90 percent of the nation's inhabitants<sup>80</sup> still make ends meet with informal jobs, including agricultural activities. Despite the very large proportion of informal workers, some experts have argued that the government historically has not paid adequate attention to the informal economy.<sup>81</sup> Experts see signs the Royal Government of Cambodia (RGC) has started to recognize the significance of the informal workforce and taken steps to improve its conditions; nevertheless, most acknowledge there is still much room for improvement.

Many Cambodians, especially those in rural communities, earn money through agricultural work; statistics show farm work accounted for 59 percent of the nation's total employment in 2007. But the prevalence of agricultural employment has declined as more jobs have become available in the service and manufacturing industries.<sup>82</sup> This trend has spurred migration of the rural population toward urban centers, with workers moving from rural to urban environments and lacking skills, education or experience to obtain formal employment and many ultimately ending up in the low-paying informal economy.<sup>83</sup>

Like many Asian nations—in which about 60 percent of informal economy workers are self-employed—self-employment also dominates the informal economy in Cambodia and accounts for 36 percent of the entire labour force.<sup>84</sup> Table B.1 shows the distribution of the nation's workforce by employment type.

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<sup>77</sup> (Economic Institute of Cambodia (EIC), 2006b); Interviews; (World Bank, 2010)

<sup>78</sup> Nationally defined as any activities which do not have a fix, identifiable postal address; where workers are self-employed; road side vendors; non availability of the data on the business through census survey; labour intensive nature of operations; quick turnover; part-time or full time work; the use of energy input from human and animal source; activities not recognized that take place in a non-structured premises, not under any regulations, license, insurance and do not pay any tax. (Becker, 2004; Heinonen 2008)

<sup>79</sup> (Economic Institute of Cambodia (EIC), 2006a); (Economic Institute of Cambodia (EIC), 2006b); (Heinonen, 2008); (Buehn & Schneider, 2011); (World Bank, 2009)

<sup>80</sup> (Economic Institute of Cambodia (EIC), 2006b) (Economic Institute of Cambodia (EIC), 2006a)

<sup>81</sup> Interviews

<sup>82</sup> (World Bank, 2009)

<sup>83</sup> (Heinonen, 2008)

<sup>84</sup> (Becker, 2004); (Economic Institute of Cambodia (EIC), 2006b); (World Bank, 2011)

**Table B.1: Distribution of Cambodia's Labour Force by Employment type (%) - 2007<sup>85</sup>**

Age 15-64	Total
<b>Employed for wages</b>	18.1
<b>Other paid employment</b>	12.5
<b>Total Paid employment</b>	30.6
<b>Self employment</b>	36.1
<b>Unpaid Family workers</b>	33.3

Skills training should address the needs of Cambodia's fast-growing service and manufacturing sectors, including the garment and tourism industries, without ignoring the agricultural sector, which still employs most rural dwellers.<sup>86</sup> In addition, about a quarter of Cambodia's self-employed workers have jobs in the wholesale and retail trade sector.<sup>87</sup> Developing their business and marketing skills will enhance growth in this sector.

Experts and Cambodian stakeholders interviewed for this study also emphasized the need to upgrade "basic literacy and numeracy skills" for informal-economy workers, many of whom have little or no education. Stakeholders also said that informal workers need much more comprehensive education and training than their formal-economy counterparts, because informal workers tend to perform a broader range of functions—from manual labour to bookkeeping to customer service—and require a wider array of problem-solving skills than typical workers in formal employment.

### **Education and Training Models**

In Cambodia, the Ministry of Education, Youth and Sports (MOEYS) oversees formal preschool, primary, secondary and tertiary education programs, and the Ministry of Vocational Education and Training oversees formal Technical and Vocational Education and Training (TVET) programs. The National Training Board was created in 1996 to coordinate the long-term development of TVET. As shown in Figure B.1, TVET programs have an average duration of 3 to 5 years, and students are required to complete lower secondary education before joining them.

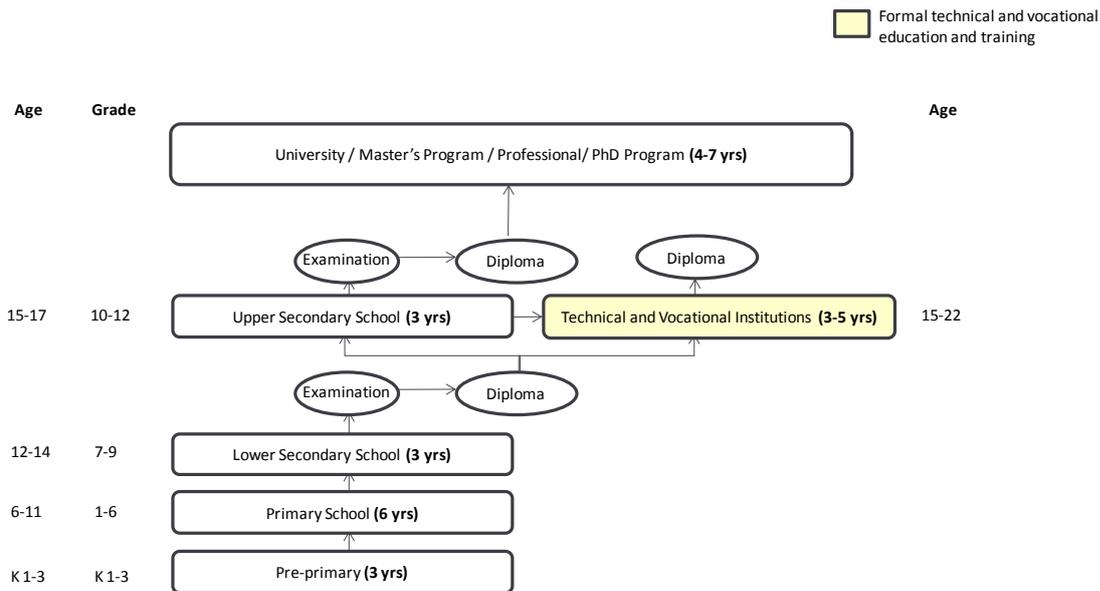
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<sup>85</sup> (Lall, 2008)

<sup>86</sup> Interviews; (Lall, 2008)

<sup>87</sup> (Lall, 2008)

Figure B.1: Structure of education and training in Cambodia



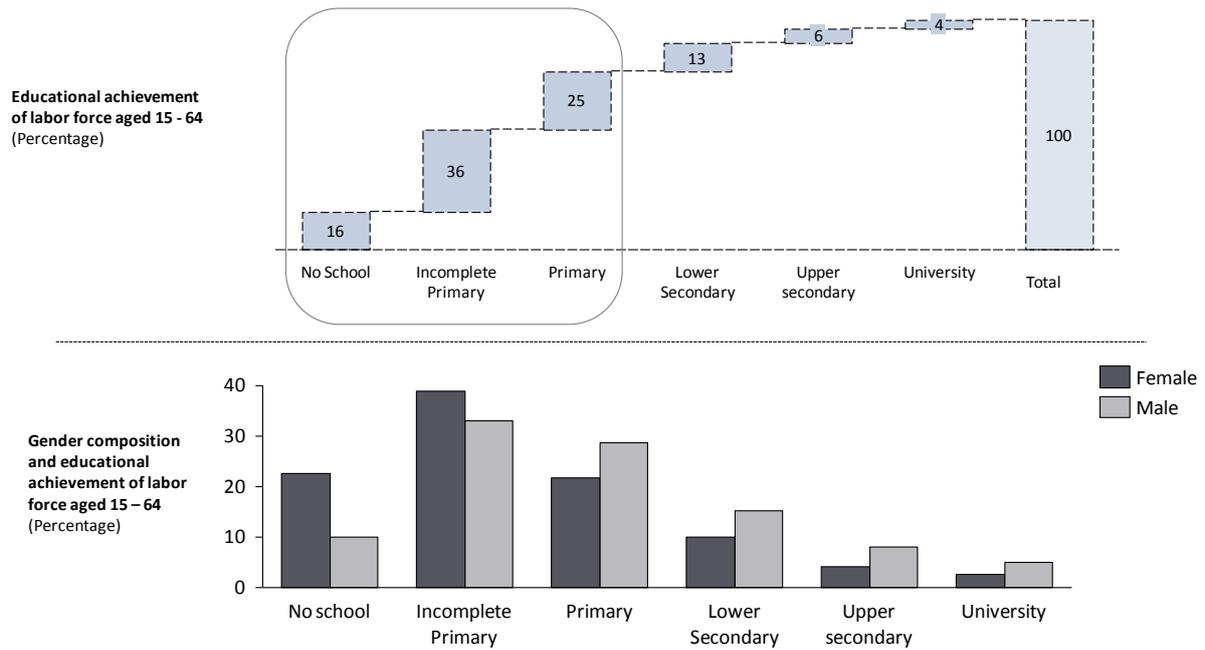
Source: Southeast Asia Ministers of Education Organization (SEAMEO). "Cambodia: National Educational System." Accessed March 14. [http://www.seameo.org/index.php?option=com\\_content&task=view&id=61&Itemid=84](http://www.seameo.org/index.php?option=com_content&task=view&id=61&Itemid=84)

Although Cambodia has a secondary education system, Figure B.2 shows that 78 percent of the Cambodian workforce between ages 15 and 64 have not completed lower secondary school.<sup>88</sup> The situation is worse for women: 57 percent of men have completed at least primary education, compared to just 38 percent of women. As a result, among the self-employed – the bulk of the informal workforce – average workers have just 4.5 years of education.<sup>89</sup> That means a large segment of the Cambodian labour force may lack basic cognitive skills, the foundation on which technical and non-cognitive skills are built. In interviews, we learned that poor children who live in urban areas typically needed to work to help support their families, an economic pressure that forces them to forego school and enter the informal workforce at a young age.

<sup>88</sup> (Lall, 2008)

<sup>89</sup> (Lall, 2008)

Figure B.2: Educational achievement and gender composition of Cambodian labour force



Source: Ashish Lall 2008. "Returns to Education in Cambodia: Results from the 2007 Socio-Economic Survey". Background paper prepared for the World Bank; Dalberg Analysis

Expert interviews reflected the broader picture of just 22 percent of the labour force having partial post-primary education of some sort (including formal TVETs), as interviewees noted a widespread lack of technical training, English literacy and soft skills. Our research shows the soft skills gap also exists among those who complete secondary education.

Figure B.3 illustrates the secondary school curricula that the government has defined for lower and upper secondary schools in Cambodia. The analysis shows that the program's bulk comprises the development of cognitive and technical skills, though there are a few courses that target non-cognitive skills, primarily in lower secondary education. Also, it should be noted that most of the hours spent developing non-cognitive skills are devoted to physical education rather than soft skills. In terms of pedagogical methods, lessons are mostly theoretical, with limited time for practice.

Figure B.3: Assessment of secondary school curricula in Cambodia

CAMBODIA Education Level	Lesson Periods (by week)			Cognitive (C) Non-cognitive (NC)	Technical/Trade (T)
	Grade 7	Grade 8	Grade 9		
<b>Lower Secondary School Subjects (3 yrs)</b>	<b>Grade 7</b>	<b>Grade 8</b>	<b>Grade 9</b>	<b>Skill Type*</b>	
Khmer Language	6	6	6	18	
Foreign Languages (English or French)	4	4	4	12	
Mathematics	6	6	6	18	
Social Studies	6	6	6		18
Sciences	6	6	6		18
Physical & Health Education	2	2	2		6
LLSP	3.5	3.5	3.5		10.5
<b>Total Lesson Periods</b>	<b>33.5</b>	<b>33.5</b>	<b>33.5</b>	<b>48</b>	<b>16.5</b>
LLSP: Local Life Skills Program (including art education) *approximate assignment based on curriculum content lesson period = 50 min					
<b>Upper Secondary School Subjects (3 yrs)</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>	<b>Skill Type*</b>	
Khmer Language	6	6	6	18	
Foreign Languages (English or French)	4	4	4	12	
Mathematics	6	4	4	14	
Social Studies	6	4	4		14
Sciences	6	4	4		14
Physical & Health Education	2	2	2		6
LLSP/EVEP	3.5	8	8		3.5
<b>Total Lesson Periods</b>	<b>33.5</b>	<b>32</b>	<b>32</b>	<b>44</b>	<b>9.5</b>
Note: Illustrative schedule; Grade 11 & 12 students may choose combination of four elective courses LLSP: Local Life Skills Program (including art education) EVEP: Elective Vocational Education Program *approximate assignment based on curriculum content lesson period = 1hr					

- **Cognitive skills:** heavy emphasis
- **Non-cognitive skills:** some emphasis
- **Technical skills:** heavy emphasis
- Lessons **mostly theoretical**; technical courses have **limited practice**

- **Cognitive skills:** heavy emphasis
- **Non-cognitive skills:** little emphasis
- **Technical skills:** heavy emphasis
- Lessons **mostly theoretical**; technical courses have **some practice**

Sources: UNESCO/IBE. 2011. "World Data on Education 2010/2011 Cambodia"; Ministry of Education, Youth and Sport, Policy for curriculum development 2005-2009; Dalberg Analysis

NGOs are also working to bridge the gap between the skills of the Cambodian informal economy and the demands of prospective employers. For instance, the Don Bosco’s Technical School, one of the largest NGO schools providing Technical and Vocational Education and Training, focuses on informal workers and entrepreneurs, offering specialized courses in electronics, vehicle repair, office administration, agricultural production, and garment manufacturing and printing.<sup>90</sup>

The quality of skills training in Cambodia is an issue, in addition to its availability. Interviewees noted that such training is often limited by the knowledge and skills of the teachers. They emphasized the need for programs that can upgrade the skills of trainers, including master craftspersons, who, through apprenticeships, provide training to many workers in the informal economy.

### Target Population

Most Cambodians still work in agriculture, and more than 70 percent of the agricultural workforce has little or no education.<sup>91</sup> These data suggest that any training program targeting this segment should start with the basics, including elementary reading and math skills.

Men in Cambodia make up 58 percent of the self-employed workforce and 65 percent of the unpaid family workers are women.<sup>92</sup> Given that these two groups—the self-employed and unpaid family workers—make up the bulk of the informal economy, it is important that skills training focused on

<sup>90</sup> (Economic Institute of Cambodia (EIC), 2006b)

<sup>91</sup> (World Bank, 2010)

<sup>92</sup> (Lall, 2008)

the informal economy take the gender divide into account, particularly by targeting women and the unpaid workforce for skills training.

Workers in both the agricultural and non-agricultural informal activities of the Cambodian economy earned significantly less than their counterparts in the formal economy.<sup>93</sup> Thus, better skills training can help reduce poverty by augmenting incomes, particularly for women in rural communities, who make up one of the groups where the income gap is the largest.

### **Enabling Environment**

In a 2006 study, the Economic Institute of Cambodia and the ILO identified three components of the informal economy to target with comprehensive policies: micro-enterprises, self-employed workers and wage-workers.<sup>94</sup>

The government has largely been responsive, developing broad and informal-economy specific policies and initiatives to extend microcredit to entrepreneurs, to provide training programs for marketing and communication, and to integrate more workers into the Ministry of Commerce's Export Promotion Initiative.<sup>95</sup> These comprehensive moves have spurred growth in both the formal and informal economies.

The government has also strengthened its partnerships to bolster holistic support for the informal economy. The Artisans Association of Cambodia (AAC), which has more than 50 member organizations, has often worked closely with the Ministries of Trade and Labor.<sup>96</sup> The Cambodia-India Entrepreneurship Development Center (CIEDC) is another example of a bilateral effort, between the Government of India and the Royal Government of Cambodia, to deliver a broad range of services that includes skills training as well as entrepreneurial support for students who establish their own enterprises (see Box 2).

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<sup>93</sup> (Lall, 2008)

<sup>94</sup> (Economic Institute of Cambodia (EIC), 2006b)

<sup>95</sup> Interviews; (World Bank, 2009)

<sup>96</sup> Interviews

**BOX 2 - Cambodia-India Entrepreneurship Development Center**

Established in 2006, the Cambodia-India Entrepreneurship Development Centre (CIEDC) is a joint cooperation programme of the Royal Government of Cambodia and the Government of India through the Entrepreneurship Development Institute of India (EDII).

During its six-year existence, the centre has offered more than 300 training programs for more than 5,900 participants. over the centre offers more than 90 different skill courses in areas including sewing, air conditioner and phone repair, hair dressing, typing, computer skills, graphic design, mushroom growing. CIEDC also runs specialized programs such as the Rural Entrepreneurship Development Program, Accounting for Small Business Owners, SME Management, and Use of English in Business Communication.

CIEDC trainees have successfully launched their enterprises. CIEDC Trainers also provide necessary post-training counselling, assistance in the loan application process, procurement of machinery/equipments, and business plan preparation.

Source: Cambodia India Entrepreneurship Development Center (CIEDC), brochure

## Appendix C – Senegal case study

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### Economic Market

Senegal's informal economy, including traditional farming, is estimated to generate about half of the country's GDP and to account for 90 percent of the nation's labour force.<sup>97</sup> Furthermore, the informal economy continued to grow in recent years: According to national accounting figures, this segment of the economy was responsible for roughly 97 percent of the new jobs created between 1995 and 2004.<sup>98</sup>

The Youth Employment Network and the International Youth Foundation conducted a joint study in 2009 to examine the current and future workforce skills necessary to the country's economic growth.<sup>99</sup> A survey of 378 private companies, randomly selected from both the formal and informal economies,<sup>100</sup> confirmed that agriculture dominates the informal economy. Experts interviewed for this report also emphasized the need to invest in training agricultural workers, given the relevance of this group in Senegal's economy.

The 2009 survey also found that the nation's trade and artisan sectors, as well as manufacturing, agribusiness and transportation industries, have the most potential to create new jobs in the informal economy. Nevertheless, this list should only be interpreted as suggestive of areas in need of increased training; further validation is necessary because both available data and the sample size of the enterprise survey were limited.

A focus on manufacturing, the artisan sector, and agribusinesses is in line with the government's economic policies; Senegal's Accelerated Growth Strategy (SCA) includes agriculture, agro-industry, tourism, textiles and clothing, and crafts as promising areas for accelerated economic growth.<sup>101</sup> Of these sectors, two have a high proportion of informal enterprises: 88 percent of the crafts industry is informal, as is 60 percent of the textiles and clothing industry.<sup>102</sup>

In addition, the African Economic Outlook identifies the construction sector as a key driver of the country's growth process and recommends strengthening its skills training, for it comprises primarily formal enterprises that subcontract informal workers.<sup>103</sup>

Along with indentifying the need for improved technical skills, the 2009 study on labour needs in Senegal concluded that employers demand workers who can think independently, communicate well, and speak a second language, and who ideally have life skills such as self-discipline, organization, and the ability to work within a team.<sup>104</sup>

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<sup>97</sup> (OECD, 2009); (AfDB/African Development Fund, 2010)

<sup>98</sup> (Échevin & Murt, 2009)

<sup>99</sup> (Youth Employment Network/International Youth Foundation, 2009)

<sup>100</sup> (Youth Employment Network/International Youth Foundation, 2009)

<sup>101</sup> (Youth Employment Network/International Youth Foundation, 2009)

<sup>102</sup> (Youth Employment Network/International Youth Foundation, 2009)

<sup>103</sup> (AfDB/OECD, 2008)

<sup>104</sup> (Youth Employment Network/International Youth Foundation, 2009)

Finally, our expert interviewees said Senegal needs to strengthen its workers' entrepreneurial skills and business acumen, thus bridging a knowledge gap that is perceived as a major limitation to informal enterprise growth. But any plans to "train up" the workforce, they added, must be coupled with access to capital investment and finance to ensure economic growth.

### Education and Training Models

Our research revealed that formal education and training programs in Senegal are limited: Instructors don't focus on critical thinking or communication skills, do not always show students how classroom theories apply to real-world contexts, and often are forced to teach from outdated materials. Also, it is common to find mismatches between skills supply and labour market needs.<sup>105</sup>

A potential explanation for this mismatch is that young people are often attracted to skills training in areas with which they are more familiar and comfortable. Meanwhile, they are not considering other jobs that the labour market needs to fill,<sup>106</sup> underscoring a potential need for career guidance.

Figure A.3 shows the structure of in-school education and training in Senegal. However, very few informal workers get in-school education and training in the first place, and what skills they do have are mostly learned on the job. In 2007, Senegal had 10,000 young people in Technical and Vocational Education and Training, while the motor repair sector alone had 440,000 traditional apprentices.<sup>107</sup>

In Senegal, higher technical and vocational education diploma courses or certificates such as BTS (see Figure C.1) are rare and mainly geared to employment in industry or hotel and restaurant trades.<sup>108</sup> More common are short-term, intensive courses. The national office for vocational training, in collaboration with training centres, offers free, short-term training targeting craftsmen's associations and, to a lesser extent, individuals. Between 1992 and 2005, approximately 4,440 people every year received skills training and/or refresher courses in the fishing, livestock and agriculture sectors or in fields often related to the informal economy such as family and social economics, crafts, literacy, and the processing of local cereals, fruit, and vegetables.<sup>109</sup> However, the number of people attending such training is still small in relation to the size of the informal labour force.

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<sup>105</sup> Interviews; (International Youth Foundation (IYF), 2011)

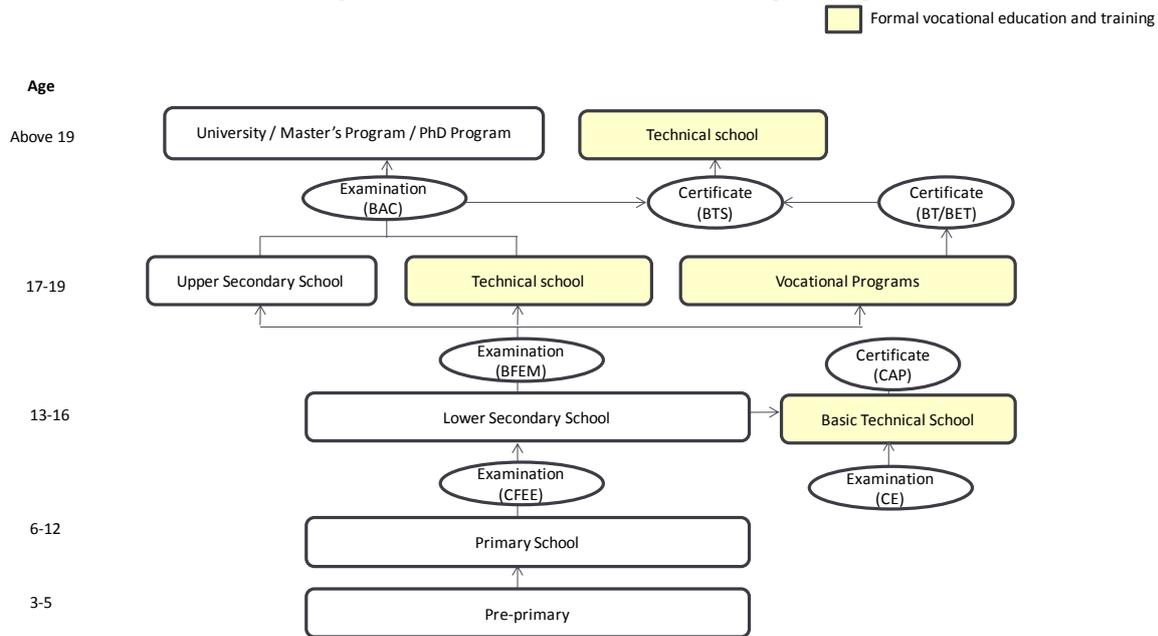
<sup>106</sup> Interviews; (International Youth Foundation (IYF), 2011)

<sup>107</sup> (Wather, 2011)

<sup>108</sup> (Hartl, 2009)

<sup>109</sup> (AfDB/OECD, 2008)

Figure C.1: Structure of education and training in Senegal



Source: International Bureau of Education (IBE), World Data on Education - Senegal, 7th edition, 2010/11, Revised version, November 2010; Association of African Universities, Online Guide to Higher Education in Africa, Senegal, 2009/2010, website [http://guide\\_beta.aau.org/country.php?cid=40](http://guide_beta.aau.org/country.php?cid=40), Access Date: March 26, 2012; Dalberg Analysis

Regarding non-school programs, our research revealed several government and non-governmental organizations are working to reform traditional apprenticeships. They have three core goals: to improve working conditions and regulate hours, to establish dual-track programs that combine on-the-job and classroom training (see Box 3), and to encourage the master craftsmen who teach apprentices to seek more advanced training themselves.

### BOX 3– Dual apprenticeship

Dual apprenticeships are based on a working partnership between a formal training institution responsible for providing theoretical training, and a craftsman’s workshop that permits the practical acquisition of professional skills. The idea of combining school- and enterprise-based learning through dual apprenticeships is an old one. In Germany, compulsory attendance to complementary theory courses in schools was introduced by law in 1938. Today, dual apprenticeship remains the primary route to skills in the country.

Different initiatives in Mali, Ivory Coast, Senegal and Tanzania are implementing reformed models of the traditional apprenticeship scheme. However, these schemes seem to be underperforming primarily due to lack of funds and problems with integration into the existing TVET system.

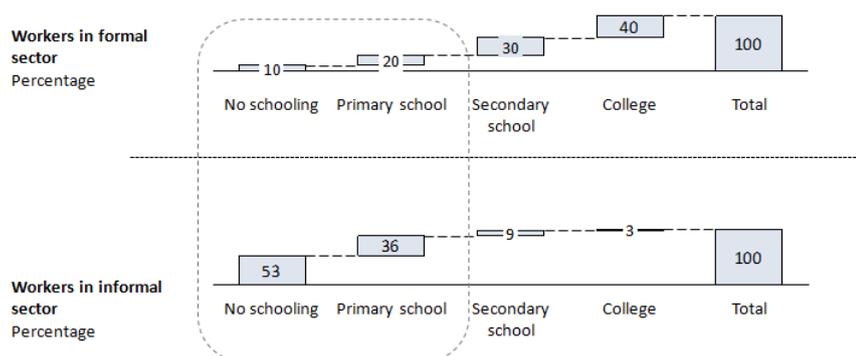
Source: ILO, “Upgrading informal apprenticeship: a resource guide for Africa” (2012); Richard Walther, “Building Skills in the Informal Sector” (2011)

An Lux-Development evaluation of approaches to reforming traditional apprenticeships in Senegal concluded that none of these approaches is better than the other: programs striving toward just one of these three goals have both benefits and limitations. Improving traditional apprenticeships in Senegal will require broad reforms that address these three goals as well as a myriad of aspects,

including the creation of a new regulatory environment and the establishment of a system to certify and monitor apprenticeships.<sup>110</sup>

At the same time, basic education of informal workers is another challenge in Senegal: Almost 90 percent have no schooling or just primary school education. Figure C.2 illustrates the education gap between Senegalese in the higher-paid, more formal workforce and those who earn less money in the informal economy. A 2003 survey showed that 53 percent of informal economy workers have had no schooling at all, compared with just 10 percent of workers in the formal economy.<sup>111</sup>

Figure C.2: General education level of the labour force in Senegal<sup>112</sup>



Source: Damien Échevin and Fabrice Murtin, "What Determines Productivity in Senegal? Sectoral Disparities and the Dual Labor Market" (2008)

## Target Population

Lately, the share of young people working in the informal economy in Senegal has been growing, and the trend is expected to continue in the future. An estimated 100,000 Senegalese newly enter the job market each year, more than half of whom have never attended school.<sup>113</sup> Of this 100,000, fewer than 30,000 formal, private-sector employment contracts are recorded annually by the labour statistics unit.<sup>114</sup> Data show that the size of the job pool in the formal economy has stagnated over the past 15 years, while the informal economy has demonstrated a greater capacity to absorb workers.

In terms of gender, our research revealed significant differences. Women rely more heavily on the informal economy for nonfarm income. Moreover, poorly educated women undertake the most precarious activities, usually self-employed in the household with the lowest earnings.<sup>115</sup> The joint study conducted by the Youth Employment Network and the International Youth Foundation found that formal enterprises appear to have unwritten recruitment policies with regard to gender:

<sup>110</sup> (Lux-Development, 2009)

<sup>111</sup> (Échevin & Murt, 2009)

<sup>112</sup> This study defines the informal economy as "all units of production that are not administratively registered and/or do not have written accountancy." This definition is in line with ILO's guidelines in that it is based on units of production; however it excludes informal workers of formal enterprises.

<sup>113</sup> (AfDB/OECD, 2008)

<sup>114</sup> (International Youth Foundation (IYF), 2011)

<sup>115</sup> (AfDB/African Development Fund, 2010)

Employers valued physical strength and shared the view that women needed to be home by a certain time and hence could not perform many jobs that required extended hours of work.<sup>116</sup> The low literacy rate of women compared to men—56 percent for female youths and 74 for male<sup>117118</sup>—creates a further barrier for women to improve their living conditions.

We also found that men and women are involved in significantly different types of employment: young women work primarily in housekeeping – especially in urban areas – gardening, small commerce and agriculture, while young men work in carpentry, masonry, mechanics, fishing and some gardening.<sup>119</sup>

Finally, those working in the informal economy come predominantly from rural areas; Rural poverty and limited access to infrastructure and basic services have stimulated migrations to urban areas.<sup>120</sup>

### **Enabling Environment**

The experts interviewed agree that the informal economy suffers from a lack of structure and organization, which can be addressed by industry and sector associations. These associations provide additional leverage for the informal economy to negotiate with the government and other education and training providers and a channel to voice their concerns. It was also suggested that these organizations can, in particular, play a role in standardizing informal workers' profiles and skills needs.

Finally, experts also highlighted the need for the government to acknowledge that the informal economy is an integral part of Senegal's economic ecosystem and that it requires targeted policies. For example, the lack of investment and the limited access to capital in the informal economy were identified as primary constraints to improving productivity and employment opportunities in this segment of the economy.

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<sup>116</sup> (Youth Employment Network/International Youth Foundation, 2009)

<sup>117</sup> Young people is defined as the population segment between 15 and 24 years old

<sup>118</sup> (UNICEF Senegal Statistics 2005-2010, 2012)

<sup>119</sup> (UNICEF Senegal Statistics 2005-2010, 2012)

<sup>120</sup> (World Bank, 2011)

## Appendix D– Kenya case study

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### Economic Market

Overall, the Kenyan economy is on an upward trajectory and is currently forecast to grow by 5.5 percent in 2012, which is slightly higher than the sub-Saharan Africa region<sup>121</sup>. With the adoption of a new constitution and the government's Kenya Vision 2030 Program, there is renewed focus on sustained national economic and social development<sup>122</sup>. The program's strategy identifies the improvement of manufacturing and service industries, rather than agriculture, as a key priority, though agriculture constituted 23 percent of the GDP and employed 56 percent of the workforce in 2009<sup>123</sup>. Industry constituted 15 percent of GDP, of which two-thirds was manufacturing, while services, mostly comprising informal sector activities, accounted for the remaining 62 percent of GDP. The contribution of agriculture to GDP shrunk to 19 percent in 2010 and that of the service sector grew to 67 percent<sup>124</sup>.

The informal economy of Kenya, called Jua Kali (hot sun) in Kiswahili, first received international prominence when the ILO's employment mission to Africa in 1972 reported that this segment of the economy had not only persisted but had grown against severe obstacles<sup>125</sup>. Recent studies of the informal economy in Nairobi have shown that its growth over the last decades is due primarily to formal enterprises' informal engagement of a significant share of the growing labour force, who consequently lack social and legal protection<sup>126</sup>. The informal economy, including agriculture, accounts for 80.6 percent of total employment, and in 2010 created 440,600 new jobs, compared with 62,600 new jobs in the formal economy.<sup>127</sup> In non-agricultural urban activities, more than 60 percent of workers are engaged in informal employment<sup>128</sup>.

The main sectors driving economic growth in 2010 were agriculture and forestry, wholesale and retail trade, transport and communication, manufacturing, and financial intermediation<sup>129</sup>. In terms of contribution to national GDP in absolute terms, the agriculture and wholesale and retail trade sectors, which traditionally employ a large portion of the informal workers, grew at 6.3 percent and 7.8 percent respectively.<sup>130</sup> Data on urban, informal, non-agricultural workers confirm that nearly 40 percent of informal workers are engaged in trade, followed by a quarter in non-domestic private services, and 10 percent in domestic services<sup>131,132</sup>. Regarding manufacturing, the sub-sector that in 2010 experienced the highest growth rate in terms of GDP contribution and employment was the

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<sup>121</sup> (AfDB/OECD/UNDP/UNECA, 2011)

<sup>122</sup> (National Economic and Social Council of Kenya (NESC), 2011)

<sup>123</sup> (National Economic and Social Council of Kenya (NESC), 2011); (World Bank, 2010)

<sup>124</sup> (World Bank, 2010)

<sup>125</sup> (International Labour Organization (ILO), 1972)

<sup>126</sup> (Bockquier, 2005)

<sup>127</sup> (Kenya National Bureau of Statistics (KNBS), 2011)

<sup>128</sup> (Budlender, 2011)

<sup>129</sup> (Kenya National Bureau of Statistics (KNBS), 2011)

<sup>130</sup> (Kenya National Bureau of Statistics (KNBS), 2011)

<sup>131</sup> The term domestic services refers primarily to cleaners and domestic workers

<sup>132</sup> (Budlender, 2011)

leather and footwear industry<sup>133</sup>, which has a large number of informal workers.<sup>134</sup> Other sub-sectors that experienced growth in 2010 were the non-metallic minerals, rubber and plastic products, and food-processing industries.<sup>135</sup> Thus, training programs aimed at increasing the productivity of the informal economy should emphasize technical skills for the agricultural and manufacturing sectors as well as improved business skills for street vendors who form a significant part of the informal trade sector.

During our interviews, experts also emphasized, as one put it, that “in Kenya, there is a competency gap between what employers look for and what skills youth have; the skills most needed by the informal economy are life skills and business skills.”

### Education and Training Models

In 2005, the Government of Kenya introduced major reforms in education and training that are reflected in the Sessional Paper No. 1 of 2005, *Policy Framework for Education, Training and Research*. Technical and vocational education was formalized and the term Technical, Industrial, Vocational and Entrepreneurship training (TIVET) was adopted, reflecting a desire for increased association of TIVET with industry and entrepreneurship<sup>136137</sup>. A new structure was proposed and adopted for education and training, shown in Figure D.1. As part of the reforms, vocational coursework was discontinued in primary and academic secondary schools between 2002 and 2005<sup>138</sup>. In Kenya, the Ministry of Education (MoE) oversees primary and secondary academic education, while the Ministry of Higher Education, Science and Technology (MoHST) oversees technical education and training, including most public and private TIVET institutions, tertiary and higher education<sup>139</sup>.

The introduction of the government’s free primary education (FPE) has resulted in significant improvement in primary enrollment and completion rates<sup>140</sup>. In 2009, primary enrollment stood at 88 percent, with 49 percent of students comprising girls<sup>141</sup>. Based on reported primary completion rates, we can estimate that between 65 and 70 percent of the future labour force is receiving basic cognitive education in literacy and numeracy, although this provides no indication about the quality of education received<sup>142</sup>.

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<sup>133</sup> (Kenya National Bureau of Statistics (KNBS), 2010)

<sup>134</sup> (Gulyani, 2006)

<sup>135</sup> (Kenya National Bureau of Statistics (KNBS), 2010)

<sup>136</sup> (Ministry of Education, Kenya, 2008)

<sup>137</sup> (Palmer, What Room for Skills Development In “Post-Primary Education”? A Look at Selected Countries, 2007)

<sup>138</sup> (Ministry of Education, Kenya, 2008)

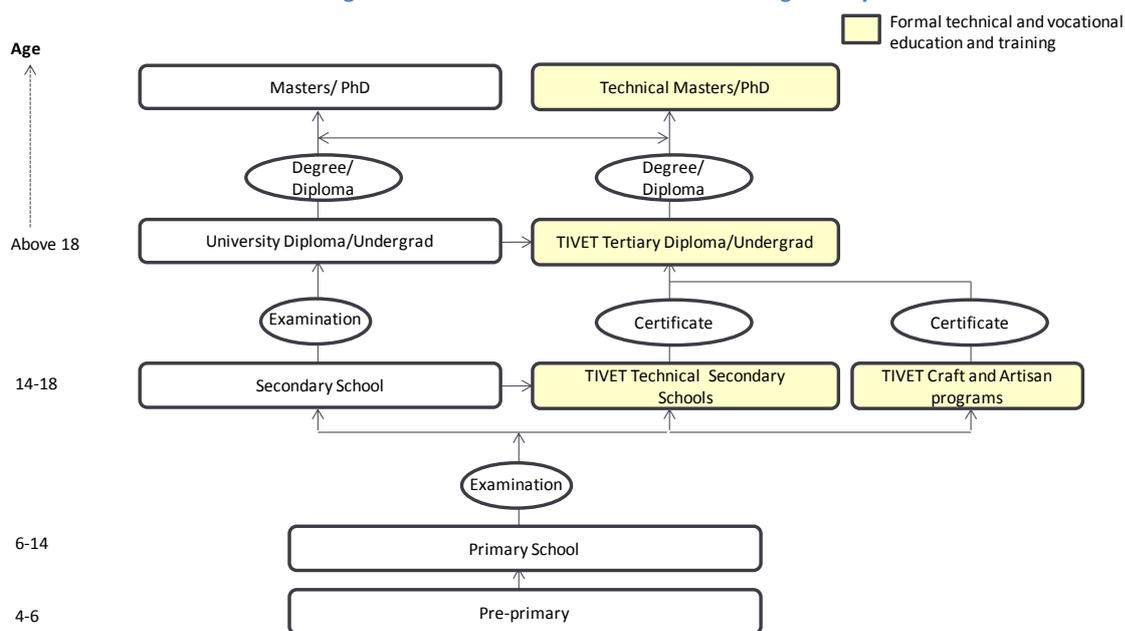
<sup>139</sup> (International Bureau of Education (IBE)/UNESCO, 2011)

<sup>140</sup> (Ministry of Education, Kenya, 2008); (AfDB/OECD/UNDP/UNECA, 2011)

<sup>141</sup> (World Bank, 2010)

<sup>142</sup> (Ministry of Education, Kenya, 2008); (AfDB/OECD/UNDP/UNECA, 2011)

Figure D.1: Structure of education and training in Kenya



Source: Ministry of Education (MoE), Kenya. 2008. "The Development of Education – National Report of Kenya"; Dalberg Analysis

In terms of the skills being developed at secondary schools, Figure D.2 shows an illustrative example of the secondary school curricula defined by the government in Kenya prior to the 2002 reform. The analysis of the skills being supplied at secondary schools is based on this curricula because no other data was available; nevertheless, later curricula reforms have focused primarily on creating a separate technical and vocational stream by removing applied/practical skill subjects (technical skills). Therefore, our conclusions in terms of cognitive and non-cognitive skills should still hold.

The analysis shows that the development of cognitive and technical skills is the bulk of the program; the only course related to non-cognitive skills is physical science. In terms of pedagogical methods, lessons mostly rely on theoretical teaching with limited time for practice. However, as a positive note, it should be acknowledged that business education is included in the curriculum.

Figure D.2: Assessment of secondary school curricula in Kenya

KENYA Education Level	Hours per week	Skill Type*		
		Cognitive (C)	Non-cognitive (NC)	Technical/Trade (T)
<b>Secondary School Subjects (4 yrs)</b>	<b>Grade 7</b>	<b>Skill Type*</b>		
English	4.7	4.7		
Kiswahili	4	4		
Mathematics	4.7	4.7		
Biology	3.3			3.3
Biological science	4			4
Physics	3.3			3.3
Chemistry	3.3			3.3
Physical science	2		2	
Applied/practical skills subjects	3.3			3.3
Cultural subjects, business education	2.7			2.7
<b>Total Lesson Periods</b>	<b>35.3</b>	<b>13</b>	<b>2</b>	<b>20</b>
<i>*approximate assignment based on curriculum content</i>				
Note: Although this curriculum was modified in 2002 and 2008, changes mostly affected applied / practical skills subjects but not cognitive skills development A newer educational structure and curriculum was proposed under Kenya Vision 2030, but lesson period details are not yet available.				

- **Cognitive skills:** heavy emphasis
- **Non-cognitive skills:** little emphasis
- **Technical skills:** heavy emphasis
- Lessons **mostly theoretical**; technical courses have **limited practice**

Sources: Ministry of Education, 2008. "The Development of Education – National Report of Kenya"; Ministry of Education (MoE), Kenya. 2012. "Task Force On The Re-alignment Of The Education Sector To The Constitution Of Kenya 2010"; Dalberg Analysis

At the secondary and post-secondary level, the new educational structure illustrated in Figure D.1 ensures that learners in both academic and TIVET channels have equal opportunities for advancement to higher learning and certification. Although this new system provides flexible mechanisms for entry and re-entry between channels, one major challenge of the disaggregation of academic and TIVET education is that without transitioning students into the TIVET channel or a significant increase in enrollment in TIVET programs, very few graduates will receive vocational and technical skills training. Data show that when vocational programs were offered in academic secondary schools in Kenya, less than 1 percent of students enrolled in these programs—compared with 6.1 percent in other sub-Saharan countries, 8 percent in developing countries and 18 percent in developed nations<sup>143144</sup>.

A primary barrier identified by stakeholders and experts as affecting TIVET education is the widespread perception that academic tracks and university-level degrees are most beneficial<sup>145</sup>. Our research confirmed that Kenyan society has a poor opinion of TIVET and does not fully appreciate its value: TIVET is regarded as a second chance for those who have failed in academic education.<sup>146</sup> In addition, interviewed stakeholders emphasized that producing graduates with industrially relevant skills is a challenge. Although the government reforms of TIVET aimed to increase sensitivity to

<sup>143</sup> (Palmer, What Room for Skills Development In "Post-Primary Education"? A Look at Selected Countries, 2007)

<sup>144</sup> The study only included data on academic secondary education

<sup>145</sup> Interviews

<sup>146</sup> (UNESCO-UNEVOC, 2009)

industry needs, our research found few examples of programs that have been designed with such sensitivity in mind.

The Don Bosco Boys' Town, a non-profit TIVET institution, is one of the few organizations to redesign its curriculum to better prepare students for the labour market and to accommodate changing industry trends.<sup>147</sup> One innovation implemented at Don Bosco is the establishment of "production workers," or higher-level students who produce materials for clients while still in school. This ensures that student skills are developed to match industry needs. More information on Don Bosco is presented in Box 4.

**BOX 4– Don Bosco Boys' Town**

Founded in 1985, Don Bosco Boys Town is a technical school in Nairobi that has trained more than 5,000 graduates since its inception. The school trains more than 200 students each year, with 168 in residence. Students are aged 18 to 22 and come primarily from very poor families. Since 2000, the institution has been training female students as well.

Don Bosco has redesigned the Ministry of Labor's Directorate of Industrial Training (DIT) curriculum to accommodate changing trends within TIVET by emphasizing practical skills and non-traditional courses such as business training, secretarial training, life skills and HIV/AIDS awareness. Courses offered to students include carpentry and cabinet making, electrical wiring and fitting, masonry and plumbing, welding and fitter tuning, tailoring and dress making, secretarial classes, computer training, screen printing and sign writing, casting, and motor vehicle mechanics, which has the highest enrolment rate.

Of the school's graduates, 30 percent have received employment through its job placement office, which maintains relationships with 450 companies across the nation, and 20 percent have become self employed.

Source: Interviews; <http://www.boystownnairobi.org/>

The Ministry of Labor's Directorate of Industrial Training (DIT) is responsible for TIVET's curriculum development and for Kenya's National Government Trade Test, a competency exam that every student in a technical institution has to take. The curriculum and the exam are divided in three grade levels (i.e., grade III, grade II, and grade I) and students are required to graduate from one level before moving to the next. An administrator of a TIVET institution reported that employers are increasingly demanding higher DIT grade certification from graduates, reflecting their dissatisfaction with the level of skills currently available.

In addition, although East African apprenticeship systems are less structured and organized than those in West Africa, they still play a significant role in skill development for the informal economy.<sup>148</sup> Different initiatives have piloted programs to reform and improve the effectiveness of this training method. For example, the Strengthening Informal Training and Enterprise (SITE) project, run by a collaboration between non-profits, provided training to master craftspersons to improve

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<sup>147</sup> Interviews

<sup>148</sup> (Haan, 2002)

their skills and ability to train apprentices.<sup>149</sup> Informal associations proved very useful in creating interest and awareness about this program.

## Target Population

In Kenya, the roles of men and women are still strongly differentiated and driven by gender stereotypes, especially in rural areas.<sup>150</sup> This is reflected in educational practices and in the work place. In Kenya, although there are no significant gender discrepancies in enrolment rates in secondary schools – 54 percent boys and 46 percent girls<sup>151</sup> in 2008 – there is a large gender gap for TIVET education: Women made up only 5 percent of enrolled students in 2008.<sup>152</sup> Moreover, most women enrolled in TIVET are concentrated in subjects such as agriculture and home science, with very few following courses in construction, mechanics, metalwork or woodwork.<sup>153</sup>

Gender differences are also evident in the labour market: 40 percent of active men work in the formal economy, but only 26 percent of active women.<sup>154</sup><sup>155</sup> In addition, 77 percent of women are self-employed but not employers, compared to 57 percent of men.<sup>156</sup> Data also shows a gender gap in terms of earnings: In urban non-agricultural work, the average earnings for men are 1.6 times the average for women; the gap gets even wider for informal urban non-agricultural work, where the average earnings for men are 1.7 times that of women.<sup>157</sup>

Our research has also revealed significant gender differences in type of employment: 48 percent of all female informal workers in urban non-agricultural activities are in trade, compared to 30 percent of men. In contrast, 13 percent of men work in construction and 8 percent in manufacturing in the informal economy, but only 2 percent of women are employed in total in these sectors.<sup>158</sup>

## Enabling Environment

In Kenya, the informal economy has long been disorganized. However, in recent years a trend toward greater organization has emerged and the National Informal Sector Coalition (NISCO) has been created to provide a single, clear voice to this segment of the economy and to defend its interests.<sup>159</sup> As pointed out in our interviews, industry and informal sector organizations can play an important role in creating links between the informal economy and training providers, creating opportunities for practical training and aligning market needs with skills development programs.

The Kenya Youth Empowerment Program, a project funded by the World Bank and implemented by the Kenya Private Sector Alliance (KEPSA) in collaboration with the Kenyan government, is an effort to

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<sup>149</sup> (International Labour Organization (ILO), 2008)

<sup>150</sup> (UNESCO-UNEVOC, 2009)

<sup>151</sup> (UNESCO, 2010)

<sup>152</sup> (AfDB/OECD, 2008)

<sup>153</sup> (UNESCO-UNEVOC, 2009)

<sup>154</sup> (Budlender, 2011)

<sup>155</sup> This study classifies a worker as formal if he or she works for a formal enterprise. This definition overestimates the number of formal workers as it does not consider informal employment in formal enterprises

<sup>156</sup> (Budlender, 2011)

<sup>157</sup> (Budlender, 2011)

<sup>158</sup> (Budlender, 2011)

<sup>159</sup> (Orwa, 2007)

create these types of links. This project is piloting a private-sector internship and training program for disadvantaged young women and men.<sup>160</sup> All sectors are represented and a large share of placements has been committed to the informal economy.<sup>161</sup> In addition to the internships, the program has also created partnerships with training providers, such as the Kenya Institute of Management, to provide core business training.<sup>162</sup> The objective is to ensure that at least 50 percent of the interns find work or start their own businesses within six months of an internship's end. The project will last for a four-year period, ending in December 2014.

In addition, the Kenyan Task Force on Realignment of the Education Sector with the Constitution 2010 and Vision 2030 recommends public-private partnership in education to reduce public spending and increase access, equality, and equity of education.<sup>163</sup> Therefore, there is an opportunity for the country to partner not only with private education and training providers, but also with private-sector associations to align education and training programs with market needs.

Finally, our research has also revealed a program in Kenya focused on the financing aspect of skill development, an essential piece of the puzzle. The Jua Kali Voucher Program piloted an intervention to make training more accessible through financial support to trainees. The idea behind the vouchers was to empower recipients with the capacity to buy training in the open market, promoting competition and efficient delivery of training services. In Kenya, recipients primarily demanded training from master craftspersons. The voucher program was not subject to a rigorous empirical evaluation, but it was considered a success. Unfortunately, it was complex and costly.<sup>164</sup>

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<sup>160</sup> (Kenya Private Sector Alliance (KEPSA), 2011a)

<sup>161</sup> (Kenya Private Sector Alliance (KEPSA), 2011b)

<sup>162</sup> Interviews

<sup>163</sup> (Ministry of Education, Kenya, 2012)

<sup>164</sup> (UN Economic Commission for Africa, 2005)

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