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# **Workforce Development in Developing Countries:**

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## **A Framework for Benchmarking**

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## Introduction

1. Many developing countries have invested in education and training and are making good progress in expanding coverage at all levels; they are also paying more attention to learning outcomes, to the broader array of skills beyond academic achievement, and to technical and vocational education and training.<sup>1</sup> Yet, a growing pool of better educated labor has not always produced the expected results. Indeed, many developing countries find themselves in a paradoxical situation where large numbers of well-educated graduates are unable to find jobs commensurate with their education and training while employers complain of skills shortages and mismatches. Viewed from a longer term perspective, an added disappointment is that these countries, especially the poorest ones, continue to find it difficult to diversify their economies and to acquire the business and technological capabilities required to produce and sell more sophisticated goods and services. Unable to move up the value chain, they are stuck in a low-skills trap and achieve, at best, only moderate rates of economic growth and poverty reduction. The persistence of these problems and their growing importance over time suggest that workforce development in most developing countries is not functioning as well as might be desired.<sup>2</sup>

2. This paper articulates a framework and approach to support the World Bank's assistance to its partner countries with regard to the challenges of workforce development.<sup>3</sup> The broader concept is the World Bank's Skills toward Employability and Productivity<sup>4</sup> framework which sets forth a holistic model encompassing five components for human development to support economic and social progress: (a) starting right in early childhood; (b) laying a strong foundation in basic and secondary education; (c) building and upgrading job-relevant skills; (d) fostering innovation and entrepreneurship; and (e) matching skills demand and supply. Workforce development focuses mainly on the third of these five components. The project is being implemented under the World Bank's broader initiative on System Assessment and Benchmarking for Education Results (SABER)<sup>5</sup> and shares the initiative's goals of creating diagnostic tools for assessing how well a given education and training system is performing in light of global good practice and what might be done to obtain better results. The initiative's operational application is to inform the design of country-level programmatic interventions for possible support by the World Bank and other donor partners.

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<sup>1</sup> One reflection of the increasing attention paid to learning outcomes is the growing prevalence of international projects to measure learning outcomes (e.g., the Trends in International Mathematics and Science Study (TIMSS), the Program for International Student Assessment (PISA), and the Programme for the International Assessment of Adult Competencies (PIAAC).)

<sup>2</sup> A recent review of the problems associated with workforce development through technical and vocational education and training can be found in Asian Development Bank (2009).

<sup>3</sup> The World Bank's partner countries refer to low- and middle-income countries as well as fragile states.

<sup>4</sup> For more details on the STEP framework, see World Bank 2010a.

<sup>5</sup> For more information on how the SABER initiative fits into the World Bank's institutional priorities in the education sector, see World Bank (forthcoming).

3. The rest of the document contains six sections. The first defines two terms used throughout this paper: workforce development (WfD) and benchmarking. The second section elaborates on the purpose and intended audience of the project. The next three sections discuss the project's conceptual framework, the application of the framework through ten performance drivers of WfD systems, and the practical arrangements for implementation. The final section concludes the paper.

## Definitions

4. **Workforce Development.** For our purpose WfD refers to a national, regional, provincial or sector-based system that serves a dual function: of enabling individuals to acquire technical knowledge, practical skills and attitudes for gainful employment or improved work performance in a particular trade or occupation; and of providing employers with an effective means to communicate and meet their demand for skills.<sup>6</sup> The former function is often associated with technical and vocational education and training (TVET), while the latter is associated with arrangements for employer involvement in WfD at both the strategic and operational levels. In today's economically-integrated and technologically-driven world, a well-functioning WfD system is an asset that can help economies to compete and grow. It provides new and incumbent workers with up-to-date skills that help firms improve their productivity and competitiveness. In most developing countries, concerns about WfD are widespread, affecting not only the modern wage sector but also the agricultural and informal sectors.

5. Countries differ greatly in the way the workforce development system functions. A complex web of multiple public and private sector agencies is often involved under the purview of various government ministries. The arrangements may assign explicit roles and responsibilities to the various stakeholders and provide for formal interactions among them; or they may entail a loose structure with flexible functions for and expectations of the parties involved. An important challenge is to strike a balance between structure and responsiveness so that the WfD system is adapted to the conditions and requirements of its context.

6. WfD is a broad concept that applies to skills formation for all workers. To keep the current project tractable, we will focus mainly on the bulk of workers filling the lower rungs of employment (e.g., production operators, craftsmen, technicians, service workers, mid-level professionals, etc.). Excluding the higher-end jobs—mostly held by those with a university qualification—also keeps the work focused on the concerns of those interested in skills

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<sup>6</sup> See <http://webapps01.un.org/nvp/frontend!polCat.action?id=36> (ECOSOC, 2010).

development through various forms of technical and vocational education and training, whether formal or non-formal and whether provided at the pre-employment stage or on-the-job.<sup>7</sup>

7. **Benchmarking.** Benchmarking was first systematically implemented in 1979 by the Xerox Corporation in response to competition from Japanese manufacturers which was beginning to erode the company's share of the photocopier business (Camp 1989). The practice revealed critical insights that helped Xerox improve its manufacturing design and production efficiency and lower costs, thereby enabling it to regain its competitive edge. Since this auspicious beginning, the concept and practice of benchmarking have become widespread as a well-regarded and versatile evaluation tool (Dattakumar and Jagadeesh 2003).

8. An organization that embarks on benchmarking assesses various aspects of its processes in relation to those of leading organizations, usually from a peer group defined for the purposes. The exercise poses such questions as the following for self-examination: (a) how well do we compare to others in the same business; (b) how good do we want to be; (c) who is doing it the best; (d) how do they do it; (e) how can we learn from and adapt what they do to suit our circumstances and needs; (f) how can we excel and become a standard of performance for others to aspire to?<sup>8</sup> The process allows an organization to develop plans for adapting specific best practices to improve its own performance. Often used as a continuous process for enhancing outcomes, benchmarking is nowadays widely used in the public and private sectors throughout the developed world.<sup>9</sup>

9. When applied to WfD, the benchmarking approach may be used to compare processes and performance metrics of the entire national WfD system, or sub-systems or organizations within it, to similar arrangements that have proven effective in other nations (O'Lawrence 2007). It may also focus more narrowly on specific programs in the system (e.g., adult worker retraining and reemployment scheme, formal industry-based apprenticeship scheme, or disadvantaged youth employment/training scheme, etc.).

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<sup>7</sup> The SABER project includes a separate project on benchmarking tertiary education. Because the separation between training at the university and pre-university levels is not airtight, training issues of a transversal nature arise (e.g., articulation of curriculum content, progression between levels) will be addressed in the WfD benchmarking project when appropriate. Also excluded here is the training of teachers which is treated under the sub-system relating to teachers in the SABER project.

<sup>8</sup> Adapted from Alstete (1995).

<sup>9</sup> See, for example, <http://www.well.com/user/benchmark/germany/Germany.html>, <http://www.besttransport.org/benchgermany.html>, and <http://www.lbg-canada.ca/model-benchmarking.html>

## Purpose and Audience

10. Benchmarking WfD is practiced in some European countries<sup>10</sup> and in the United States,<sup>11</sup> where the approach finds acceptance in both the private and public sectors and has evolved, in some settings, into a routine for monitoring the performance of the system and fostering its continued development. Among developing countries, the practice appears to be more limited, reflecting such constraints as: (a) the challenges of coordinating the exercise in fragmented systems with multiple players; (b) the limited capacity in staffing and funding to collect and analyze the data in order to maintain a benchmarking system; and (c) the cost of identifying similar schemes, programs and organizations in other nations that represent good practice in WfD. In the face of political realities and financial constraints, governments may also be discouraged from benchmarking their WfD systems if the exercise merely points out the flaws and shortfalls in performance without giving realistic and concrete guidance on actions for improvement.

11. The purpose of the benchmarking WfD project is to overcome the foregoing impediments. An important objective is to help the World Bank and its donor partners provide a more consistent and effective response to requests from their national counterparts for assistance in mobilizing global good practice to inform policy dialogue and programmatic interventions to improve the WfD system. Used in collaboration with national counterparts, the project's diagnostic tool and associated knowledge assets can assist in developing a frank assessment of the current performance of WfD system, in highlighting its weaknesses in light of experience in other countries, and in pointing to pathways for improvement over the short and long term along a continuum of developmental phases. The process of arriving at the findings may itself engage the relevant stakeholders—within the country, within donor agencies and among donor partners—in ways that are helpful for building common understanding, if not consensus, of issues pertaining to WfD in the country.<sup>12</sup>

## Conceptual Framework

12. The key elements of our conceptual and policy framework appear in figure 1. It recognizes that achieving coherence in WfD policies requires a simultaneous consideration of the demand for skills as well as the supply. A well-functioning WfD system with a high degree of coherence between skills demand and supply achieves faster economic growth by improving

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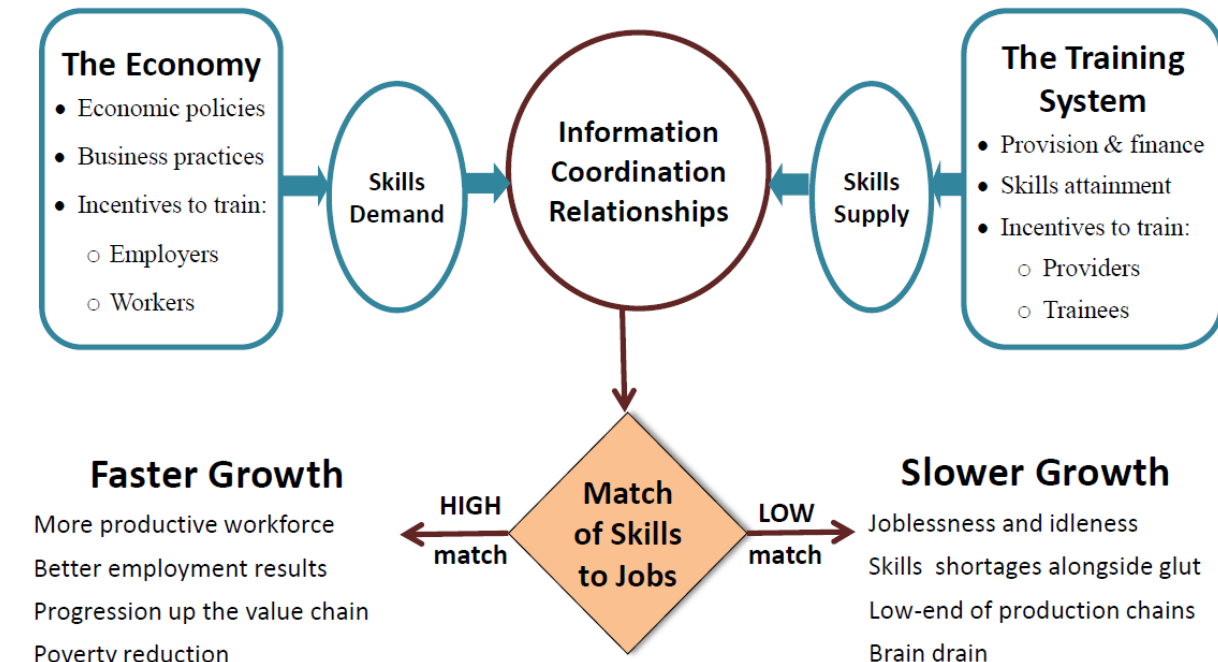
<sup>10</sup>See <http://www.eskillspolicy-europe.org/downloads/documents/Flyer2.pdf> and [http://www.worldwideerc.org/Newsroom/Pages/06-30-04\\_benchmark.aspx](http://www.worldwideerc.org/Newsroom/Pages/06-30-04_benchmark.aspx)

<sup>11</sup> See <http://www.commerce.state.il.us/NR/rdonlyres/C76D9D59-1319-4A4C-A381-282760D50EDC/0/07BenchmarkAnnualReport.pdf> and <http://www.workforce.mo.gov/About%20DWD.html>

<sup>12</sup> The proposed benchmarking approach complements the World Bank's MILES framework which is used by some to evaluate employment issues through four lenses: Macroeconomic conditions, Investment climate and infrastructure; Labor market regulation and institutions; and Education and skills development; and Social protection, where the underlined letters are used to form the acronym MILES (see Banerji et. al 2008.)

trainees' employability, by supplying the workers that firms require to improve product quality and competitiveness, and by enabling firms and entrepreneurs to expand their technological capability and move up the value chain where profit margins are often more attractive. Where this match is poor slower growth and the associated problems of joblessness and underemployment, brain drain and technological stagnation or laggardness are an ever present prospect. In developed countries, the economic crisis of 2008 and its aftermath have increased the urgency of addressing WfD issues (see for example, OECD 2010). In developing countries, skills to increase the employability of youth and to help accelerate overall growth also feature regularly in both national and international dialogue (see, for example, World Bank 2010b and World Bank 2010c). Below we elaborate on the main components of the framework relating to the skills demand and supply and to the linkages between these two parts of the WfD system.

**Figure 1: Conceptual Framework for Workforce Development**



Source: authors' construction.

13. **The demand for skills.** The government's economic policies set the overall context for skills demand in multiple ways. Wage policies and related legislation, for example, influence the flexibility of the labor market, the hiring practices of firms and the aggregate demand for labor and its distribution between formal and informal sectors. Tax policies affect firm and worker behavior, including their incentives to train. The spending policies of the governments often have a significant impact on skills demand; large infrastructure investments, for example, create a demand for various construction, engineering and specialized skills. In some countries, governments also make strategic investments to nurture or grow selected sectors and these may

call for new skills beyond what is available in the current labor pool (see, for example, UKCS 2009). In countries where the government takes a proactive approach to economic management, its policies may also affect firms' business strategies and the incentives for innovation and adoption of new technologies. These forces in turn shape the demand for skills that may be required for technology absorption and advancement.

14. Forward-looking policies must obviously take into account global trends and practices and evaluate their implications for the local economy. Demographic changes, globalization and technological advances, urbanization, and climate change are some of the key influences on the dynamics of skills demand. The world's population is aging as a result of declining fertility and rising life expectancy.<sup>13</sup> In developed economies, the trend is already translating into a growing demand for health and personal care services and for the skilled workers, often imported from abroad, required to provide these services.<sup>14</sup> In less developed economies, the share of younger workers—many of them new entrants to the labor force and often in the midst of starting and growing their families—is increasing rapidly, creating both a pool of potential employees as well as a market for consumer goods and services and the associated demand for skilled workers to produce and sell these products. In most countries, however, the potential has yet to translate into tangible results in the form of jobs and sustainable income growth.

15. Globalization and technology, particularly in information and communication, are an even more obvious influence on the demand for skills. Firms everywhere face increasing pressures to innovate and diversify into newer and more lucrative markets, as profit margins in traditional industries are squeezed by intense global competition and the shortening of product shelf life. Especially among the more dynamic firms that compete in export markets, skills bottlenecks are a chronic complaint, even in countries with a highly educated workforce.<sup>15</sup> Rapid urbanization, a trend that some countries actively promote in order to foster dynamic clusters of economic activity, is also ratcheting up the demand for talent and skilled workers, including service workers to build and maintain lively and livable urban spaces. In some settings, the lure of overseas jobs has fueled the demand for skills, encouraging potential migrants to obtain training to improve their prospects abroad. Climate change is yet another global trend with important implications for skills demand. As countries scale up mitigation or coping responses, they will require workers skilled in a wide range of “green” technologies.

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<sup>13</sup> In developed economies, 33 percent of the population in 2050 is projected to be at least 60 years old, compared with just 22 percent in 2010; in developing economies, the corresponding percentages are 20 percent and 9 percent. Africa has the youngest population, but even there, the share of the population at least 60 years of age is projected to rise from 5 percent in 2010 to 11 percent by 2050 (UN 2009).

<sup>14</sup> At the same time, older workers in developed economies are finding it necessary to postpone their retirement and are therefore seeking new skills in an effort to remain employable and productive. In these settings the concept of life-long learning has gained growing relevance in public policy debates.

<sup>15</sup> See, for example, data from the World Bank's Enterprise Surveys posted at <http://enterprisesurveys.org>.

16. These global trends combine with conditions in a particular sector or a locality to shape the demand for specific skills. In the United States, for example, a 2009 survey of manufacturing businesses indicates emerging skills shortages in three sectors: aerospace and defense; life sciences and medical devices; and energy and resources; and bottlenecks for skilled production workers and for scientists and engineers (DMIA 2009). In Europe WfD policies are being informed by detailed analyses by the European Center for the Development of Vocational Training for the 27 countries of the European Union.<sup>16</sup> In India, the boom in information technology (IT) and IT-Enabled Services is increasing the demand for technicians—estimated at 500,000 a year—as well as for English language skills (Sudan et. al 2010). One careful study shows that each new call center raises enrollments in English-language schools in center’s vicinity by nearly six percent (Oster 2010).

17. **The demand for quality skills.** A large number of surveys confirm that employers value not just a worker’s ability to perform specific technical tasks, but also the worker’s possession of “soft” skills or behaviors. In the United States, manufacturers have consistently ranked highly skilled and *flexible* workers as one of two top drivers of performance (the other is new product innovation).<sup>17</sup> In the Philippines and Indonesia, employer surveys conducted in 2008 revealed a high demand for three “soft” skills for managers and production staff alike: problem-solving, leadership, and communication skills. In Vietnam, the top behavior prioritized by employers in a 2009 survey was punctuality; in the same survey, employers also valued workers’ practical and technical knowledge more highly than theoretical knowledge. The importance placed on “soft” skills is not surprising, given the nature of work in the today’s modern economy. An increasingly integrated global economy with intense competition, a growing body of scientific and technological knowledge and the lowering of barriers to accessing that knowledge via digital communication are reinforcing the demand for skills that go beyond simple book learning and the ability to execute a specific task. In settings where most school leavers must find their livelihood in the informal sector, having the flexibility and entrepreneurship and initiative to find work must also be added to the list of core skills that young people are likely to require (e.g., Adams 2007).

18. **The supply of skills.** Because skills are formed through a cumulative process that begins in early childhood and continues through schooling, a comprehensive view of the training system would include all parts of it, including those serving children still too young to join the workforce. To make our analysis tractable, however, we focus on the part of the system that has an explicit training mission to equip people with skills to get a job and earn a living in the not too

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<sup>16</sup> According to CEDEFOP 2010, projections for 2020 suggest a net loss of some 2.5 million jobs in the primary sector (mainly agriculture) and 2.0 million in traditional manufacturing, balanced against gains of some 7.0 million jobs in business and other services, 3.4 million in distribution, transport, hotels and catering, and 1.0 million in education, health and other non-marketed services. Demand is expected to rise for highly- or medium-skilled workers, while it will shrink for workers in clerical services, crafts and related trades and agriculture (see CEDEFOP 2010).

<sup>17</sup> See DMIO 2009.



distant future. Our main focus is thus on programs in technical and vocational education and training (TVET), typically at the secondary and post-secondary levels.<sup>18</sup>

19. The national TVET system is often perceived as the main source of workforce skills development. This is understandable as public TVET institutions often host major government-financed programs for formal skills training. However, in many countries, other sources of training exist, including private TVET institutions and employer-based training programs. In mid to high income nations, and in particular in large industrialized nations such as the USA, Germany and Japan, the main suppliers of mid- to higher level skills training are the employers themselves. Because these firm-based training activities and programs are fragmented across the sector, often unpublicized outside the firms, and typically paid for by the firms themselves, their national contribution to WfD is not always understood or recognized.

20. A wide range of programs in fact offers opportunities for skills training in most countries. They include formal, non-formal and informal program, each of which may require different levels of prior educational attainment and may operate under different institutional homes.<sup>19</sup> While both formal and non-formal TVET refer to structured programs, they often fall under the mandate of different ministries, with formal programs usually taking place in the education system and ending with formal certification or accreditation of qualifications, and non-formal programs occurring outside the education system, in or outside the workplace and rarely leading to an accredited qualification. Informal TVET comprises unorganized and unstructured learning that may not be the responsibility of any agency at all, taking place, for example, in the workplace when a junior worker learns the ropes simply by working alongside or watching more experienced colleagues.<sup>20</sup> Despite their informality, such programs can be a significant source of learning for important tacit skills.

21. To add to the complexity, the system for skills provision may also include such programs as: (a) formal, industry-based apprenticeships (usually for high skills training); (b) training partnerships involving organized labor and firms, often with formal curricula taught by training providers; (c) technical training for, and within, the military; and (d) special needs training (i.e., skills training for selected populations, such as prisoners, persons with disabilities, and the disadvantaged).

22. In all TVET systems, government policies influence the way the system is organized, governed and financed and how skills attainment is certified and recognized. They therefore

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<sup>18</sup> University level TVET programs are excluded from our project as they are treated as part of the tertiary education sub-system in the overall System Assessment and Benchmarking for Education Results (SABER) project.

<sup>19</sup> Each of the four words in the acronym has a specific meaning: “technical” and “vocational” typically refer to technician-level and craftsmen-level programs, respectively; “education” refers to exposure to the world of work and preparation for further studies in technical and vocational fields; and “training” refers to preparation for entry into, or upgrading in, specific occupations or clusters of occupations.

<sup>20</sup> Non-formal TVET should not be confused with TVET for the informal sector of the economy.

affect the efficiency of service provision, the effectiveness of the system in meeting training objectives, the quality and relevance of skills that it produces, and the accessibility of training opportunities, particularly among disadvantaged population groups. They also shape the incentives for both training providers and learners and influence the aggregate supply of skills and its diversity by level and specialization. The impact of policies on the role of employers in WfD planning and implementation—at both the strategic and operational levels—is a particularly important consideration. In the best systems policies are in place to encourage training providers to view employers, both public and private, as critical partners. Such TVET systems are *demand-driven* in that providers' decisions about skills supply typically respond directly to the skills demand of employers. On the other hand, when employers' needs are not taken into account, training programs often fail to produce the types and levels of skills and numbers of workers actually needed by employers. These kinds of programs are referred to as being *supply-driven*.

23. **Aligning skills supply to demand.** A key challenge in all WfD systems is to ensure a good match between skills demand and supply.<sup>21</sup> The outcome hinges on the actions of and interactions among four sets of actors: (a) public officials whose vision and policies influence the overall and sector-specific direction of economic development as well as the nature of incentives for the other actors; (b) employers who are a source of jobs as well as market intelligence, expertise and advice to inform the training curricula, and possibly gifts and advocacy to support training programs; (c) training providers who offer pre-employment, on-the-job and targeted training services as well as a pool of potential recruits for employers and networking among trainees; and (d) individuals who have dual roles, as trainees and as incumbent or future workers (whether working for others or in self-employment).

24. Information flows among the four sets of actors are essential for alignment. Where consistently reliable information is easily obtainable in a timely manner on such issues as the skills gaps faced by employers, on training options and their costs, and on the employment and earnings of the graduates of training programs, the decisions of individuals to invest in training and the program offerings of service providers are likely to respond more closely to the demand of employers. Yet passive information flows alone may not suffice to close the gap between skills supply and demand, particularly if an important economic goal is to grow and upgrade into new areas of economic activity that most likely will require new technological and other skills. In such settings a more proactive effort at coordination may be appropriate to take stock of emerging demand among firms for new skills, to stimulate their demand and to bring the

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<sup>21</sup> See Almeida and Robelino (2011) for a convenient summary of common market failures that can cause a mismatch between skills supply and demand. These failures include: (a) labor market imperfections (e.g., firms demand sub-optimal levels of training for their workers for fear of losing their trained workers to competitors); (b) imperfections in capital markets which prevent individuals and firms to borrow for training investments; (c) coordination failures arising from weak linkages among key stakeholders (e.g., employers and training providers) and (d) limited information, uncertainty and myopia.

behaviors of individuals and training providers into closer alignment with the areas of emerging demand.

25. From an operational perspective, the quality of relationships and cooperation among the various parties also influences the extent to which the strategic goals for skills formation in fact materialize in practice. Country differences in economic, social and cultural circumstances imply that no single design or format for cooperation among the stakeholders is likely to be valid or relevant in all situations. Furthermore, stakeholders often have varying and sometimes conflicting interest, objectives and priorities and these stakeholders may not be the same in every country. Nonetheless, agreement on goals, clarity on roles and accountabilities and routine interaction among the key parties in the WfD system provide the key ingredients for a productive relationship among them. Where the relationship exists and is well maintained, programs are likely to be more flexible and responsive to changes in employers' demand as they take advantage of emerging technologies that may require new skills or the retraining of workers whose skills have become obsolete.

26. Well-performing WfD systems realize a high degree of skills match in terms of the aggregate supply of skilled workers relative to the demand as well as in the quality of skills and the mix of skills levels among the workers. In such systems inputs and services from a variety of entities are routinely mobilized to meet the skills requirements of employers in a timely manner. In the best systems, important benefits accrue in the form of a more productive workforce, higher rates of employment and labor utilization, progress in the fight against poverty, and for the economy as a whole, tangible movement up the value chain of economic activity. The alternative scenario of a weak system delivering a poor match between skills demand and supply cannot be ruled out, however. In such systems, the results include unemployment and underemployment, often coexisting with chronic skills gaps felt by employers; emigration of skilled workers, and an economy showing few signs of diversifying and upgrading its technological capabilities.

### **Drivers of Performance in Workforce Development**

27. In order to create a practical tool for evaluating the performance of WfD systems, we propose to focus on ten performance drivers that are likely to be relevant across a wide range of developing countries.<sup>22</sup> By collecting data on these drivers from knowledgeable informants drawn mostly from practitioners in the country using a structured data collection instrument, the project would make it possible to assess the current status of the country's WfD system (or the

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<sup>22</sup> The choice of these drivers has been informed by an ongoing review of the literature and by discussion with practitioners. These drivers may be modified in light of the experience gained in the process of implementing this project.

parts of it that are the focus of interest) and to benchmark the system according to its level of development.

28. The ten performance drivers can be grouped into three domains: (a) economic ambition; (b) system design; and (c) service provision (table 1). Taken together, they describe the economic context and authorizing environment for WfD, the structural coherence of the system as a whole, and the operational arrangements for service delivery at the level of institutions. While other ways to organize these drivers exist and some overlap among them is unavoidable (e.g., costs are affected by the choice of quality assurance frameworks and by the efficiency of governance and management structures, etc.) the chosen grouping creates a simple, meaningful structure for consolidating the drivers that also helps minimize potential gaps in the analysis.

**Table 1: Domains and Drivers of Performance of Workforce Development**

Domain	Drivers of Performance
Economic ambition	<ol style="list-style-type: none"> <li>1. Strategic planning</li> <li>2. Technology and skills</li> <li>3. Governance and coordination</li> </ol>
System design	<ol style="list-style-type: none"> <li>4. Resources and partnerships</li> <li>5. Management and administration</li> <li>6. Diversification and articulation</li> </ol>
Service delivery	<ol style="list-style-type: none"> <li>7. Financing and accountability</li> <li>8. Training provision</li> <li>9. Quality assurance</li> <li>10. Monitoring, evaluation and innovation</li> </ol>

Source: authors' construction.

29. A brief description follows below on the ten drivers of WfD performance under each of the three domains.

30. **Economic ambition.** When policy makers emphasize the importance of skills for growth, they often have in mind its role in helping to diversify the economy and upgrade its technological capability. This perspective emphasizes demand-led skills development for jobs in the modern sector. However, to achieve inclusive (and therefore, sustainable) growth, a more holistic approach that addresses the following dimensions may be appropriate: (a) aligning skills training to employers' needs and national investment priorities; (b) meeting the needs of vulnerable populations (e.g., informal sector, traditional agriculture, etc.); and (c) building strong foundational skills through general education. Given the inherent tradeoffs and interdependence among these dimensions of skills development, strategic planning is an important driver of performance in the WfD system; it can help create a virtuous circle of skills investments leading to inclusive growth which in turn generates the resources to sustain and reinforce the investment.

A second driver of performance under this domain relates to the nexus between technology and skills; it emphasizes the alignment of efforts to promote technology adoption with support for skills development and utilization. Finally, because strategic planning and technology policies involve multiple stakeholders working across administrative and other boundaries, we include a third driver of WfD here: coordination and governance.

31. With regard to *strategic planning*, its vital function is to give direction and coherence to the activities of the WfD system. Such planning situates skills development as part of the broader strategy for economic growth. It therefore addresses the short-term concerns of relieving employers' immediate skills constraints as well as the longer-term challenges of building a pipeline of future skills to support innovation and productivity gains throughout the economy. Strategic planning requires leadership and vision at all levels in government and a commitment to implementation. The clearest example of the importance of this performance driver comes from the experience of East Asia's fastest growing economies over the past 50 years, viz. South Korea, Taiwan (China), and Singapore. These countries have built a strong foundation in basic skills through general education for all and now consistently appear among the top-performing nations in international tests of student learning (OECD 2010; Mourshed et. al 2010); at the same time, they have also developed training systems to equip workers with job-relevant skills to expand the country's technological capabilities (see Green et. al 1999; Ashton et. al 2002; Kuruvilla et. al 2002). One sign of success is the increasing sophistication of the exports from these countries: in Korea, for example, electronic, electrical and other high-technology products made up nearly 40 percent of the country's exports in 2006, compared with less than 5 percent in 1980.<sup>23</sup>

32. Taking the foregoing considerations into account, the following are examples of what might be considered in gauging this driver of performance:

- (a) Nature and quality of the advocacy for WfD as a strategic priority for national economic development;
- (b) Emphasis on a demand-led approach for WfD; and
- (c) Existence of strategic policies addressing skills-related constraints on inclusive growth.

33. The second driver relates to *technology and skills*. It recognizes that employers are ultimately the agents through which the ambition of a skills-biased growth strategy is translated into effective demand for skills. In most countries, the bigger firms and those with an explicit export orientation often employ more skilled workers than other firms and also invest in their training as part of their business practices; smaller firms lag behind for various reasons and are often also less productive. In strong WfD systems, the demand for higher-level skills is

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<sup>23</sup> Yusuf and Nabeshima 2010.

sustained through incentives designed to promote technology upgrading and absorption by all firms but especially by the smaller firms that might otherwise be left behind. Mexico's Integral Quality and Modernization (CIMO) program exemplifies an effort by the government to foster skills upgrading among firms.<sup>24</sup> This performance driver also recognizes that linkages among research and training institutions and employers are essential to efforts aimed at expanding a country's technological capability; such efforts can help shape the preparation of technicians and other workers for jobs in technology-rich settings.<sup>25</sup> In addition, the driver acknowledges that stimulating employers' demand for higher level skills is insufficient in the absence of job-matching mechanisms. By providing information about skills demand and emerging needs (e.g., those associated with technology and other trends in labor market), such mechanisms can help close the gap between skills demand and supply.

34. Evidence for gauging this driver of performance includes:

- (a) Promotion of technology adoption and catch up by firms to improve productivity and competitiveness and to progress toward the technology frontier;
- (b) Existence of linkages among research and training institutions and employers to support investment in skills formation for technology adaptation and diffusion among firms; and
- (c) Provision of information about skills demand and the preparation and matching of job-seekers to all forms of employment.

35. The third driver pertains to *coordination and governance*. WfD is a complex undertaking that must engage and serve the needs of a wide variety of stakeholders. Abrams et. al (2003) define governance in terms of the "interactions among institutions, processes and traditions that determine how power is exercised, how decisions are taken on issues of public and often private concern, and how citizens or other stakeholders have their say" (p11).

36. Aligning WfD more closely with the country's economic priorities may require the introduction of new pilot programs or institutions, the involvement of new, non-traditional, partners, and possibly also new procedures. Coordination of effort for such initiatives is essential among those leading the effort, at both the strategic and operational levels, to ensure that these initiatives receive the necessary support to mature, thereby generating lessons to inform the broader reform agenda. Ireland's experience with the establishment of new regional technical colleges (RTCs) beginning in the late 1960s is an example of coordinated effort to supply mid-level technicians for the country's emerging industries (O'Hare 2008).<sup>26</sup> Not all

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<sup>24</sup> For more information about CIMO, see Tan et. al 2004.

<sup>25</sup> See Ferrier et. al 2003 for a discussion of Australia's experience in this regard.

<sup>26</sup> O'Hare (2008) elaborates that the Ireland Development Authority, in its effort to convince foreign businessmen to invest in the country, used a portfolio of incentives to encourage a greater output of skilled technicians throughout Ireland, while simultaneously involving the leaders and staff of the training institutions to participate actively in its

WfD stakeholders are involved in breaking new ground, however; indeed, as systems mature most activities would have been mainstreamed as part of the routine functions of the system. A governance framework that clarifies roles and responsibilities and that fosters communication among the relevant WfD stakeholders sets the stage for coherent and well-coordinated action by these players (e.g., ADB 2009).

37. The performance of this driver may be gauged from such evidence as:

- (a) Nature and strengthen of the linkages among leading champions of WfD;
- (b) Clarity and effective functioning of the roles and responsibilities of WfD authorities and the relevant WfD stakeholders; and
- (c) Mechanisms for coordination and communication among WfD stakeholders.

38. **System design.** Included in this domain are three drivers of performance that shift attention from the demand side of the skills equation to the supply side. The drivers share a common theme in relating to systemic arrangements (i.e., “rules of the game”) that set the stage for the operations of individual training providers in the WfD system. In most countries, the system will involve an umbrella-type structure with a central organization (or organizations) that exercises systemic oversight and possibly coordinates a number of training providers—public as well as private. The function of systemic oversight pertains to three important aspects of the WfD system: the mobilization of resources and the leveraging of partnerships; the arrangements for overall management and administration of the WfD system; and the diversification of pathways for skills acquisition and the articulation of these pathways with the rest of the education system.

39. Continuing with the list from the start, the fourth driver, *resources and partnerships*, acknowledges the reality that WfD will require financial and other resources (e.g., access to specialized facilities and staff as well as instructional materials). These resources may come from a variety of sources, including government budget allocations, fees paid by trainees or their sponsors, and contributions or donations by private entities, non-governmental organizations, local communities or external donors. By harnessing the contribution of local partners and others, the WfD system is often able to mobilize in-kind contributions (e.g., of equipment, services of experienced skilled workers, etc.). The process of working together with supporters in a collaborative and interactive fashion to identify, articulate, negotiate and clarify goals is also an important benefit of partnerships (e.g., Seddon, Fennessy and, Ferguson 2009).

40. WfD systems that do not have access to adequate resources and partnerships have limited potential to satisfy the expectations of employers. Their ties to employers are thereby weakened,

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promotional efforts (e.g., by attending functions where foreign businessmen were gathered, and travelling to events in potential investor countries).

reinforcing the tendency toward supply-driven services. In many developing countries, TVET systems fall victim to this vicious cycle because governments simply do not have enough resources or the support to prioritize TVET in the allocation of public spending when other parts of the education systems, such as primary and secondary schooling, are also poorly funded. In World Bank-financed projects, experience suggests that once resources and partnerships are brought into the picture, TVET can be improved significantly.

41. Evidence for gauging this performance driver includes:

- (a) Existence of an explicit strategy for sustainable funding WfD;
- (b) Allocation of public funds for WfD to achieve results with efficiency; and
- (c) Encouragement of partnerships to leverage non-government resources for WfD priorities.

42. The fifth driver relates to **management and administration** at the level of the system as a whole. Because all WfD systems are complex and necessarily decentralized, a system-wide management and administrative infrastructure, staffed with managers empowered to exercise strategic oversight of the system and supported by the necessary digital resources for communication and administration, is essential (Malcahy, 2003). In well-performing systems the managers routinely evaluate the context for WfD, identifying new trends and developments to guide the orientation of the WfD system so that it continues to achieve a close match between skills demand and supply. As in any system with multiple providers of a service used by many individuals, an important systemic function relates to the nature of reporting relationships between the training authorities and the providers of services. Appropriately designed and focused on the desired WfD outcomes, this function enables managers of the system to supervise service provision and assure quality without overburdening providers with unrealistic requirements. A well-performing system also deploys a combination of technical assistance and incentives to enable and motivate all providers to reach higher levels of performance.

43. Evidence to gauge this performance driver includes:

- (a) Strategic management of TVET service delivery to evaluate and address existing and emerging skills demand;
- (b) Specification of reporting relationships and protocols; and
- (c) Provision of support and use of various incentives to enable and encourage all providers to meet WfD standards.

44. The sixth driver concerns the ***diversification and articulation*** in the WfD system. The nature of competitive business and industry in a global society demands a wide variety of skilled workers. To be effective in providing real value to employers, WfD systems must seek to support a diversified and responsive menu of skills training programs. Simply offering options



in a few trades is not sufficient to support the needs of employers in most countries. In WfD systems that feature a diversity of programs, services are typically offered through a number of public and private providers; and courses are available at multiple levels (e.g., upper secondary, and post-secondary levels). In areas where existing providers are unable to train, partnerships with firms can close the gap through in-firm training or sponsorship to obtain the training overseas.

45. Articulation refers to an arrangement that allows students to transfer from course to course or to progress to higher levels of training or to programs in other fields (McKenzie and Plovere 2009). In some countries, the WfD system stands alone outside the education mainstream and students who enter the system are not allowed to move back into the formal education systems. In other nations this issue is handled in a more proactive manner to permit, to the extent possible, movement back and forth between the WfD system and the general education system as the student's needs require. Good examples of these systems can be seen in the U.S. where community colleges commonly give credit for work experience in industry and enroll employed students in pre-college preparatory courses (usually part-time) so that they may fulfill the prerequisites for full-time enrollment in a community college. Community colleges also have strong articulation mechanisms with universities and colleges, most often within their respective states, to ensure students can continue on to college- or university-level courses once they have proven themselves in a community college program.<sup>27</sup> An important goal of diversification and articulation of programs in the WfD system is to provide individuals with flexible options to acquire skills for jobs that are available in the labor market or for self-employment.

46. Evidence to gauge this performance driver includes:

- (a) Diversification of program offerings to match student profiles and interests with WfD priorities;
- (b) Existence of policies that provide for articulation of WfD programs with existing secondary, post-secondary and higher education programs; and
- (c) Availability of options for lifelong skills acquisition and progression.

47. **Service delivery.** The next set of performance drivers, four in total, moves our focus from the systemic to the institutional level. They address facets of the operational arrangements for providing training services in the WfD system. Four aspects are emphasized: financing and accountability, the content of services provided, quality assurance, and monitoring, evaluation and innovation practices. Strong WfD systems are characterized by sustainable financing of training institutions, by responsive programs that meet externally validated standards of quality,

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<sup>27</sup> For example, the community colleges in the states of Virginia and Maryland have such agreements with their respective colleges and universities.

and by service providers' reliance on monitoring and evaluation to track their own effectiveness and to experiment with and learn from promising innovations in their operations.

48. Continuing the list from above, the seventh driver of WfD performance, ***financing and accountability***, recognizes that financing is a particular concern for all institutions (e.g., Wolf and Erdle 2009). Because government funding is typically limited, strong WfD systems include a diversity of TVET service providers that are able to tap into multiple sources of financial and other support. While private providers by nature have more autonomy over their finances and operations than their public sector counterparts; the latter in well-functioning WfD systems are often granted meaningful powers to mobilize resources and manage their finances. If providers are able to retain and manage self-generated resources (e.g., from the provision of contractual services to industry partners, the sale of production at the institution, etc.), they may be more motivated to protect the sustainability of these resources (e.g., by delivering good services or products). More broadly, the mechanisms through which funding is channeled to providers, whether in the government or non-government sector, can be a powerful tool for fostering accountability for results and efficiency in service delivery. For example, the criteria for funding allocations can be designed to foster competition among providers which may lead to better WfD outcomes while lowering the cost of services; or to favor programs that align well with emerging WfD priorities.

49. Evidence for gauging this performance driver includes:

- (a) Existence of a competitive training market with a diversity of training providers in the public and private sectors;
- (b) Explicit policies designed to promote and strengthen the financial sustainability of service providers; and
- (c) Availability of an accountability framework that effectively motivates service providers to focus on achieving results defined in terms of trainees' performance in the labor market.

50. The eighth performance driver, ***training provision***, relates to two items at the heart of training programs: the curriculum and the inputs required to implement it. Because the objective is to equip trainees with job-relevant skills, it is critical to design training programs with inputs from potential employers and relevant industry or sector experts (e.g., Sung and Ashton, 2006). Indeed, employers will only get involved in a WfD system if they believe that their participation would enable their workers to be more effective, competitive and productive. Training providers must therefore find ways to obtain detailed feedback from the employers they serve and from the relevant industry experts. This feedback is critical for improving external efficiency (i.e., ensuring that training programs equip graduates with employable skills and help them secure jobs for which they were trained); it may also help boost the internal efficiency of training

programs (i.e., ensuring that the programs are organized in the most cost effective and productive manner). Further, because labor market conditions are not static, the inputs from employers and industry or sector experts are needed on a continuing basis to ensure that programs remain relevant and responsive to the demand for skills as conditions in the labor market evolve.

51. Important as the curriculum is, it is insufficient by itself to ensure effective training provision; needed too are skilled instructors and administrators as well as appropriate facilities, equipment and materials. Each provider must be able to attract the number, types and quality of staff required to deliver the expected services within its budget constraints. Because good TVET teachers are highly sought by industry for their technical skills, training providers are often hard pressed to satisfy employers' demand for skills unless they are able to find creative solutions to their staffing constraints. Training providers must also have access to the facilities, equipment and instructional materials required for implementing their training programs. These items in the WfD system are the next most costly after teachers; their costs per instructional hour per trainee are often several times as high as those in academic programs at a comparable level of instruction. In modern WfD systems, the challenge of providing trainees with experience in handling actual production equipment is sometimes met through the use of competency-based modular curricula that include on-the-job training as part of the program. While attractive, this option is often difficult to organize in low-income settings.

52. Evidence to gauge this performance driver includes institutional-level practices that reflect:

- (a) Prevalence of routine solicitation of input from industry experts in the design of training curricula;
- (b) Efforts to enhance the capability and technical competence of instructors and administrators in the WfD system; and
- (c) Alignment of the acquisition of equipment and materials to the training curricula in question.

53. The ninth driver pertains to **quality assurance**. Two aspects of this driver are especially relevant: the quality of the entities that provide training services and the quality of skills acquired by the graduates of training programs. Providers are keen to market their programs, particularly when these are offered on a fee-for-service basis. Obtaining accreditation with a national training authority is an important way to signal to potential clients (i.e., students, parents, employers, etc.) that the training services provided satisfy some externally-established standards of quality. Countries use different criteria to accredit providers, but often include assessments of institutional practices such as planning (i.e., goal setting), implementation (i.e., coherence between goals and actions to accomplish them), evaluation (i.e., measuring outcomes against expectations) and review of feedback to distill lessons learnt. Some training providers may also

pursue accreditation with internationally-recognized bodies—such as the International Standards Organization (ISO)—in an effort to establish their credentials as providers of high quality services.<sup>28</sup>

54. While accreditation attests to the quality of a training provider, a formal qualification awarded to the graduates of training programs seeks to convey information about the skills attained by the holder of the qualification. When the information is accurate and reliable, it eases the task of evaluating applicants seeking jobs or places in further training. In light of international migration trends, employers in countries that employ foreign workers are taking an interest in qualifications frameworks in the sending countries as a tool for gauging the quality of potential recruits from these countries. The growing demand for intercollegiate credit transfers and articulations across programs and institutions is another reason for the growing interest in such frameworks. As Hanf and Hippach-Schneider (2005) notes, a national qualification framework “takes all of a country's formally recognized qualifications and arranges them in a clearly defined structure. .... qualifications are understood as sets of certified or documented skills - with no regard given to the respective learning path.” Numerous countries have embarked on building national qualifications frameworks and are at various stages in the process (Allais 2010); a review of the experience in 16 countries of those countries suggests that national qualification frameworks require significant resources and patient work by skilled personnel over years to set up and maintain—conditions that are often absent in developing countries.

55. Beyond accreditation standards and qualification frameworks, an important feature of quality assurance in WfD systems is the ability to adjust or terminate programs that no longer fit the bill, either in terms of quality or relevance, or to add new ones. While training providers that depend largely on fee-paying customers are naturally quick to respond, those that are publicly-funded may react more slowly, if at all. Well-performing systems are characterized by the availability of program offerings that maintain their quality and relevance through routine review and adjustments.

56. Examples of the evidence that can help gauge this driver of performance include:

- (d) Existence of schemes for the accreditation of service providers;
- (e) Contextually-adapted arrangements and tools for certifying qualifications attained by trainees; and
- (f) Stated policies and procedures for renewing and adjusting training programs in light of trends in the demand for skills.

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<sup>28</sup> Singh and Sareen (2006) note that the rising popularity of ISO 9000 certification among Indian educational institutions may be a reflection of the absence domestic quality management systems specific to the education and training sector.

57. The tenth driver is about *monitoring, evaluation and innovation*. As in all forms of education, monitoring and evaluation of trainees and programs provide essential feedback to help improve the quality, efficiency and impact of the services delivered. Regarding trainees, WfD programs should ideally impart three types of learning: *cognitive* (knowledge), *psychomotor* (physical skills), and *affective* (attitudes and self concept about employment). Monitoring how well this objective is achieved requires both formative and summative evaluation of the trainees. Formative evaluation informs the use of corrective interventions, as and when required, while the trainee is undergoing training; the summative process, on the other hand, seeks to evaluate skills attainment at the end of training and is often formalized through the award of credit or credentials for employment. The evaluation may involve the traditional methods of oral and written testing but performance testing is also considered important and is used extensively. International efforts to compare workforce skills, such as those associated with the OECD's Program for the International Assessment of Adult Competencies; provide a new source of information about the quality of skills attained (Schleicher 2008).

58. Regarding programs, the simple outcome of trainees' employment and retention by their employer is the key measure of success. Once this principle is understood, the focus of monitoring and evaluation can be more clearly defined and focused. This objective is the reason for treating TVET as a specialized form of education, intended only for those with an immediate need or interest in obtaining gainful employment. Such programs have many monitoring requirements, but they all draw the evaluator to conclusion that training programs must be as cost effective as possible, yet efficiently meet the needs of the employers that they serve. As such, the following indicators would appear especially relevant in the monitoring and evaluation plans of providers: (i) costs incurred in the program/institution; (ii) time required to effectively train; (iii) instructional materials that are consumed for training; (iv) number of persons trained; (v) number of persons who did not complete training (and why); (vi) quality of training provided; (vii) satisfaction of employers; and (viii) medium-term retention of trainees once employed.

59. An important function of monitoring and evaluation is to identify promising innovations in WfD. Innovations in WfD are essential for keeping up with changes in skills demand and new ideas in training methodology. While innovations in WfD may relate to any aspect of the system (e.g., finance, governance and administration), their common goal is to boost the system's performance, either at the systemic or institutional levels. Adapting from the model of innovation in Mulgan and Albury (2003), innovations in WfD typically pass through four phases: (a) generating possibilities through the stimulation and support of new ideas; (b) incubating and prototyping to develop and test the most promising of the new ideas; (c) replicating and scaling up the best (i.e., most cost-effective and most relevant to the local context) among the tested ideas in a timely and sustainable manner; and (d) distilling and codifying lessons to institutionalize knowledge and foster a culture of continuous learning and improvement. Monitoring and evaluation is thus an essential process for supporting innovations in WfD.

60. Evidence to evaluate this performance driver includes:
- (a) Degree to which monitoring and evaluation of trainees and programs, in terms of skills attained and labor market outcomes, are a matter of routine practice in the WfD system;
  - (b) Availability of tools for measuring workforce skills; and
  - (c) Existence of a process for aggregating, analyzing and distilling lessons from monitoring and evaluation as a basis for improving all aspects of training provision and for encouraging innovation.

### **Benchmarking System Performance**

61. Consistent with the approach in the broader SABER initiative, the performance of the WfD system is benchmarked against defined rubrics that describe various levels of development of the system. The process requires the collection of data using a standardized tool for each of the ten drivers of performance discussed above.<sup>29</sup> Country circumstances may call for disaggregation of the data and analysis by regional and sectoral dimensions to provide a sufficiently granular assessment of the status of WfD. The goal of this process is to inform the preparation of an action plan that aims to move the WfD from its current level of development to the next level. The plan would be customized to the given context by taking into account initial conditions and focusing on areas of particular relevance or concern. Such an action plan may also benefit from disaggregation of the data by the type of economic activity for which skills development programs may be designed.

62. **Benchmarking rubrics.** Following the practice in other areas of work in the SABER initiative, we define four levels of development of the WfD system: latent, emerging, established and cutting-edge. A summary description of these rubrics appears in table 2 below.

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<sup>29</sup> See next section for further details on the plans for implementation.

**Table 2: Rubrics for Benchmarking Workforce Development Systems**

Level of development	Summary Characteristic
Latent	<ul style="list-style-type: none"> <li>• Few employers value in WfD system</li> <li>• Interest in hiring graduates from the system is low</li> </ul>
Emerging	<ul style="list-style-type: none"> <li>• System produces some useful outputs</li> <li>• Trainees and employers are generally dissatisfied</li> <li>• Access to training is limited and quality of skills imparted is poor</li> </ul>
Established	<ul style="list-style-type: none"> <li>• System trains large numbers</li> <li>• Most trainees and employers are satisfied with the system</li> <li>• System trails in skills for innovation and technology upgrading</li> </ul>
Cutting-edge	<ul style="list-style-type: none"> <li>• System makes a difference and enjoys employers' confidence</li> <li>• Employers participate actively to provide feedback</li> <li>• Graduates get jobs</li> <li>• System adapts to new economic conditions and opportunities</li> </ul>

Source: authors' construction.

63. In practice, benchmarking a WfD system against the foregoing rubrics requires a systematic assessment based on factual information about the functioning of the system and its authorizing environment. For this purpose, we developed rubrics for the policy actions associated with each of the ten performance drivers.<sup>30</sup> To illustrate, under the strategic planning driver are three actions, one of them being to advocate for WfD as a priority for economic development. The rubrics for this policy action are as follows:

- **Latent:** WfD is acknowledged but not prioritized;
- **Emerging:** Political and other leaders recognize the importance of WfD for economic development; steps are being taken to develop the relevant policies and build institutional capacity to implement the policies;
- **Established:** Political and other key leaders in industry and the administration support a holistic approach<sup>31</sup> to WfD; the organizational arrangements have been set up for implementation and are being improved; and
- **Cutting-edge:** WfD is fully integrated into national policies and strategies and the institutional arrangements for implementation are fully functional and capable of continuous self-evaluation and improvement

<sup>30</sup> Two documents accompany this paper: one defines the rubrics for each of the three policy actions associated with the ten performance drivers; and the other contains the questions that will be used to collect factual information on the policy actions.

<sup>31</sup> A holistic approach is one that addresses multiple dimensions of skills development, including: (a) aligning skills training to employers' needs and national investment priorities; (b) building strong foundational skills through general education; and (c) meeting the needs of vulnerable populations (e.g., informal sector, traditional agriculture, etc.). It recognizes interventions that have different time frames to achieve impact.

64. The data for assessing the policy action on advocacy according to the above rubrics are generated by a standardized data collection instrument. Following a similar approach for the other two policy actions under the strategic planning driver—viz., emphasize a demand-driven approach to WfD and formulate policies targeting the key skills constraints on inclusive growth—it is possible to consolidate the information based on a systematic decision rule. Because the assessment is not precise but depends on judgment as well, the data collection instrument will be used not as a questionnaire but as a tool for systematic data collection by knowledgeable informants. Where doubts about the assessment on a specific policy action exist, a process of consultation among experts will be followed to resolve them.

65. **Levels of disaggregation.** Depending on the size and complexity of the various economic sectors, the assessment process in a given country may have to be divided in some meaningful way. In a large country, like India, Brazil or China, for example, the assessment may have to be conducted at the state level so that the unique features of WfD in each state can be taken into account. In other smaller and less developed nations, it may not be necessary to disaggregate the analysis as there will be a single WfD system established to serve the entire country and all the economic sectors.

66. In some larger countries, the project team may also find that the WfD systems have been established on a sector-by-sector basis. In this approach, each sector is served by a specialized WfD system that seeks to only address the needs of employers within that sector. These specialized WfD systems may be free-standing in that they are managed and resourced as independent training authorities, or they may be part of a national umbrella organization that is coordinated by a central body, usually known as the national human development council or the national skills training council.

67. Beyond the geographic and sector distinctions, it may also be useful to disaggregate the benchmarking exercise based on the nature of the WfD responses required to address the skills constraints in various parts of the economy or in selected population groups. For our purposes, the following distinctions will be considered to evaluate how well a country's WfD strategy responds to constraints associated with:

- (a) The more dynamic sectors of the economy where there is high potential for productivity gains and job growth. These sectors will often have faster-paced and more flexible WfD strategies with a sharp focus on new technologies (new either to the country or to the world), as well as greater selectivity in the choice of training providers and trainees. The training programs will often require innovative partnerships and linkages with leading firms (domestic and foreign) in the industry; and in some instances, they may call for new training facilities that function as test beds;



- (b) Mainstream manufacturing and services sectors that make up the bulk of the formal economy, where firms are likely to operate with relatively mature technologies, where skills constraints can often be addressed through standard design of training programs organized through routine planning processes in the mainstream training system;
- (c) The informal economy where the key concern is to equip workers with skills to raise their productivity, typically entrepreneurship skills, among others, combined with selected support services (e.g., microfinance, mentoring, etc.). Associated with this, it is often preferable to focus on multi-skill training so that trainees may be employable in more than one skill area. Such skills typically require only short-duration training and they can be organized relatively easily through existing providers in both the public and private sectors;
- (d) Agriculture where most of the population in low-income countries earn their livelihood; separate treatment of the challenges is warranted because training may involve specialized approaches and it is often delivered through institutions under the purview of a ministry other than education and training; and
- (e) The urban economy where skilled workers in the basic trade areas (e.g., plumbers, electricians, air-condition repairers, etc.) are required to build and maintain critical infrastructure and services essential to the livability and hence economic attraction of cities and towns ; and
- (f) The desire of potential migrants to gain qualifications for various skills in order to compete for jobs abroad.

68. Keeping in mind the foregoing considerations—of country size, economic and institutional structures and the nature of the skills constraints that may arise in different contexts—it is understood that the proposed benchmarking approach will be applied flexibly to fit in with the realities of WfD context in each country setting. It may thus focus selectively on only some of the areas listed in the previous paragraph.

### **Implementation Plan and Expected Outputs**

69. Because WfD issues are highly complex, this benchmarking exercise is best viewed as an exploratory project at this time. It will therefore be implemented with appropriate caution and openness to learning. Three phases of the work are envisaged: creation of a data collection instrument; prototyping the instrument through field tests in two countries; and revising the instrument and piloting it in a small sample of countries. The expected results from this plan are: (a) a validated and field-tested data collection instrument and rubrics for benchmarking WfD systems; (b) a comparative dataset for countries where the instrument has been beta-tested or piloted and an analysis of the performance drivers of WfD systems in these countries; (c) a network of WfD practitioners within the World Bank and in partner organizations and countries

that are equipped to implement the benchmarking tool and process; and (d) web-based resources to provide information and guidance for assessing the performance of WfD systems.

70. **Phase I – Preparing and validating the data collection instrument.** The task team will initiate the proposed work by consulting with knowledgeable World Bank staff and with external experts to guide the effort. The combined expertise and experience of those being consulted span a wide range of WfD issues related to the drivers of performance identified above.<sup>32</sup> A few of the experts will come from academia while most of them will be drawn from among those with practical experience in policy formulation and implementation of major WfD initiatives. As a group, the experts will also bring knowledge and expertise covering a wide range of country perspectives. Feedback from the expert group will help the task team refine all dimensions of the benchmarking effort.

71. **Phase II – Prototyping the benchmarking tool in two countries.** Following the consultations in phase 1, the tool will be tested by prototyping it in two countries. In order to expedite this phase, the countries selected will satisfy criteria such as the following: (a) the government is agreeable to the proposed activity; (b) a counterpart national team can be identified to collaborate with the task team; and (c) partner agencies are engaged and willing to participate actively in the beta-testing effort. Agreement to the proposed work by the relevant World Bank regional manager and task team leader are also essential to the success of this phase.

72. The task team will take stock of the beta-testing experience and use it to improve both the design of the tool itself and the process for implementation. With regard to the latter, a good process can enhance the tool's effectiveness as a mechanism for productive dialogue among the various stakeholders in WfD.

73. **Phase III – Piloting the benchmarking tool in a sample of countries.** The work accomplished in the previous two phases will position the tool for application in a few pilot countries. It is proposed that six countries be chosen for this purpose, two of which could be the same countries involved in the beta-testing phase. Beyond the criteria used to identify the countries for beta-testing, an additional consideration is that the government should be interested in using the findings from the exercise to develop and implement an action plan for WfD in the country. Again, the task team will be guided by the relevant World Bank regional managers and task team leader to identify the pilot countries.

74. In parallel to the work in the pilot countries, the task team will also develop case studies by applying, through desk work, the benchmarking tool to selected developed economies whose

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<sup>32</sup> As of this writing, a few key consultations have already been completed, notably with World Bank staff in July 2010 and with a 16-person external advisory group comprising of seasoned TVET leaders from around the world in October 2010. Further consultations with knowledgeable TVET experts, both inside and outside the World Bank will continue in 2011.

generally well-functioning WfD systems, including at earlier phases of their development, are a likely source of performance benchmarks for other countries.

75. In each of the pilot countries, the task team will implement the benchmarking process in collaboration with a national counterpart team using the following steps:

- (a) **Preparation.** Key activities in this phase include identifying the national counterpart team and the key informants; selecting and training the interviewers; and setting up the arrangements for interviews with the key informants. Involving an appropriate national counterpart team is in line with the capacity building intent of the project and is also helpful in facilitating the dissemination of its results. As part of the preparation, background information on the WfD system will also be collected at this stage, particularly quantitative data that describe the system's essential characteristics.
- (b) **Field work.** The main focus will be on implementing the interviews with the key informants. Typically the informants will be interviewed by pairs of interviewers using the standard benchmarking questionnaires.
- (c) **Consolidation and interpretation of the data.** The data collected will be compiled to facilitate discussion among the Bank team and the national counterpart team so as to classify the country on each of the ten performance drivers against the benchmarking rubrics that describe one of four levels of development: latent, emerging, established and cutting edge.<sup>33</sup>
- (d) **Dissemination.** One outcome of the previous step is a country report that provides a snapshot of the WfD at present. It would identify the system's strengths and weaknesses and suggests directions for improvement based on the availability of resources, the management capacity of the WfD system and the development priorities of the nation. The findings would provide the basis for preparing an action plan for implementation with external support as desired.

76. **Taking stock of the results from the three phases of the work.** An important objective of the benchmarking WfD project is to distill lessons from the experience regarding the usefulness of the benchmarking concept and its practical feasibility. Thus, at the end of Phase III, the task team will take stock of the whole exercise through its various phases. Gaps in the questionnaires, flaws in the interview process, and other weaknesses in the approach will be documented and recommendations for addressing them will be identified, so as to improve future benchmarking activities under the SABER project.

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<sup>33</sup> These developmental stages are chosen to be consistent with rubrics used in the overall System Assessment and Benchmarking for Education Results (SABER) project; their specific definition in the context of benchmarking WfD systems is being developed as of this writing.

## **Conclusion**

77. In the quest for economic growth, many developing countries see workforce development, often in the form of technical and vocational education and training, as an essential investment. However, TVET has continued to pose daunting challenges because it is expensive and has often failed the test of meeting employers' skills requirements. Although the mismatch between what the system supplies and what employers demand has many causes, some of them beyond the control of training programs, policy makers are keen to learn from the experiences of countries that have made progress in equipping trainees with job-relevant and productivity-enhancing skills. Some of them have turned to the World Bank among others for assistance in mobilizing this knowledge to inform efforts to improve the effectiveness of their workforce development system. This paper is a response to this growing interest among the Bank's partner countries. While the work is conceptual at this stage, it is hoped that the three-stage process envisaged—creating the instrument based on guidance from expert practitioners, prototyping it for proof of concept, and piloting it in selected countries—would produce a tested tool that policy makers and their development partners will find useful for evaluating and designing policies and programs to boost the performance of national, sub-national or sector-specific workforce development systems.

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