

ERIA Discussion Paper Series**Investing in Workers and Firms as Learning Centres for Industrial Upgrading**

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Abstract: *Investing in workers and firms as learning centres for industrial upgrading is important for economic, social, and cultural development in the context of the Association of Southeast Asian Nations (ASEAN) Economic Community and the ASEAN Socio-Cultural Community. The critical question is how best to impart learning and training of relevant skills in a rapidly changing and dynamic global environment. A collective approach of the government, firms, and workers as major stakeholders holds the key to this issue. This must be done proactively and should involve active participation by the stakeholders on a lifelong and sustained basis. Special programmes must be established for small and medium enterprises as they face structural constraints, including learning and training processes. Indeed, some ASEAN Member States (AMSs) have developed an effective and workable system for investing in workers and in firms for economic restructuring and industrial upgrading. In this context, AMSs should seriously consider publicly funded workers' training and upgrading through various empirically tested schemes, initiated and supported regionally. For example, an ASEAN Academy for human resource development and an ASEAN Labour Exchange initiative could be established for skills training and upgrading and as a platform for region-wide recognition of industries and firms with outstanding performance in investment in workers and firms as learning centres for industrial upgrading.*

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1. Introduction

The 13th Association of Southeast Asian Nations (ASEAN) Summit held in Singapore on 20 November 2007, agreed to develop an ASEAN Socio-Cultural Community (ASCC) Blueprint to ensure concrete actions are undertaken to promote the establishment of an ASCC. The primary goal of the ASCC is to contribute to realising a people-centred and socially responsible ASEAN Community with a view to achieving enduring solidarity and unity among the nations and people of ASEAN by forging a common identity and building an inclusive and harmonious society, in which the well-being, livelihood, and welfare of the people are enhanced. Based on the above objectives, the ASCC sets itself the following goals: (a) Human Development; (b) Social Welfare and Protection; (c) Social Justice and Rights; (d) Ensuring Environmental Sustainability; (e) Building an ASEAN identity; and (f) Narrowing the Development Gap. To achieve those objectives, it is of paramount importance to give education and training strategic priority. This can be achieved by providing workers with equitable access to human development opportunities through investment in education and training to workers and firms through life-long learning, human resource training and capacity building to firms, especially to small and medium enterprises (SMEs), to encourage innovation, creativity and entrepreneurship in the context of a rapidly changing regional and global economic environment. Therefore, prioritising education and investing in workers and firms are considered a strategic objective within the broad framework of human resource development in the ASCC Blueprint. Adopting such policy priorities would greatly enhance competitiveness and productivity of ASEAN member economies in line with the pillars and objectives of the ASEAN Economic Community (AEC) Blueprint. The critical importance of investing in workers and firms has been clearly recognised in the national policy of each ASEAN Member State (AMS) as well as in the AEC and ASCC frameworks. In fact, some AMSs have heavily invested in workers and firms over the years, particularly Singapore, Malaysia, Thailand, Philippines, and Viet Nam. And Indonesia has achieved notable progress in education and training for workers and firms. The main purpose of this thought paper is to highlight many of these successful and effective education and training policies and measures. The basic policy rationales

and implementation are similar. What is necessary is to fine-tune these successful policies and apply them to other AMSs that are at a lower stage of development. This chapter's focus is primarily on investment in workers and firms in industrial upgrading as another research project – 'Framing ASCC Post-2015' – has chapters on basic and higher education.

2. Investing in Workers

2.1. The Mission and Vision

The rapidly changing economic landscape in the ASEAN region and the wider world requires different strategies and different sets of manpower and workforce development to engender sustained economic growth and continued industrial upgrading and restructuring. Globalisation, marked by rapid progress in transportation and communication technology, has changed the way ASEAN production systems are organised. With competitiveness and innovation driving globalisation, eliminating barriers to trade as well as increasing capital flows, labour mobility, and information flows have become critical factors in ensuring a country's economic growth. Indeed, the process of trade and investment liberalisation is one of the main reasons behind ASEAN's economic success. All AMSs need a long-term strategy and flexible workforce to meet ever-changing labour market demands due to rapid economic integration and globalisation of markets. ASEAN economies with larger domestic markets will face different challenges compared with economies that have smaller domestic market and are more reliant on external demand for their economic growth. Nonetheless, all ASEAN economies face a critical need to adequately invest in their workers and firms based on the pillars and objectives of the AEC. Many AMSs do not have a strategic long-term mission and vision with measurable benchmarking indicators and coherent regular monitoring. Investment in workers requires a long gestation period as training and education of workers requires a lengthy time period of planning and implementation.

The next policy question is, how best to realise the policy objective of making workers more compatible, resilient, and productive in a rapidly changing regional and global economic environment?

The rational approach in investing in workers is to have a mission and vision of objectives. The mission is to enhance employability and competitiveness of the workforce and the vision is to create a resilient, skilled, and agile workforce for a vibrant national and regional economy. Due to continual changes in the national, regional, and global marketplace, the policy instruments to implement the mission and vision must be flexible, effective, and adjustable to changing external environments.

3. Building Continuing Education and Training Infrastructure

Education and training in future will require lifelong and continuing education and training to prepare the workforce for a changing set of work skill requirements to maintain competitive advantage. Therefore, AMS governments need to set up a Continuing Education and Training (CET) Master Plan. As part of the CET Master Plan, governments should enhance the capacity of the CET infrastructure, establish stronger links between CET and pre-employment education institutions, and set up a specialised Institute of Adult Learning to develop the capability of adult educators. We suggest governments set up the following adults and workers' training infrastructure:

- (a) An Adult Education Network to assist agencies and institutions that would like to draw on a pool of readily available CET practitioners. Organisation for Economic Co-operation and Development (OECD) members have widely practised this system and network. Singapore and, to some extent, Malaysia have already established such an Adult Education Network. The network should be gradually extended to all major ASEAN cities through an integrated ASEAN ICT (information and communications technology) network.
- (b) Industry-Based Training refers to skill-specific training for workers by companies and industries associations with the requisite infrastructure and expertise. The advantage of this approach is that training is tailored to company needs. Company training centres that meet specific requirements in terms of staffing, facilities, and curricula can apply to become Approved Training Centres (ATCs), which are

authorised to provide training to publicly funded Institute of Technical Education certification. Such training centres could provide apprenticeship schemes. This industry-based training scheme has been very successful in Singapore since it was set up in 1980. Such training schemes have also been successfully applied in Taiwan, Korea, and many other countries. Firms have incentives to conduct industry-based and firms-based training as they can draw from the publicly funded Skills Development Fund (SDF) and the Workforce Development Fund (WDF). Penang Skills Development Centre (PSDC) and Singapore Workforce Development Agency (WDA) are cases in point. Many export-oriented firms and sub-contractors in Singapore and Malaysia dealing in electronic goods, computer peripheral equipment, electrical goods, machinery, and industrial equipment accessories, have benefitted from such industry-based training and upgrading schemes.

- (c) Customised Skills Training is conducted for companies that need specially tailored programmes for their staff. In Singapore, the Institute of Technical Education has conducted 350 courses for 500 companies that have widely benefited workers. Substantial subsidies can be provided by the Singapore Workforce Development Agency. The same basic model is used in many developed economies including the United States and Japan, and in Europe. Media Corp and OCBC in Singapore, Star Publishing in Malaysia, Telecom Malaysia, The National Bank of the Philippines, and many other well-managed corporations in ASEAN countries have benefitted from this type of customised skills training, as well on-the-job training schemes.
- (d) The Certified On-the-Job-Training Centre (COJTC) Scheme was set up to encourage and upgrade the quality of On-the-Job-Training (OJT). Companies with the commitment and proper infrastructure to conduct structured OJT can be certified as COJTCs to plan, design, and implement OJT programmes tailored to the needs of needs of their workers. In Singapore, COJTCs are also authorised to issue OJT certificates on completion of training to their employees. Such training schemes have been very successful in Singapore and have received strong support from employers in part because they have tax benefits for participating firms. The Institute of Technical Education (ITE) in Singapore launched a Certified OJT Centre Scheme in 1994. Many ASEAN countries have OJT centres, but they must

be linked to dedicated technical education institutes or polytechnics in order to have long-term and sustainable quality results.

- (e) National Trade Certification and public trade tests can be structured on a three-tier system of basic, semi-skilled, and skilled worker level or the equivalent of Master craftsman. National Trade Certification standards should be based on competency-based and can be applied to full-time apprenticeship and part-time programmes. This is a good training model, which is widely practised in Japan, Korea, Taiwan, and Singapore. ASEAN countries need to establish this trade system and gradually standardise like other professions under mutually recognised agreements, which have been agreed by AMSs.
- (f) The development of a good technical training system requires a clear vision, strategic planning, and effective implementation. Vocational education and training includes education and training programmes designed for, and typically leading to, particular jobs. It normally involves practical training as well as learning relevant theory. The system is constantly subject to changes arising from the need to respond to the needs of the economy, and industry. The major factors that are having a significant impact on technical education and training for workers are rapid globalisation, technological change in production and ICT, regional integration, and the imperative need for continuous industrial upgrading and restructuring in the national and regional economies. Consequently, workers are required to have relevant skills in a rapidly changing, dynamic labour market. They need to be skilled in the use of information technology and highly automated machinery and production systems. On the importance of team work and greater focus on productivity, workers at all levels need to have key competencies to work more independently, communicate effectively and be able to adapt to changing technologies and workplace environment. Nurturing a workable system requires sustainable and consistent investment in the skill development for workers by dedicated public workforce agencies and collaboration between firms and workers. Rather than focusing on university-level cooperation, ASEAN countries should give higher priority to technical and vocational training cooperation, as such public spending would yield much higher benefits to most AMSs at this stage of their development. In this context, Singapore and Malaysia, being the most developed in

workers' training and education, could play a catalyst role in providing workable experience and technical expertise to other AMSs. Moreover, giving higher priority to and a strong policy push on the agreement of movement of natural persons would accelerate the development of high-quality and standardised technical training systems in AMSs as free movement of skilled labour across borders would tend to increase competition and efficiency in labour market in AMSs.

4. Institute of Technical Education

Technical skills and capability are crucial for the social and economic development of a country. A vocational training system is very much an integral part of the national education system and social fabric of the community. The system must be dynamic as it is subject to the rapidly changing needs of education, society, and the economy. Changing demand at the workplace, higher aspirations of the young generation, and an increasingly competitive global market pose new challenges and opportunities in shaping the characteristics of vocational and technical training systems. Each system is unique in its development based on the social, institutional, and economic characteristics of a country. However, any vocational and technical education and training has some basic common features – it must be effective and responsive and relevant to the needs of workers by having a long-term strategic planning, effective training infrastructure, and delivery system. In Singapore, a system of quality technical education and training is in place. In Malaysia and Thailand, the system is developing and becoming more effective. There is a need for more effective collaboration, co-ordination, and joint efforts among key stakeholders. A good example is the tripartite system in Singapore, where public institutions, firms, and workers, especially unionised workers, cooperate effectively. Polytechnics and technical education and training are the vanguard and prime policy measures to engender the ASCC objectives of inclusive growth, employment growth and fairer income distribution as these objectives can be advanced more effectively through higher labour productivity and more dynamic economic development.

5. The Role of Trade Union in Workers' Training and Upgrading

Globalisation and rapid technological advances pose serious challenges for labour movement and trade union organisation. The major trends that challenge the future role and relevance of trade unions are the demand for greater labour market flexibility and the need for efficiency and flexibility due to greater diversity of needs and expectations among workers. It is therefore important for trade unions to develop a strategic plan – including specific implementation programmes – to remain relevant in terms of representing workers in the future. Such strategic long-term planning can be in the following areas:

- (a) Trade unions must change their basic objective from employment security to employability, and their policy approach to dealing with firms from confrontation to collaboration among trade unions, the government, and firms.
- (b) Enhancing employability for life through lifelong learning and national skills certification. For example, in Singapore, the Skills Redevelopment Programme (SRP) and the National Trade Union Congress (NTUC) Education and Training Funds were set up to provide relevant skills and for the upgrading of skills.
- (c) Strengthening competitiveness through shared responsibility in the production process. Such collaborative labour and management systems have been used in Japan, Korea, Taiwan, Singapore, Sweden, Germany, and many other countries. When there is shared value to production process, it is more conducive and effective in planning and implementing continual skills training and upgrading for workers by employers as there is a mutual trust and confidence between management and workers.
- (d) Promoting workplace health and safety as well as social and recreational activities to help workers enjoy a better life and lifestyle, and also to contribute to company productivity.
- (e) Contributing to community development in activities such as mass fund-raising, and providing education grants for children of low-income families.
- (f) Developing a strong labour movement by increasing union membership. For example, the Singapore Institute of Labour Studies was set up in 1990 to strengthen union leadership through training, education, and research. Empirical studies have

shown that enlightened trade union leadership with strong vision and mission to promote workers' interests would significantly contribute to effective workers' training and upgrading. In addition, strong trade unions adopting a collaborative approach (a tripartite approach) would be an important supplementary income policy (wage policy) tool for boosting the effectiveness of traditional macroeconomic policy instruments in managing economic crises and recovery. Most ASEAN countries have had strong labour movements, but with differing development patterns, focuses, and implications for workers' vocational training and skills upgrading. There should be an ASEAN regional centre in which trade unions in ASEAN exchange their experience in promoting workers' training and education. The objective of trade union and labour movement must aim for peaceful industrial relations as well as its importance for human- and productive-centred education and training in enhancing the social well-being of workers. Many AMSs need to revamp and restructure their trade unions so that these trade unions become more organised and imbued with the correct industrial relations mindset. Well-organised trade unions and management are important stakeholders in investment in workers and firms and they should be considered an important determinant for success in the restructuring and upgrading of any economy, developed or developing.

6. The Role of Government in Investing in Workers' Training

It is a generally accepted view that governments have a responsibility to provide skills training and upgrading. Increasingly, in addition to basic education provision, governments are committed to planning and setting up continuing adult education and skills training and upgrading. ASEAN could adapt and innovate a number of good practices and feasible policies to suit each country's social and institutional characteristics at different stages of economic development:

(a) Skills Development Fund (SDF) Singapore Model

Employers have to contribute Skills Development Levy to full-time, casual, part-time, temporary, and foreign workers rendering services wholly or partly in Singapore up to

the first \$4,500 of gross remuneration at a levy rate of 0.25 percent, subject to a minimum of \$2 whichever is higher. The Central Provident Board (CPF) collects the Skills Development Levy on behalf of the Singapore Workforce Development Agency. A minimum of \$2 is payable for remuneration below \$800 and a maximum of \$11.25 is payable for remuneration above \$800. The levy collected is channelled into the Skills Development Fund (SDF) which provides companies that send their workers for training with grants. Malaysia has a similar basic model of funding workers' skills training and upgrading through its Employees Provident Fund (EPF). Empirical evidence from OECD invariably indicates that successful skills and training programmes for workers are generally provided by public funds similar to SDF in Singapore, as the marginal social benefit (MSB) accruing to society is generally greater than the marginal private benefit (MPB) accruing to individual workers.

(b) The Ministry of Manpower and the Workforce Development Agency plan and coordinate workers' education and training with the Institute of Technical Education (ITE), the Institute of National Human Resource Capability, the Human Capital Leadership Institute and Polytechnics. In addition, national manpower planning includes consultation and cooperation with the National Trade Union Congress (NTUC) and the Singapore National Employers Federation (SNEF) to provide continual education and skills upgrading to workers at all levels. Their long-term and proactive approach to planning and managing workers' education and training has greatly contributed to successfully making labour market adjustments in the rapidly changing demand and supply of workers in Singapore. In terms of investing in workers' skills upgrading, it is grossly inadequate just to rely on market forces as training and skills upgrading require long gestation periods while the demand for relevant and skilled workers in the labour market is increasingly externally driven and frequently fluctuating in nature. Therefore, it is imperative for the government and dedicated relevant public agencies to have a long-term strategic plan and an effective implementation mechanism to smooth out the dynamics and fluctuating demand and supply of labour in an interdependent global economic environment. The role of government and publicly funded agencies such as polytechnics to assist workers and

firms are important, but the national effort must be shared and supported by workers and firms.

7. Investing in Firms

Investment in firms implies investing in large, medium, and small enterprises. Generally, large firms or business organisations have adequate financial and manpower resources to set up their in-house or affiliated skills training and upgrading schemes. In the ASEAN context, investing in small and medium enterprises (SMEs) as learning centres for industrial upgrading is a major policy issue beyond 2015. The level of SMEs development and their training capacity differs widely between ASEAN countries. Singapore, Malaysia, and Thailand, have much higher SMEs development levels than other ASEAN countries, especially in the area of skills training and upgrading. However, ASEAN leaders are strongly committed to developing SMEs as one of the main pillars of ASEAN competitiveness, inclusiveness, and equitable policy objectives as embedded in the AEC Blueprint. This section deals with investing in firms, especially SMEs, as learning centres for industrial upgrading.

Company size is an important determinant of the level of participation in workforce development, especially of labour force training and skills upgrading activities, applicable even in developed economies. Data across OECD countries show consistently that SMEs participate 50 percent less in training activities than large firms. Lower levels of participation can also be explained due to financial costs and the costs of employees' time, and access to formal training opportunities for SMEs

8. Barriers to Training

It is widely accepted that many SMEs face special challenges in relation to training, as confirmed by various reports and studies conducted by the OECD and the International Labour Organization (ILO):

- (a) Information deficiencies – Small firms generally lack information on what training is available to them, as well evidence of the benefits of training to set against the perceived and real barriers to training activity.
- (b) Risk aversion – Small firms tend to be oriented to immediate goals, notably survival, and operate to shorter horizons than larger firms, resulting in higher discount rates apply (more aversion) in any calculation of the benefits of training.
- (c) Training supply – Small firms often have difficulties accessing training tailored to their needs in terms of type and quality. In addition, a lack of access to economies of scale means training costs are higher for them.
- (d) Management capability – Based on various surveys conducted by the OECD, a principal reason why small firms do not provide training is the belief of management that the workforce is already capable and proficient. A further dimension to this management failure, is the limitation upon an employer's ability to recognise the importance of skills of human resource development to support current and projected product market development.
- (e) Externalities – Benefits to workforce skills are not confined to the small employer investing in training because of 'spill-over' part of the gains can go to individual employees, the state and other employers. Such concerns reduce the employer's incentives to train workers. Thus, many large firms provide only in-house, firm-specific training, which produces skills that are less transferable in the open market.
- (f) Capital market imperfections – The relatively high financial costs of training for small firms is due to the lack of information available to financial markets about the costs and benefits of training.
- (g) Low skill equilibrium – It is widely recognised that suppressed demand for training among small employers arises because of a further system failure, often referred to as the 'low skill equilibrium'. Market demand, production strategies, and skill levels become locked into a path of, self-reinforcing cycle.

9. SMEs as Learning and Training Centres for Growth and Industrial Upgrading

SMEs can play, and have played, a key role in economic growth and equitable development in developing countries. Their contribution to employment generation, output, exports, poverty alleviation, economic empowerment, entrepreneurship, and wider distribution of wealth and economic opportunities has been clearly established and recognised by policy makers. Their potential is often not realised due to a number of factors relating to their size. In addition to many other constraints, small size is also a limitation on the internalisation of functions such as training, technological innovation, quality accreditation, while preventing the achievement of a specialised and effective division of labour. Nonetheless, there are a number of established policies on training and upgrading, which have proven to be effective in minimising SMEs' known limitations:

(a) Networking and clustering of learning and training to create an eco-system which facilitates economies of scale, sharing of learning experience, and costs and benefits of learning and training. to promote workers' training.

Evidence from developing and developed countries shows that cooperative relations and joint actions are more likely when small enterprises operate in close geographical proximity and share business interest such as markets for products, infrastructure needs, training and upgrading activities. Within such clusters, joint initiatives are more likely because of the critical mass of interested parties and they are more cost-effective due to shared fixed costs and because they are easier to coordinate. SMEs tend to concentrate on a core of well-known competencies while they outsource manufacturing of components to other small firms. Within a cluster, there is a capacity for exploration, and for experimenting with new processes, new products, or new markets. With these joint or collaborative activities, an environment or 'eco-system' is created of joint activity for learning, training, and upgrading of skills. Singapore has implemented an industrial park for SMEs clustering in certain competencies and products categories. Further example of competitive SME clusters can be seen in OECD countries such as Germany, Japan, France, and the United States. The dynamism and economic success of the numerous SME clusters operating in Italy, in

sectors as diverse as textiles, leather, jewellery, and optical frames, has been well documented.

(b) Collaboration between large firms and small firms as suppliers (sub-contractors). Links between large and small firms have many potential benefits in terms of cluster development and access to training facilities. Empirical evidence suggests that supplier or sub-contracting networks often need support to be able to develop. There are numerous examples of initiatives designed to achieve this objective. Emphasis in developing such training schemes requires carefully managing system to place upon properly identified small firms into such network. Such systems of learning and upgrading of skills between large firms and local SMEs are quite common in East Asia, particularly in Japan, Korea, Taiwan, Singapore, Malaysia, and to some extent in Thailand (in automotive parts and components), the Philippines (automotive, electronics, and tradable services), and Indonesia (machinery, furniture, logistics).

(c) Participation and involvement in regional and global value chains

Integrating value chains often requires local suppliers to be able to meet product and services standards prevailing within the chain. Numerous studies have shown that the workforce skills at the level of local suppliers are crucial to meeting these requirements. Because of resource constraints, SMEs tend to find it more difficult to invest in necessary training of their workforce than their larger counterparts. They also find it harder to identify their skill requirements or to anticipate future skills demand. A well-functioning education, vocational, and training (VET) system is crucial, therefore, in order for SMEs to recruit workers that have the ability to changing working environment and technical skills that SMEs need to successfully connect to production value chains. The OECD–WTO monitoring survey data confirms that skills are a major supply side constraint for SMEs.

(d) A close partnership between firms and the government in providing education and training

A pro-business economic environment strongly supported by the government to provide education and training to firms is crucial. Upgrading of firms must be institutionalised in the form of tax benefits, subsidised training and upgrading, and a mechanism of continual and targeted public investment in the human and physical resources of firms. Successful experiences in Japan, Korea, Singapore, The

Netherlands, Germany, and Scandinavian countries provide valuable learning experiences for ASEAN countries to adopt and adapt. For example, the Singapore government has rolled out several schemes that provide full or partial funding to locally registered organisations – including SMEs, large local companies, and multinational companies – for their capability development programmes. These funding schemes include cash grants, government-backed equity financing schemes, business incubator schemes, debt financing schemes, and tax incentives. There are also schemes that can help defray the cost of consultancy and implementation of capability development initiatives such as training programmes and productivity improvements, IT upgrades, human resource (HR) systems, and customer centric initiatives. With respect to government grants, in Singapore four types of grant are available – Enterprise Training Support (ETS), Capability Development Grant (CDG), Customer Centric Initiative (CCI), and Innovation and Capability Voucher (ICV). In this context, firms can tap into ETS for a holistic HR and training package to train and develop employees and raise productivity and with the CDG, firms can defray up to 70 percent of qualifying project costs, relating to consultancy, manpower, training certification, upgrading productivity, and developing business capabilities. In Malaysia, a similar scheme was developed by the Penang Skills Development Centre (PSDC) and later adopted by 11 other States in the country.

10. Employers' Federation

Increasingly, training and skills upgrading for firms and workers are arranged and coordinated by employers federations or associations to minimise costs of training and as well as to have a better leverage in dealing with government or external technical assistance. Firms, especially medium and smaller firms are unable to plan and manage training and skills upgrading in line with product and labour market requirements. For example, the Singapore Manufacturers Federation (SMF) works very closely with various industry and workforce development agencies to promote government assistance schemes and develop new initiatives to support restructuring of the local manufacturing sector. SMF offers a myriad of activities ranging from trade fairs and

missions to training courses, many of which are funded by the government. Some of the assistance schemes most commonly used by firms are the International Marketing Activities Programme (IMAP), the Continuous Learning Scheme, and SPUR (Singapore Planning Urban Research) for Enterprise and Skills Development Fund (SDF).

11. Summary and Conclusions

Human capital development is critical for promoting and sustaining economic development in the context of the AEC and beyond as well as for the realisation of the ASCC. Due to rapid changes in technology and rapid globalisation and regionalisation, human capital development must go beyond basic formal education. Vocational and technical training as well as other informal learning and training have become an integral part of developing and improving human capital in both developed and developing countries. Moreover, increasingly learning and education must be based on a lifelong process of acquiring the skills required by the supply for and demand of product and factor markets. The critical policy question is how best to formulate labour policy aimed to impart learning of and training in relevant skills in a rapidly changing and dynamic economic environment. Investing in workers and firms has been widely proven to be an effective strategic approach for industrial upgrading. A collective approach on workers' training and upgrading by the government, firms, and workers as major stakeholders holds the key to economic re-structuring. This must be done proactively and effectively as explained in this paper, involving active participation by the stakeholders on a sustained basis. Governments can extend the required assistance but to be effective the process must involve the active participation, commitment, and contribution from workers and firms. Special programmes must be tailored to SMEs as they face structural constraints compared to larger firms. Some ASEAN countries have developed effective systems for investing in workers and firms with a view to economic restructuring and industrial upgrading. With some modifications and adjustments based on the different stages of economic development and different social and cultural traditions, a workable system of learning and training in workers

and firms can be transferred to, adopted by, and learned by other ASEAN countries. In this context, AMSs must give high priority to setting up an ASEAN Labour Academy dedicated to promoting workers' skill training and upgrading. For example, Singapore has developed a comprehensive and flexible system of interactive learning and a training process for workers and firms. This flexible, result-oriented and integrated system of learning and training for workers and firms has contributed to Singapore's economic competitiveness and its ability to reorganise and restructure Singapore's economy, which is highly dependent on the rapidly changing external economic environment. By empowering workers through education and training, the government is directly focusing toward human-centric approach in enhancing workers' welfare and social benefits. Increasing productive employment is a single most important labour policy objective. The first priority of governments, before other social objectives can be achieved, is to make workers productive, employable, and their skills relevant in the changing labour market. A key challenge for AMSs is to change the social and cultural mindset concerning investing in workers and firms. Having the prerequisite policy knowledge is not enough. To implement policies effectively requires a well-coordinated policy tool and mechanism that can be done nationally and facilitated regionally through the AEC Blueprint and the ASCC Blueprint. Investing in workers and firms is the responsibility of individual ASEAN country but the desired outcome can be reached much higher through collective regional efforts. There are emerging policy windows as spelled out in the AEC and ASCC Blueprint. Integrating into ASEAN post-2015 does not necessary imply 'racing to the bottom' for wages and profits. But through government correct labour policy, corporate social responsibility and enlightened labour movement, inclusive benefits to all stakeholders can be achieved. Regional integration facilitates regional production networks and global and regional value chains that would, in turn, promote regional human resource development and investment in workers and firms across AMSs. Success in one or more AMSs in workers' skills training and education would set off a chain reaction of duplication of successful experiences to the other AMSs, as was the case in liberalisation and deregulation experience of foreign investment in 1980s. Case studies on ASEAN indicate that countries and firms that collaborate closely with workers have succeeded in promoting rapid and sustainable development based on the

principle of inclusiveness, green growth, and equitable income distribution. This presents a challenge to our present state of thinking on education and training. The most important lesson and perhaps the greatest challenge is that those required policies will not be achieved through a simple restructuring of government. It requires a change in culture and a transformation of mindset amongst policy makers, workers, and firms. Each stakeholder must calibrate the right approach and engage the right leadership to bring together the appropriate partners and bring about the co-ordinated efforts that link workforce programmes with economic development programmes and with educational institutions. National governments can provide resources and foster alignment among national agencies and local agencies, with workers and firms as major stakeholders. Indeed. The AEC Blueprint and the ASCC Blueprint have provided the regional framework, opportunities, and challenges for AMSs to pursue an inclusive, and human-centric approach to investment in workers and firms for sustainable growth and industrial upgrading. In this context, all AMSs should seriously consider establishing the ASEAN Labour Academy for Human Resource Development dedicated to skills training and upgrading. In addition, said labour academy can be used as a platform for conferring annual awards, region-wide recognition or honours to industries and firms that have done outstanding performance in investment in workers and firms as learning centres for industrial upgrading.

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Appendix

(A) Singapore WDA (Workforce Development Agency) established Continuing Education and Training (CET) centres to deliver quality adult training. CET Centres are public training providers that offer a comprehensive array of Workforce Skills Qualifications (WSQ) courses as well as additional services, such as employment advisory and placement. These centres are also required to monitor and report their trainees' training and job placement activities according to WDA's reporting requirements.

They undergo a rigorous accreditation and Continuous Improvement Review process to ensure the standards and quality of training are maintained.

These centres cover a wide range of industries, specialising in areas such as retail, tourism, hospitality, aerospace, security, finance, digital animation, process engineering, culinary skills, basic literacy, numeracy, and service skills.

In recognition for CET Centres' high quality delivery, and their commitment to support workforce development programmes in WSQ sectors, National CET Institutes (NCIs) were established. To be eligible for NCI status, Approved Training Organisations (ATOs) must demonstrate the ability to achieve outcomes, ensure organisation excellence, and provide quality WSQ programmes and services. NCIs have more obligations and privileges than CET Centres.

<http://www.wda.gov.sg/contents/wdawebwebsite>

(B) The [Singapore](#) Workforce Skills Qualifications (WSQ) system is a national [continuing education](#) and training system designed for adult workers which complements the formal education system for students. WSQ training is accessible to all workers and does not require academic pre-requisites. The WSQ provides training for skills upgrading and also recognition and certification of workers' existing skills. There are seven qualification levels from basic Certificate to graduate Diploma and these spell out the upgrading and career advancement pathways for workers. Workers can also be certified with Statements of Attainment for individual modules to fill gaps in their skills.

WSQ is based on industry-agreed national skills standards, and courses only cover skills training that is determined by employers to be relevant to prevailing occupations in the industry. WSQ training is quality assured by the [Singapore Workforce Development Agency](#) (WDA) and is delivered to suit adult workers – modular, flexible, not necessarily classroom- based, and recognising past skills and experience that workers had already acquired. WSQ, developed by WDA, was launched by the [Minister of Manpower](#) in October 2005. Through the WSQ system, Singapore can enhance the professionalism of industries, improve their global competitiveness, and create training avenues for workers to advance in their jobs and to enter new industries.

As of 2010, there were 30 Singapore Workforce Skills Qualifications Frameworks, mainly categories in two aspects 1. Foundation Skills 2. Industry & Occupational Skills

WSQ courses are delivered via various WDA ATOs or CET centres.

Types of WSQ CET Centres

WSQ CET Centres are public training providers that usually provide a comprehensive array of WSQ courses, and they are required to provide additional services such as career facilitation as well as employment advisory. To ensure standards and quality of training delivery, CET need to undergo rigorous accreditation and a Continuous Improvement Review process conducted by WDA on a regular basis.

The National CET Institute (NCI) has the highest status conferred by WDA to WSQ CET that demonstrates high quality delivery and commitment to support workforce development programme in the WSQ sector it serves. The following CET was conferred NCI status in March 2009:

1. At-Sunrice Global Chef Academy for Food & Beverage WSQ framework 2. Centre for Urban Greeny Ecology (CUGE) for Landscape WSQ framework 3. [Tourism Management Institute of Singapore \(TMIS\)](#) for Tourism WSQ framework.

External links

- [Singapore Workforce Skills Qualifications](#)
- [List of CET Centres](#)
- [National CET Institute](#)

(C) The Penang Skills Development Centre (PSDC) was established in 1989 and is the first tripartite, industry-led skills training and education centre in Malaysia. Since its inception, the PSDC has grown phenomenally to become the premier learning institution in the country, dedicated to meeting the immediate human resource needs of the business community and to supporting and strengthening business competitiveness It has attained both national and international recognition as a truly successful example of shared learning and as a model institution for human resource development, to be emulated within and beyond Malaysia.

Over a period of 20 years, the Centre has trained over 150,000 participants through more than 7,000 courses; pioneered local industry development initiatives; assisted in the input and formulation of national policies pertaining to human capital development; and contributed directly to the Malaysian workforce transformation initiatives.

In line with its commitment to support the growth and development of local industries, the PSDC remains dedicated in its aim to provide quality training programmes and

services to SMEs. In 2010, it executed PSDC 3.0, a strategy that supports the onset of Industry 3.0, the advent of High Technology Research and Design & Development activities in the field of manufacturing and its related services. With its unique approach incorporating both the *New Economic Model* and the *1Malaysia: People First, Performance Now* concepts, the PSDC continues to supply high-end Shared Services facilities and promote fundamental Design and Development activities to meet the current needs and demands of the industry.

Vision:

Be the preferred one-stop human resource development entity.

Mission:

Promote shared learning for the manufacturing and service industry to be globally competitive by promoting proactive HRD initiatives.

(D) Skills Development Approaches

(1) Strengthening technical and vocational education and training systems –Expansion of secondary school; targeting youths; quality improvements.

(2) Fostering knowledge intensity through workplace training –

Greater private sector involvement; increase funding; higher education reform; workforce vocational training programmes; support higher technology skills training; legislation to provide workplace training; subsidise on-the-job training; SMEs access to finance; public and private education and training institutions; national skill ecosystem programme; national human resource strategy.

(3) Developing Local Skills Ecosystem –

Roles of centralised agencies; local training partnerships; promoting trust; clear objectives; improving curriculums based on skill needs; recruiting overseas talent; comfortable living and working environment.

(4) Integrating Skills and Technology for Green Growth –

Strategy for green growth; policies for boosting green-collar jobs; sustainable growth framework; green skills agreements between all levels of governments; research and development; legislation to cover costs of green training.

Source: Skills Development Pathways in Asia @OECD 2012

(E) Box Articles on Singapore’s Workforce Development Authority (WDA), Institute of Adult Learning (AIL), and Skills Development Levy (SDL)

Box 1

Workforce Development Authority (WDA) adopted a new vision statement in 2008 to reflect its broadened role and bolder aspirations as the agency championing Continuing Education and Training (CET) through skills training and upgrading in Singapore.

The new vision articulates and reflects WDA’s unique role as it has evolved over the years:

A competitive workforce with workers learning for life and advancing with skills

Learning for life

Advancing with relevant skills reflects WDA’s focus on the future and the outcome it seeks.

A competitive workforce is what WDA ultimately wants to achieve, to sharpen Singapore’s competitiveness, enabling Singapore to continue to progress and prosper

In 2013, Singapore’s workforce established two National Continuing Education and Training (CET) campuses, which will be a one-stop destination for skills training and career opportunities.

Box 2

The Institute for Adult Learning (IAL) engages and nurtures a dynamic community of CET professionals through the Adult Education Network (AEN). The core mission is to support CET professionals’ ongoing development and future skill needs.

AEN brings together CET professionals from a range of disciplines such as Adult Education, Training Management, Human Resource Development and Workforce Development to strengthen the community by building new connections and collaborations.

With over 5,000 members to date, the Adult Education Network (AEN) brings together diverse professionals with a heart for adult learning and the advancement of the Continuing Education and Training landscape.

AEN provides opportunities for making connections, collaboration in learning, and continuous professional development through collaboration with industry leaders, special interest groups, focused seminars, workshops, and informal learning.

Box 3**Skills Development Levy (SDL)**

Under the Skills Development Levy Act, it is a statutory requirement to make SDL contributions for all employees. With effect from 1 October 2008, the SDL contribution is set at the rate of 0.25 percent of an employee's gross monthly remuneration up to the first \$4,500, or \$2, whichever is higher. The SCL is payable for all local and foreign employees, including casual, part-time, and temporary employees rendering services wholly or partly in Singapore.

Remuneration means any wage, salary, commission, bonus, leave pay, overtime, allowance including housing or other like allowances, and other emoluments paid in cash.

The SDL collections are credited to the Skills Development Fund (SDF). Acting as the custodian of the SDF, the Singapore Workforce Development Agency (WDA) taps into the funds to implement various incentive schemes to facilitate upgrading so as to raise industry competitiveness and workforce employability.

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