

## Vocational Education and Skills Development: A Case of Pakistan

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***Abstract:** Both vocational education and skills development have been known to increase productivity of individuals, profitability of employers and expansion of national development. A 'knowledgeable' workforce, one that is both highly skilled in a particular occupation and also exhibits flexibility, is seen as the most important human capital required for the development of a country. Pakistan's workforce is characterized as having low skills and poorly prepared to compete in today's globalized world. Rapid technological changes now require individuals to learn and relearn skills throughout their working lives by ensuring its relevance and effectiveness. The paper analyses the efforts made in recent years for increasing the knowledge, the skills and the institutional capacities within the Medium Term Development Framework and the Vision 2030 at the national and sub national levels. Some conclusions are also drawn.*

### Introduction

Human resources development (HRD) is the process of capacity building and strategic mobilization of human capital which unlocks the door of modernisation, increases productivity and greater global trade as well as integrates them with the world economies. The most important outcome of an effective HRD system is that it opens up decent employment opportunities by enhancing workers' abilities to secure and retain jobs, progress at work and cope with the change. Investment in priority areas of education and skills development become very important for reducing the gap between a knowledge-based workforce and a low-skilled workforce. Human resource development (HRD) has also emerged as the primary and most effective means for reducing chronic absolute poverty, reducing gender-oriented and inter-generational income inequalities.

HRD particularly improves skill levels of the workforce, impacts positively on economic growth, raises productivity levels and reduces unemployment (Solow, 1957). Wagner (2005) points out that vocational and professional training system would have a major positive impact on national competitiveness.<sup>2</sup> Since

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<sup>2</sup> She quotes the evidence of German-British industrial experience, showing specific links among vocational training, products and competitiveness on the basis of matched-plant comparisons

the mid-1980s, a wave of 'new' growth theories focus on increasing returns, not only in physical but also in human capital. Human capital is a key input to both the 'use of ideas and the production of ideas' (Romer, 1993). The large stocks of human capital provide enabling environment for adapting new ideas readily and acquiring technological capabilities. The ILO global report on information technology (2001) points out that the full benefits of the new wave of technological change cannot be appreciated without creating a striking balance of skills. Promoting a knowledge-based economy puts a huge premium on acquiring an appropriate education and demand-driven skills.

Since the 1990s, a shift in development paradigm favoured globalization by creating substantial opportunities, as well as challenges for socio-economic progress. HRD has received worldwide recognition as an important factor for achieving a rapid transformation of economies from agrarian, to industrial and to services. As elaborated in the ILO's *World Employment Report 1998-99*, demand for skilled labour has been rising as a result of globalization, and the technological advancement has led to changes in work organization. Globalization implies international competitiveness: firms have to compete not only on the basis of price but also on the basis of quality. The pressure of competition has prompted firms to ensure price competitiveness, greater flexibility, enhanced quality, timeliness, and the capacity to introduce new products and services effectively. And since the quality of human resources is an important determinant of competitiveness in all respects, a greater focus towards developing human resources is seen throughout the world as essential for socio-economic progress.

The training systems are a product of the labour market institutions and incentive structures in which they operate and the support they receive from the employers, workers and governments. Most skills developed over a lifetime are acquired on-the-job, mostly in enterprises where people work in both the formal and informal economies. Lall and Weiss (2004) in a study point out:

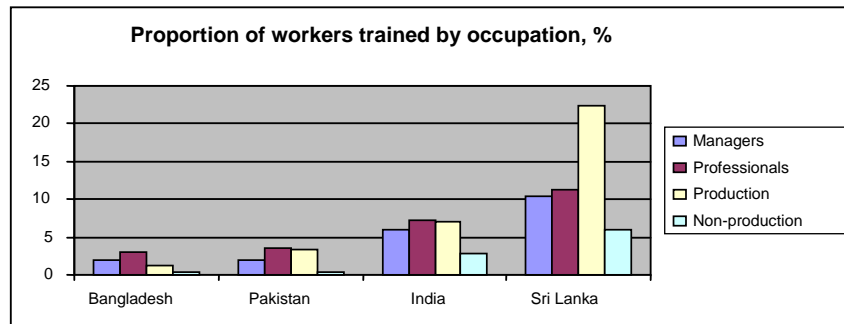
- a) The technology-intensive and more sophisticated manufactured exports are growing faster in the world, but the South Asian region lags significantly behind in technology-intensive manufactured exports
- b) Some of the countries of the region score relatively low on export sophistication, reflecting specialization in low technology products, and within these, on products that are at the low commodity ends of the sophistication spectrum
- c) Main drivers of the competitiveness<sup>3</sup> in the region are weak and are not responsive to international challenges.

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<sup>3</sup> Human resources, technological effort, technology inflows and supporting institution

Empirically, it has been established that countries, such as Singapore, Taiwan, Thailand, Korea, Malaysia and many more that achieved prudence in the global workplace as well as social and economic gains, invested heavily in HRD in their initial stages of development (Khan, 2005). Whereas the countries, such as Pakistan that invested less in HRD, progress gradually and have fallen behind in socio-economic progress and succumbed to low quality products, poor technology and a large unskilled labour force. In the South Asian region, Pakistan’s position in trained manpower is fairly weak. The economy has, so far, not produced managers, professionals and a knowledgeable workforce needed for achieving a higher productivity and required value addition. The figure 1 below provides a comparison.

**Figure: 1 Proportion of Workers Trained by Occupation (%)**



Source: World Bank 2007

**Technical and Vocational Education**

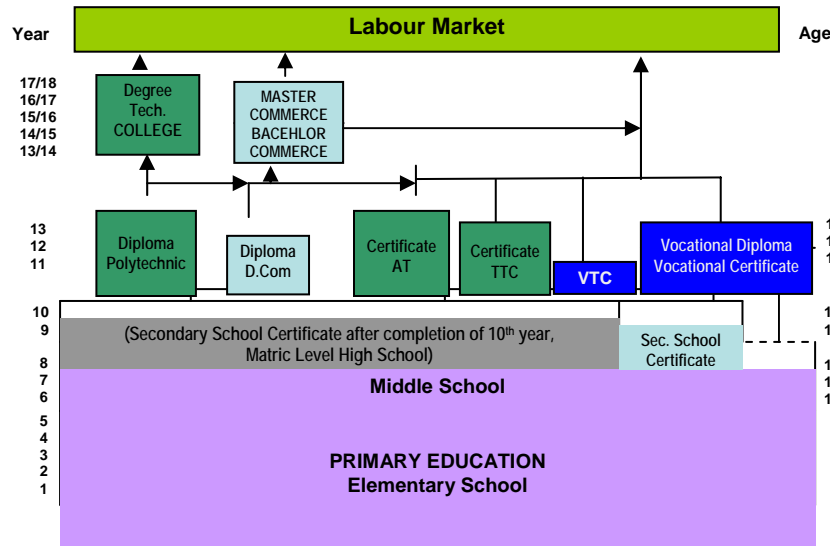
The Technical and Vocational Education is considered as an important measure for the development of trained labour force required for the socio-economic development of a country. Thomas Balogh (1969) argues that the elementary education must impart usable technical knowledge. Grubb (1985) states that vocational education can be used effectively to combat dropouts. More specifically, it is believed to be an effective answer to reduce unemployment and migration to urban centres (Lillis and Hogan, 1983). Technical education develops ‘skill culture’ in contrast to pure academic culture and preferences for white collar jobs and ‘to serve simultaneously the ‘hand’ and the ‘mind’, the practical and the abstract, the vocational and academic’ (Grubb, 1985). The development of occupational skills leads to technological advancement that ensures optimum utilization of resources and leads to enhanced productivity and thereby increased level of growth, competitiveness and job satisfaction and reduction in gap between demand and supply. Technical education is different in many ways from the general education. Table 1 below explains these differences.

**Table I: Technical Education vis-à-vis General Education**

<b>Technical Education</b>	<b>General Education</b>
Provides skills with knowledge	Provides knowledge only
Focused on job oriented terminal education.	Not target towards jobs.
More value addition in all diplomas & degrees, through learning by doing	No value addition, at all. Provides only theoretical knowledge.
Academic & technical skills are more useful for Industry.	Only bookish knowledge not useful for industry/employment.
Enables trainees to get into job market much earlier in life	In the majority of cases low rate of employment with no career growth opportunities, most of the jobs are clerical/office work
Less dependence on parents' income	More dependence on parents' income
An ever increasing demand of skills	Most of the times become burden on the country's resources.
Market forces demand skilled workers.	Market can not consume unskilled employees
Enables self-employment and generates possibilities of export of trained manpower, which remains a big source of balance of payments and budgetary support	Less possibility of self - employment

Technical education starts from the very beginning of education system i.e. primary education and moves to middle level and after completing 10 years of education, Secondary School Certificate, to different disciplines of technical education, fully integrated with the labour market. The Figure 2 gives the framework.

**Figure 2: Process of Technical Education Integration with the Labour Market**



**Pakistan**

In the Human Development Index (HDI), Pakistan ranks at the 136<sup>th</sup> position out of 175 countries due to its low per capita income, low literacy rate and poor health conditions. Development of Pakistan’s enormous human potential requires a shift in national priorities, and a greater share of the country’s financial resources to the education and vocational and technical training. Pakistan is currently investing less than 2.0 percent of the GDP in education, which is considerably less compared to the UMI reference level of 4.9 percent of the GDP. It is also important if Pakistan wants to capture some of the key industries of the 21st century. Pakistan must create conditions and environment necessary for creativity and innovation essential for moving into and being competitive in the knowledge-based industries, which will provide the highest value-addition for the economy. This will require change in the thinking of the policymakers and additional allocations of financial resources.

Pakistan, since its implementation of the First Five-Year Economic Plan (1955-60) and the Medium Term Development Framework (2005-10) at the policy level, made concerted efforts to develop human resources as per the requirements of the economy. These efforts, however, have not been supported at the implementation stage. As a result, many of the policies and programmes enacted by these Plans have not resulted into desired outcomes. The Vision

2030<sup>4</sup> document, launched by the President of Pakistan in August 2007, envisages a “developed, industrialized, just and prosperous Pakistan through rapid and sustainable development in a resource constrained economy by deploying knowledge inputs”. The Vision 2030 policies have been implemented through the Medium Term Development Framework (MTDF 2005-10).

The MTDF recognizes the importance of the HRD and its transition towards a more knowledge-based workforce in a variety of innovative ways. It emphasizes on the formulation of policies for developing capabilities to achieve technology-based self-sustaining knowledge-based growth through human resource development. The Framework recognizes that capacity building of Pakistani workforce requires development of a broad array of trade skills associated with literacy, work attitudes, behavioural and developmental skills, that are generic to employment and transferable outside of a specific occupation based on employers’ demand.

The implementation of MTDF indicates that general education system has improved significantly in terms of enrolment and upgrading of primary and secondary schools and tertiary education. However, the framework’s strategy to invest heavily in higher education including technical and vocational education received lower priority and investment.

The emerging demographic trends in Pakistan, point towards a growing population between the age of 10 to 25 ready to enter the labour market expecting to find jobs, only to find out that their education and training have not provided them with the appropriate skills. It will, therefore, be difficult for the large semi-skilled and unskilled workers to find a decent job in the labour market. With such a labour force Pakistan cannot position itself in the international market to compete and increase foreign remittances from abroad which approximated Rs. 6.0 billion<sup>5</sup> in 2006-07, a large part of which originated from the earnings of semi-skilled and unskilled workers. In the changing scenario, the types of skills demanded in the international labour market are changing and better skilled workers are being preferred over semi-skilled and unskilled workers. Similarly, to increase Pakistan’s share in world exports and to compete with imported goods domestically, Pakistan has to focus on improving its competitiveness. Upgrading skills to enhance the productivity of our labour force would contribute greatly towards increasing country’s competitiveness. It is, therefore, important to improve the skills profile of Pakistani workers to enabling it to access better jobs in the domestic and international job markets and gain higher incomes. Pakistan must prepare a policy response to demographic and related employment trends to benefit from

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<sup>4</sup>The Vision 2030 document is largely seen as a government initiative, without attracting endorsement and ownership of the civil society and the public at large. In author’s recent interaction with the Provincial Governments, the majority of Provincial Government officials appeared unaware of the Vision 2030 document.

<sup>5</sup> Planning Commission, 2007. Annual Plan.

the large dividend provided by the demographic transition by developing market driven skills.

### **Review of Education and Vocational Training**

Over the last seven years (2000-07), modifying, improving and expanding the education system in Pakistan have been a key priority for the government. Many projects and policies have been designed to provide universal access to education, at least up to the primary level. Nevertheless, Pakistan has far too long remained in a low-level skills trap and if it has to move into the knowledge economy, then it must break out of this trap (Amjad 2005). In Pakistan, skills development has been the most neglected area. The country has neither been able to improve vocational and job skills nor could inculcate the creative and cognitive skills. The lack of focus on interpersonal and social skills resulting in loss of output, exports and employment and slow growth of living standards presents a similar scenario. Various factors have contributed towards the neglect, which includes among other: inward looking policies with little emphasis on quality products, focus on primitive technologies and choice of economic activities and the limited supply of skilled workers (Atta-ur-Rehman, *et al.* 2005). Albeit the main beneficiaries of the skill development are the producers, they have made little efforts to improve the skills of their workers. Pakistan, despite improvement in Technology Index from 87 to 80 (WEF, 2004-05, and 2005-06) still lags far behind in technology. Most of the Pakistani firms continue to be on the lower end of technology.

The current structure of Vocational Education and Skill Development (VESD) programmes in Pakistan is complex, consisting of many agencies and levels. Government Vocational Institutes are administered by the Provincial Education Department while Technical Training Centres and Apprenticeship Training Centres are administered by the Provincial Labour Departments. The provincial Directorates of Manpower and Training administer apprenticeship Training under the Apprenticeship Training Ordinance.<sup>6</sup>

Training of various skills in Pakistan is imparted through polytechnic, vocational training centers, apprenticeship schemes, various training and vocational institutions under various ministries and departments, commercial training institutions and ‘Ustad-Shagird’<sup>7</sup> system in the informal sector. The formal institutions produce a very small proportion of the total increments to the skilled workforce and not necessarily in accordance with the demand and of requisite quality.

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<sup>6</sup> Pakistan handout

<sup>7</sup> Traditional Teacher-Student system.

Pakistan's failure to break away from its dependence on low-skills and low-technology manufactured exports is because of stock of human capital. The majority of labour force is illiterate. In 2006-07 around 42 percent of the population 10 years of age and above was illiterate of which males were 34 percent and females 58 percent. The figure in rural areas was significantly higher at 44 and 73 percent respectively<sup>8</sup>. The mean years of schooling for adults over the age 15 was 3.9 years compared to 8.5 for the Philippines, 6.5 for Thailand and 5.1 for India<sup>9</sup>. The one third of the labour force in 2003-04 had an education level below Matric.<sup>10</sup> Owing to low skills, the bulk of production and exports remain in low-value added and low technology manufactured goods.

### **National Vocational & Technical Education Commission (NAVTEC)**

New production methods of goods and services, technology revolution, increasing regional and international competition for exports and foreign private investment, particularly foreign direct investment and new forms of business organization and production have created a demand for new, diversified, industry relevant skills and knowledge. There is an increasing evidence that Pakistan is experiencing a serious skills gap. Pakistan's global competitiveness will largely depend upon its TEVT system. Efforts at the policy and programme level to develop knowledge and market driven skills have been intensified with the implementation of MTFD in 2005. The National Vocational and Technical Education Commission (NAVTEC) has been entrusted the work of policy formulation, vocational training and skill development coordination with provincial governments for execution of national plans / policies on technical and vocational training.

The Authority would undertake assessment of training needs, forecast technical changes and demand, and plan alternative pathways for those who drop out or could not finish normal school. Efforts have also been made to strengthen and expand Technical Education and Vocational Training (TEVT), with the involvement of stakeholders. In conjunction with the provincial counterpart Technical Education and Vocational Training Authorities (TEVTAs), It would undertake national planning, curriculum development, standardization of technical education, training of trainers, national accreditation of private polytechnics and institutes and develop strong linkages with the industrial end users. The Commission aims to provide adequate access to TEVT facilities and cater for deficient areas and target groups such as women, workers of the informal sector and the destitute sections of the society.

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<sup>8</sup> Planning Commission, 2007.

<sup>9</sup> Barri-Lee Data set, 2000 cited in Ministry of Industries, Production and Special Initiatives (January 2005)

<sup>10</sup> FBS. Labour Force Survey 2003-04 (FBS website).

TEVTA has been set up in Punjab and similar organizations in other provinces as well as at the federal level. TEVTA focus is on enhancing the enrolments, instead of providing good quality relevant training. It is generally perceived that technical and vocational training in Pakistan has little relevance to the demand of industry (Table 2). The technical institutions and training centers lack required machinery and equipment for training of the skilled workers<sup>11</sup>. In the majority of cases, teachers are not qualified and lack practical knowledge.

**Table 2: Abilities Developed during Training of Polytechnic/Vocational Institutes**

Aspects of Evaluation	Polytechnic Programme			Vocational Programme		
	Poor	Fair	Good	Poor	Fair	Good
Technical Concepts	46	41	13	28	60	12
Practical Skills	55	33	12	27	54	19
Repair/Maintenance/Trouble Shooting	55	37	8	27	58	15
Commercial Skills/Report Writing	63	29	8	44	48	8
Safety Consciousness	46	40	14	31	54	15
Quality Mindedness	43	43	14	28	60	12
Others	33	67	-	-	100	-

Source: ADB (2005)

The NAVTEC has been established to develop the knowledge economy during the implementation period of Medium Term Development Framework (2005-10). The public sector is expected to spend Rs. 333 billion (16 percent of the GDP) to achieve the objective of knowledge economy. Private sector contribution of Rs. 40 billion will be in addition. Technical and vocational enrolment in the country is around 1.3 percent of the total enrolment in 11-17 age groups. It is planned to increase it to 4.2 percent by 2010 and 7 percent by 2015.

<sup>11</sup> Author's recent visit to TEVTA, Quetta suggests that Government must invest properly according to the requirement of these institutions. The TEVTA Quetta building, its shops and equipment need substantial improvement. The current situation is not supportive of government efforts.

**Table 3: Vocational and Technical Training Institutions in Pakistan (2004)**

Province	Type of Institute	No. of Centre	Capacity
TEVTA Punjab	Technical and Vocational	402	83,000
Punjab Training Council	Vocational	60	15,000
DMT Sindh	Vocational	33	3,740
TE and VT NWFP	Technical and Vocational	35	3,300
DMT Balochistan	Vocational	12	1,730
Skill Development		Contractual basis	25,000
Federal	Ministry of Labour	2	1,500
Federal	Ministry of Education	2	1,400
Private Sector and Apprentice			70,000
<b>Total</b>		<b>546</b>	<b>204,670</b>

TEVTA = Technical Education and Vocational Training Authority

DMT = Directorate of Manpower and Training.

Source: ADB (2005)

At the provincial level, Punjab and NWFP have already started trials of “coordinating different departments under a single umbrella body”; while Sindh and Balochistan have a system that different departments have different responsibilities. Linkages between the government and TEVT schools and the private sector are yet to be strengthened.

#### **Skill Development Councils (SDCs)**

The idea to link the private sector and the national vocational training system led to the establishment of Skill Development Councils (SDCs). The SDCs were originally constituted as a contracted autonomous body established with the assistance of the World Bank, International Labour Organization (ILO), Employers Federation of Pakistan and the National Training Bureau, Ministry of Labour Manpower and Overseas Pakistanis, Government of Pakistan. The basic objective of each council is to provide flexible demand oriented and cost-effective training with the participation of employers. These objectives are carried out through the major functions of the Skill Development Councils which are to:

- a) Provide a productive link between employers and training providers.
- b) Identify training needs of the geographical area in which the SDCs is working.

- c) Analyse and prioritise training needs through government, private training institutions establishments and in-plant training modes.
- d) Validate, adapt and determine training standards and curricula contents.
- e) Implement programmes to promote vocational training, apprenticeship, and in-plant training in reaction to industrial needs.

Issues which the councils are currently reviewing have to do with making themselves financially self-sustainable and in establishing models to use in working with public sector and for-profit training providers. Other issues stimulated by the development of SDCs include how the SDCs and the NVTS can coordinate their activities more effectively, and how the NVTS can refocus its energy into skill standards, instructor training and short-term flexible courses that lead to employment in either the formal or informal sectors.

### **Conclusions**

- a) Globalization has brought new challenges for developing economies and their labour markets. To face these challenges, it is imperative to be competitive in the world market, which to a large extent is driven by scientific and technological innovations. Education and training require to be made need-oriented, multi-skill and flexible to meet changing needs of the local industry and overseas demand.
- b) In the globalization context, skill requirements are not only growing but are also constantly changing. A comprehensive training system with built-in flexibility is a vital component of an employment-intensive growth strategy. Given this requirement, two problems are being encountered virtually everywhere: the first is finding ways of making a training system flexible enough, with wide coverage; and the second is raising adequate resources for establishing and sustaining a training system of this type.
- c) Jobs in the coming years will demand higher levels of competencies and skills whilst competencies and skill requirements of existing jobs will continue to grow at a rapid pace. Knowledge, skills and talent of workforce provide a competitive edge for the individuals as well as entrepreneurs in an ever-changing work environment. There is a clear recognition now that human skills would play an important role in sustaining the current pace of growth through enhanced productivity of human capital. Vocational and technical education at school level and setting up of the specialized institutes of good quality is necessary.
- d) The current situation of knowledge and appropriate skills needs significant improvements. Pakistan must prioritise its investment in education. While

the universal primary education is necessary, but the investment in tertiary education and vocational education and training is also very important, keeping in view the global development. Without proper knowledge and skills Pakistan is not likely to compete properly internationally.

- e) The public expenditure on vocational education and vocational education must be increased manifold from its present level. It is also necessary that institutional arrangements must be strengthened to address governance issues which most of these institutions are facing.
- f) The public-private partnership is necessary to achieve the desired goals of human resource development. The country's present educational and vocational training system is largely supported by the public sector which is not likely to improve the knowledge and skills that Pakistan needs badly.

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