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Leveraging Youth Employment Through Human Resource Practices and Vocational Education in Asia

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Abstract: This paper reviewed how human resource (HR) practices and vocational education leverage youth employment in Asian countries, presented a statistical analysis of youth unemployment and employment, and formulated policy proposals that influence youth employment through HR practices and technical and vocational education and training (TVET). The study has used multiple data sources for data triangulation and combined qualitative and quantitative research. The study reveals that inadequate knowledge and skills have been responsible for substantial youth unemployment in Asian economies. Novel technologies and innovations cause substantial skills gaps in labor markets. Disruptive technologies make it difficult to predict future job skills. The existing skills in organizations engaged in information technology/business process outsourcing and tourism are becoming obsolete. Similarly, organizations engaged in financial services and advanced manufacturing are vulnerable to disruption. Therefore, HR practices in organizations need to adopt a more forward-looking approach and equip young workers with cross-job skills that enable them to perform new tasks. Therefore, skilled, knowledgeable, and trainable human resources should be recruited to perform human resource management tasks including routine and specialized activities. Besides, emerging employment opportunities in the context of new technologies should be tapped by developing compatible skills by reorienting existing educational and vocational education through robust TVET programs.

***Keywords*:** human resource, labor force, labor productivity, vocational education and training, youth unemployment, employment, policy implications

JEL Codes: E24, J08, J21, J24, J84

1. Introduction

Human resources (HR) refers to the explicit talents and primary characteristics that people possess (Boxall, 2014), while HR practices refer to recruitment and selection, training, security, and evaluation (Pfeffer, 2005). HR is defined as the accumulation of creative abilities and practical skills embodied in workers and implies the entire workforce engaged in a company or an organization. Improved skills and competencies increase employee productivity (Boxall & Macky, 2009) and firm competitiveness using HR policy (Boxall & Steeneveld, 1999). Employee productivity is

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defined as the efficiency of a worker or a category of workforce, which is estimated relative to other workers performing alike tasks and significantly influences the performance of a firm (Kenny, 2019), while firm competitiveness refers to the firm's capacity to plan, generate and or sell goods and services more efficiently compared to their competitors in the market. Employee productivity is influenced by training, skills, and work experience, which boosts the workers' capacities to perform a task more efficiently (Raja et al., 2011). HR policy implies improving the quality, efficiency, knowledge and skills of human resources through vocational education by integrating unemployed and inactive youth into the employment market (UNESCO, 2018). Vocational education refers to teaching and learning which embraces abilities, skills, capacities, knowledge, and other relevant expertise for the employment market. Technical and vocational education fosters the development of human resources by generating a skilled workforce, increasing the efficiency of workers and enhancing the standard of living. Technical education imparts realistic training and skills to learners to perform technical and supervisory tasks, while vocational training refers to comparatively lower levels of learning and skills training offered to semi-skilled workforce in different vocations. Technical and vocational education and training (TVET) have focused on the impartation of employment-oriented vocational skills to meet the needs of new technological development and innovations in the labor markets. TVET provides job opportunities (Bartram & Cavanagh, 2019), and builds skills and confidence (Cavanagh et al., 2017). TVET refers to different features of learning procedures focusing on common education, technical and scientific education, and attainment of realistic and workable knowledge, abilities, mindset, and skills including soft skills such as interaction skills, collaboration, and group tasks for socio-economic activities.

Robust HR policy is at the nucleus of increasing youth employment, productivity and growth in Asian countries due to which governments support TVET development as a priority area of intervention (ILO, 2020). Rapid technological progress provides immense opportunities to increase youth employment and labor productivity in organizations by enhancing skills (OECD, 2017). Technological progress is defined as the breakthrough of novel and enhanced techniques for generating outputs (Korinek et al., 2021). Youth employment refers to the active and effective use of the existing workforce and their skills and expertise, while labor productivity is defined as GDP per hour of work performed and includes worker's efficiency and effective utilization, which can aid in developing efficient labor market strategies. Inadequate skills can hamper the application of novel technologies and innovations due to the human resource development (HRD) paradox of high youth unemployment and low-skilled workforce (Charles et al., 2022). The generation of novel technical knowledge refers to the development of new technology to generate low-cost goods and services, while innovation refers to the practicable execution of thought which culminates in the launch of novel products and services or the enhancement of existing products and services. HRD embraces training, skills, knowledge, and professional growth of human resources and firm development through investment in the learning of workforce (Dachner et al., 2021). Therefore, appropriate HR policies and TVET interventions should be developed to cater to the needs of technologically-compatible skills for young labor market entrants in Asian countries. However, little research has been conducted on how HR practices facilitate youth employment through TVET interventions in emerging Asian countries. Existing HR practices often fail to realize the challenges of young employees in many organizations. Therefore, HR practitioners must learn effective ways to integrate young employees into the workplace. HR practitioners can gain knowledge and skills through TVET to develop a more positive approach toward young employees for their greater organizational involvement.

2. Objectives and methodology

In emerging Asian countries, improving employee skills through HR practices and TVET interventions to leverage youth employment is less researched, which emphasizes the need for policy options based on thorough evidence. Therefore, this paper reviewed how HR practices and TVET interventions impact youth labor market outcomes in emerging Asian countries. HR practices and human capital development through TVET determine youth employment in companies and complement the active labor market policies (ALMPs). This paper critically reviewed the existing human resource management (HRM) literature and cross-examined the literature concerning TVET and youth employment. This paper identified the research gaps, applied HRM literature and defined and explained the concepts and HR implications, besides drawing significant contributions in relation to HR practices and the theoretical implications. In

addition, this paper identified how HRM practices and opportunities for human capital development in organizations and TVET programs can contribute to reducing youth unemployment in emerging Asian economies. Besides a literature review on HR practices, TVET programs and youth employment policies, and their implications on youth employment, this paper presented a statistical analysis of labor markets in emerging Asian economies to draw policy implications.

This paper collected secondary data from various national and international publications, using multiple data sources for data triangulation (Bans-Akutey & Tiimub, 2021; Renz et al., 2018). This paper combined qualitative and quantitative research and used data triangulation to study the phenomenon of youth unemployment vis-à-vis TVET. A careful review of data collected from different sources was performed to arrive at more accurate qualitative results. As regards triangulation, this paper uses data from diverse sources to ensure a more comprehensive analysis of the situation. Data triangulation has been done by cross-examination of multiple data sources to check the results obtained from the research and to increase the credibility as well as validity of the findings and provide a more detailed and balanced depiction of the phenomenon under study.

Besides data triangulation, a theoretical approach has been used to analyze youth unemployment vis-à-vis TVET in Asia. Unemployment has been interpreted as periods of voluntary job search in a neo-classical perspective, as periods of vocational reorientation in a biographical perspective, and as market organized matching process from an institutional perspective, which is different from that in a theoretical perspective. The emergence of unemployment depends on organizations and institutions and is determined by general education, TVET, and the employment system. However, countries differ in the structure of general education, TVET, labor market, and labor laws. The instruments used in active labor market policies for youth differ significantly across countries and are linked to educational and vocational systems and how access to institutions and organizations depends on market organizations. In most Asian countries, youth unemployment has increased significantly due to a mismatch between skills and employability compared to adult unemployment; ALMPs and labor market institutions have no clear and universal solution to reduce youth unemployment. However, Asian countries have had varied experiences in terms of educational and occupational choices, which could compose a universal Asian solution. Thus, the present study has used a theoretical approach to analyze how youth unemployment can be tackled by focusing on the best and the worst practices.

The most representative countries in the Asian sub-regions with comparable TVET institutions have been selected for the comparative analysis. For instance, Cambodia, Indonesia, Lao People's Democratic Republic (PDR), Malaysia, the Republic of Korea (ROK) and Sri Lanka have introduced the National Qualifications Frameworks for skills accreditation. China, India, Japan, Mongolia, Pakistan, the Philippines, Singapore, and Vietnam have launched youth entrepreneurship and skill development programs. In reviewing various TVET institutions, including vocational training policies and programs, it is clear that the situation has improved in many Asian countries, but industry involvement in TVET has been limited. Labor force participation, unemployment and youth unemployment situations vary across countries of Asian sub-regions considerably by their volume and features. The highest unemployment rates (over 5% in 2017) affect mostly Indonesia and the Philippines in Southeast Asia, and Pakistan and Sri Lanka in South Asia. The measurement of the unemployment rate differs across countries of Asian sub-regions, which might weaken the relevancy of such a comparison. Besides, relatively lower unemployment rates in Vietnam or Thailand (in Southeast Asia) may disguise the absorption of the unemployed by the informal economy. As TVET is a recent institutional arrangement in most Asian countries, the study has taken the most recent years for which comparable data is available.

The data on labor force participation, employment, unemployment and education have been drawn from the ILO (2018a). The figures on the unemployment rate, growth in unemployment and labor productivity have been taken from the ILO (2019). Youth unemployment rates have been derived from the ILO (2012), while unemployment estimates have been based on the UN (2018a).

3. Literature review

Human capital has been coined by Becker (1964) and sanctified by Mincer (1974) to assess the productivity of workers (Lepak & Snell, 1999). Human capital refers to the capability of workers (Wright & McMahan, 1992). The hiring of suitably qualified and skilled employees is the cornerstone for the success of an organization. However, the non-availability of educated and trained manpower hinders effective HRM in organizations. HRM refers to linkages

between employers and employees (Boxall & Purcell, 2003) to sustain organizational viability through a cost-effective system of labor management (Boxall, 2007). Effective HRM practices improve organizational performance (Boxall & Macky, 2007; Boxall & Macky, 2009; Boxall & Purcell, 2003) by increasing labor productivity, service quality and flexibility (Boxall & Macky, 2009). There exists a strong relationship between employee well-being and performance and the overall success of the organization (Boxall et al., 2011; Boxall & Macky, 2007). Different measures have been used to implement HRM practices (Boselie et al., 2005) to develop talent, inspiration and prospects to execute work (Boxall & Purcell, 2003).

HRM system is experiencing transformation in recruiting, reinforcing, retaining, and replacing competencies. HRM practices are moving towards a more flexible training system as an investment rather than a cost. High-performance work systems (HPWS) refer to a sequence of interlinked HR practices to employ, promote, inspire and maintain the workforce in a firm (Zacharatos et al., 2005). There is a positive relationship between HPWS and organizational outcomes (Boxall & Macky, 2007). HPWS improves workers' pledge, contentment and capabilities (Zacharatos et al., 2007) and enhances organizational outcomes (Bartram et al., 2007; Boxall, 2003).

Strong HRM practices are directed toward improving employees' skills through TVET to adopt new technologies (Psacharopoulos & Patrinos, 2018). The benefits of human capital investment exceed private returns to companies and spread across generations (Flabbi & Gatti, 2018). Demand for higher cognitive skills and socio-behavioral skills (Deming, 2017) is increasing and demand for narrow job-specific skills is declining (Hanushek et al., 2017). Employees with complex problem-solving skills earn higher wages (Ederer et al., 2015). Many Asian firms face a scarcity of employees with specific socio-behavioral skills such as organizational commitment and adaptability skills. TVET offers most of the socio-behavioral skills needed in organizations and improves the adaptability of employees as these foundational skills are not occurring in schools (World Bank, 2018). Therefore, HR practices should foster human capital acquisition among employees through TVET to leverage youth employment (Rosas & Sabarwal, 2016).

ALMPs and the participation of companies in TVET increase youth employment (Jang, 2017). ALMPs refer to all interventions targeted at increasing the prospects for youth employment (OECD, 2013). The effectiveness of ALMPs on youth employment has been reviewed in recent years (Card et al., 2010). ALMPs significantly affect youth employment outcomes and abridge employment transition due to the low retention rate of the youth internship programs, which fails to create decent jobs in companies (Kim, 2017). Direct employment schemes provide temporary and bridge employment to young job seekers, however, TVET programs generate sustainable youth employment (Card et al., 2010). HR network proves to be more effective in creating permanent employment in organizations (Kang, 2010) and leads to higher job satisfaction due to better counseling (Yang et al., 2016).

New technologies help create jobs in the gig economy (Gregory et al., 2016). General cognitive skills and socio-behavioral skills cannot be replaced by robots (World Bank, 2019). Robots may complement employees to perform non-routine tasks, which need advanced analytical, interpersonal, or manual skills (Akerman et al., 2015). Higher-order technical skills and socio-behavioral skills (Arias et al., 2018), and routine cognitive skills are highly demanded by organizations (Mason et al., 2018). Therefore, human capital investment raises labor productivity and increases the demand for young workers (Glaeser, 2018). However, there is considerable uncertainty about the future of employment. New technologies provide HR challenges to organizations to get ready for the future of work through TVET to leverage youth employment (World Bank, 2019). Therefore, governments, HR practitioners and policymakers should rethink policies that deter job creation and emphasize policies that encourage youth employment.

The literature review makes it evident that past HRM research mostly focused on the linkage between HRM practices, employee outcomes and firm accomplishment. The linkages between HRM practices and human capital development through TVET and their role in leveraging youth employment in emerging Asian countries have received virtually no attention. There is a clear lack of understanding of how HR practices influence firms' skills through TVET to leverage youth employment. Finally, much of the research has been conducted in developed countries and this review adds value to the contemporary knowledge on HRM practices, TVET programs and youth employment and how surrounding issues can be addressed.

4. Youth unemployment and employment in Asia

Youth refers to the person in the age group of 15-24 years (UN, 1992), while employment refers to the workforce in salaried jobs and self-employment during a year. Youth employment in the Asian developing economies is significantly different from that in the developed economies, as work opportunities are concentrated in the informal sector which is characterized by less security, low wages, and on-the-job learning requirements. Unemployment refers to the failure to create jobs for the workforce, in spite of being available for employment and actively seeking work. Unemployment varies significantly between developed and developing countries, and among and within regions, while youth unemployment is pervasive worldwide (ILO, 2019). The youth unemployment ratio refers to the proportion of unemployed youth to a population of similar ages. Long-term youth unemployment is becoming acute in developing countries (ILO, 2013a). This has resulted in high levels of discontent and a lack of trust in socio-economic and political systems.

4.1 *Labor force participation and employment*

Table 1 reveals that both the LFPR and EPR have declined from 2000 to 2017 in Asia and the Pacific as well as all the sub-regions. In South Asia, the LFPR and EPR were robust, but remained lower than the world average, while East Asia's LFPR and EPR remained above the world average, which implies that both have been higher in East Asia compared to South Asia (ILO, 2018a). A decline in employment growth was recorded in South Asia in 2017, but EPR remained lower than in other Asian sub-regions. Between 2010 and 2017, global employment growth stood at 8.6%, while the employment share of Asia and the Pacific and South Asia stood significantly high at 44% and 50% respectively attributed to growth in population and workforce, but almost static EPR. In recent years, South Asia has experienced a substantial fall in employment, but it remained more than other sub-regions, while East Asia has experienced low employment growth rates due to a declining working-age population (ILO, 2018b). South-East Asian and the Pacific economies have experienced different populations but wider fluctuations in employment, which has remained more than the global average. Over more than two decades, EPRs have remained above the world average in all sub-regions of Asia. A large proportion of the workforce has caused a substantial increase in manufacturing growth and export performance in most of the Asian economies (ILO, 2019), but a substantial proportion of the workforce has been denied decent work opportunities and compelled to work in informal activities under precarious conditions (UN, 2019).

Table 1. labor force participation and employment (%)

Sub-region	labor force participation rate					Employment-to-population ratio				
	2000	2010	2015	2016	2017	2000	2010	2015	2016	2017
Asia and the Pacific	67.6	63.7	62.6	62.5	62.2	64.5	61.1	60.0	59.9	59.7
East Asia	75.0	69.6	68.6	68.4	68.0	71.6	66.6	65.6	65.3	64.9
South-East Asia and the Pacific	69.2	69.0	68.0	68.1	68.0	66.4	66.5	65.9	66.1	66.1
South Asia	57.8	54.9	54.0	54.2	54.1	55.0	52.9	51.9	52.0	51.9
World	64.8	62.8	62.2	62.1	62.0	60.7	59.2	58.8	58.7	58.6

Source: ILO (2018a)

Disruptive technologies make it difficult to predict future job skills. The existing skills in organizations engaged in information technology/business process outsourcing and tourism are becoming obsolete. Similarly, organizations engaged in financial services and advanced manufacturing are vulnerable to disruption. Therefore, HR practices in

organizations need to adopt a more forward-looking approach and equip young workers with cross-job skills that enable them to perform new tasks.

4.2 *Unemployment rate and unemployment*

Table 2 reveals the unemployment rates between 2017 and 2020. The unemployment rate refers to the proportion of unemployed persons to persons in the workforce. In East Asia, a constant unemployment rate and a decline in the unemployed population between 2017 and 2020 reflect a shrinking working-age population and high enrolment in education. From 2017 to 2020, the unemployment rate remained unchanged in South Asia, but unemployed people surged due to an increase in the workforce. Thus, both East Asia and South Asia have experienced high unemployment rates, more so in East Asia than in South Asia (ILO, 2019). Basic education has been unable to equip school leavers with strong employable skills. In most Asian economies, educational institutions failed to meet the skills requirements of the firms. The skills gaps remained a substantial constraint in promoting youth employment (ILO, 2013b). HRM practitioners have not been engaged by many educational institutions to develop relevant skills among graduates. Fiscal pressure remained a substantial challenge in promoting skills in most public institutions. The private sector's capability has not been tapped fully to develop relevant skills. Educational institutions have also not been oriented to develop soft skills among the pass-outs. Educational and vocational systems have not developed a technology-ready workforce for novel enterprises.

Table 2. Unemployment rate and unemployment

Region	Unemployment rate (%)				Unemployment (million)			
	2017	2018	2019	2020	2017	2018	2019	2020
Asia and the Pacific	3.6	3.6	3.6	3.6	71.6	71.8	72.2	72.3
East Asia	4.2	4.2	4.2	4.2	39.5	39.3	39.2	38.7
South-East Asia and the Pacific	2.9	2.9	3.0	3.0	10.0	10.2	10.4	10.7
South Asia	3.1	3.1	3.1	3.1	22.2	22.3	22.6	22.9

Source: ILO (2019)

4.3 *Unemployment and labor productivity*

Table 3 reveals the significant decline in unemployment and labor productivity growth between 2017 and 2020 in the Asia Pacific region. labor productivity refers to output per worker. Meanwhile, the negative growth in unemployment in East Asia between 2018 and 2020 reflects the declining labor force and longer stay in educational institutions (ILO, 2019). Labor productivity has been substantial in East Asia and is projected to remain at a higher level in 2019 and 2020 compared to other Asian sub-regions. In 2018, unemployment remained low at 4.2% in Asia and the Pacific, mainly due to strong employment growth, and has been estimated to grow at 1.2% between 2017 and 2019, with a 90% share of South Asia and a marginal share of East Asia, mainly due to shrinking labor force in China. In 2019, vulnerable employment remained substantially higher in South Asia (72%), followed by Southeast Asia and the Pacific, (46%) and East Asia (31%). Vulnerable employment among females remained significantly higher compared to males in South-East Asia and South Asia (ILO, 2018b), which can be attributed to low structural change (UN, 2019). Non-availability of educated and trained human resources hinders effective HRM in many organizations, which in turn adversely affects labor productivity. Organizations also face difficulty in recruiting highly talented employees, which hampers labor productivity. Therefore, skilled, knowledgeable and trainable human resources should be recruited to perform HRM tasks including routine and specialized activities.

Table 3. Growth in unemployment and labor productivity (%)

Region	Unemployment growth				labor productivity growth			
	2017	2018	2019	2020	2017	2018	2019	2020
Asia and the Pacific	1.1	0.7	0.6	0.6	4.4	4.7	4.5	4.3
East Asia	0.2	-0.2	-0.3	-0.3	5.3	5.4	5.1	4.8
South-East Asia and the Pacific	1.2	1.3	1.2	1.2	3.5	3.4	3.3	3.3
South Asia	2.2	1.6	1.5	1.5	3.9	5.0	4.8	4.7

Source: ILO (2019)

Table 4. Unemployment and education attainment in selected Asian countries (%)

Country	Latest year	Less than primary school	Primary school	Secondary school	Tertiary
Bangladesh	2017	1.8	3.5	8.5	10.7
Cambodia	2012	1.1	1.4	1.4	2.1
China	2013	3.7	3.5	4.0	2.5
India	2012	0.8	2.4	6.3	8.4
Indonesia	2017	1.2	2.9	7.7	4.6
Japan	2015	0	n.a	4.0	2.8
Lao PDR	2017	9.5	11.0	6.5	6.9
Malaysia	2016	2.6	2.1	4.1	4.1
Maldives	2016	5.1	9.4	6.0	3.5
Mongolia	2017	5.5	3.2	7.1	7.0
Myanmar	2017	1.7	1.1	3.0	2.7
Pakistan	2015	0.6	2.2	6.1	16.8
Philippines	2016	2.7	4.5	9.0	7.5
ROK	2017	n.a	2.8	3.8	4.0
Singapore	2017	n.a	3.1	4.3	4.1
Sri Lanka	2014	0.9	3.3	5.7	7.9
Thailand	2016	0.1	0.6	0.9	1.5
Viet Nam	2017	1.0	1.3	2.8	4.0

Source: ILO (2018a)
Note: Age group = 15 years and over, n.a. = not available, Educational attainment and Labor force status (measured for the adult population aged 25-64)

4.4 *Unemployment and education attainment*

It is significant to learn the features of the unemployed workforce and their susceptibility to unemployment to understand the labor markets (IILS, 2013). Table 4 reveals the unemployment rate by education attainment in selected Asian countries. Graduates from secondary and tertiary levels experienced substantial unemployment in Asian economies, for instance, 9% in the Philippines and Pakistan. This makes it clear that middle-skilled jobs are decreasing fast in many Asian economies due to the application of new technologies and innovations (ILO, 2018b). Not only this, technical skills among vocational graduates are significant in entering the labor market (ILO, 2018a). Thus, it becomes essential to focus on both the supply and demand of skills in the labor market for a smooth transition to labor markets. This calls for developing compatible skills development policies and robust ALMPs. The application of new technologies and innovations needs strong and efficient HR to skill and re-skill the young workforce via vocational education to create sustainable jobs (Nübler, 2017). Besides, compatible skills are needed to tap new technologies for sustainable employment. The young workforce also needs to be equipped with a variety of soft skills via strong HR practices and vocational education (Holtgrewe, 2014).

4.5 *Youth unemployment*

Table 5 reveals that regional youth unemployment rates in South Asia and East Asia declined during 2010-2011. In 2017, nearly half of the economically active young workforce remained economically vulnerable in South Asia compared to about one-fourth of the economically active young workforce in Southeast Asia (ILO, 2017a). Young males experienced more unemployment compared to young females in East Asia, which can be attributed to the greater participation of Chinese young females in fast-growing manufacturing activities. In most Asian economies, the TVET enrolment remained low and confined to the secondary education level (ILO, 2018a). Therefore, the TVET failed to meet the skills required in the services sector. The existing vocational education system is unable to provide novel skills to meet the industry requirements. The young workforce lacks digital literacy, soft skills, and interpersonal skills, which need to be provided to the youth by reorienting the vocational education system for which greater attention should be given to robust HR practices and vocational training (ILO, 2017b).

Table 5. Youth unemployment rates in selected Asian sub-regions (%)

Sub-region	2000	2010	2011	2012†	2013†	2014†	2015†	2016†
East Asia	9.3	8.9	9.0	9.3	9.4	9.6	9.7	9.8
South-East Asia & the Pacific	13.2	13.6	13.5	13.7	14.0	14.2	14.2	14.3
South Asia	10.1	10.2	9.8	9.8	9.7	9.7	9.8	9.8

Source: ILO (2012)
Note: † = partly estimated

4.6 *Labor force participation rate in selected Asian countries*

Table 6 reveals that LFPR has been different and fluctuating in Asian economies in recent years (ILO, 2018a). In South-East Asia, LFPR remained significantly high due to higher life expectancy (ILO, 2018b). Garment manufacturing generated much female employment and supplemented household income in Bangladesh, Pakistan, and Sri Lanka. However, women's LFPR remained generally low in South Asia due to customs and traditions influencing female participation in outside activities. In South Asia, high poverty motivates more people to engage in employment even at substantially lower wages, which causes high poverty rates among workers (ILO, 2018a). Therefore, the young workforce needs market-compatible skills for a smoother transition to labor markets. Informal workers require training to upskill and reskill for better wages and decent work opportunities, for which apprenticeship systems should be strengthened in the formal sector and suitable linkages, should be maintained to train informal workers in market-

compatible technological skills.

Table 6. Labor force participation rate in selected Asian countries (%)

Country	2000	2005	2010	2013	2014	2015	2016	2017
Bangladesh	72.1	58.5	58.6	57.2	n.a	n.a	56.1	58.3
India	57.2	58.2	53.5	51.6	n.a	n.a	n.a	n.a
Indonesia	67.8	64.4	66.6	66.8	66.6	66.6	66.3	67.0
Japan	62.4	60.4	59.6	59.3	59.4	59.6	60.0	60.5
Malaysia	65.1	63.3	63.0	67.3	67.7	67.9	67.7	68.0
Pakistan	50.4	50.7	51.0	51.5	51.0	52.0	n.a	n.a
Philippines	64.3	61.6	61.4	61.5	62.2	n.a	61.5	59.1
ROK	61.2	62.0	61.0	61.5	62.4	62.6	62.8	63.0
Singapore	49.3	63.0	66.2	66.7	67.0	68.3	68.0	67.7
Sri Lanka	55.6	54.3	53.4	53.8	53.3	53.8	53.8	54.1
Thailand	72.7	73.7	71.6	71.1	69.8	69.2	68.3	n.a
Viet Nam	72.3	n.a	76.2	77.0	77.0	77.2	76.6	76.1

Source: ILO (2018a)
Note: n.a = not available

Table 7. Unemployment rates in selected Asian countries (% of labor force)

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017[‡]
China	4.3	4.2	4.3	4.5	4.5	4.6	4.6	4.6	4.6	4.6
India	4.2	3.9	3.6	3.5	3.6	3.6	3.5	3.5	3.5	3.4
Indonesia	8.4	7.9	7.1	7.5	6.1	6.2	5.9	6.0	5.6	5.8
Japan	n.a	5.1	5.1	4.6	4.3	4.0	3.6	3.4	3.1	2.8
Malaysia	3.3	3.7	3.4	3.1	3.0	3.1	2.9	3.1	3.3	3.3
Pakistan	5.0	5.5	5.6	6.0	6.0	6.2	5.6	5.9	5.9	5.9
Philippines	7.3	7.5	7.4	7.0	7.0	7.1	6.6	6.3	5.9	5.9
ROK	3.2	3.6	3.7	3.4	3.2	3.1	3.5	3.6	3.7	3.6
Singapore	4.0	4.3	3.1	2.9	2.8	2.8	2.8	1.7	1.8	2.0
Sri Lanka	5.2	5.9	4.9	4.2	4.0	4.4	4.4	4.7	5.0	5.2
Thailand	1.2	1.5	1.0	0.7	0.6	0.8	0.8	0.7	0.6	0.6
Viet Nam	2.3	2.6	2.6	2.0	1.8	2.0	1.9	2.1	2.2	2.2

Source: UN (2018a)
Note: [†] = as percentage of labor force, [‡] = partly estimated, n.a = not available

4.7 *Unemployment in selected Asian countries*

Table 7 reveals that the employment rate fluctuated in South Asian countries, for instance, it dropped in India, but surged in Pakistan and Sri Lanka. Thus, young graduates and job seekers have faced substantial constraints in the employment market. Similar is the situation of other Asian economies with significant differences across countries. Unemployment increased in China and the ROK, while Indonesia, Japan, the Philippines, Singapore, and Thailand experienced a significant decline in unemployment; in Malaysia, youth unemployment remained almost static over the period (ILO, 2018a). Skills mismatches in South-East Asian countries have been considerable. For instance, Malaysia and the Philippines have experienced substantial but static unemployment rates. This calls for market-compatible skills development for tapping employment opportunities (ILO, 2014). Effective HRM practices improve youth employment outcomes (Cavanagh et al., 2017) and offer solutions to deal with the challenges of developing skills and managing talent through successful partnerships between TVET providers, organizations and other stakeholders to address skill scarcities and improve the quality of human capital (Connell & Stanton, 2014).

Table 8. Youth unemployment rate in selected Asian countries (%)

Country	2000	2005	2010	2013	2014	2015	2016	2017
Bangladesh	10.7	9.3	6.4	9.9	n.a	n.a	11.4	12.8
India	8.1	9.0	9.0	10.1	n.a	10.1	n.a	n.a
Indonesia	19.9	26.2	17.6	15.7	15.7	17.0	15.8	15.6
Japan	9.1	8.7	9.4	6.9	6.3	5.5	5.1	4.6
Malaysia	n.a	n.a	11.4	9.8	9.5	10.7	10.5	n.a
Mongolia	n.a	n.a	14.8	10.9	12.3	13.1	20.8	17.9
Pakistan	13.3	11.7	1.3	5.9	4.0	6.6	n.a	n.a
Philippines	25.3	9.6	9.9	9.2	n.a	9.5	7.7	7.5
ROK	10.8	10.2	9.8	9.4	10.0	10.5	10.7	10.4
Singapore	9.9	9.3	8.8	9.4	9.1	10.8	10.3	10.3
Sri Lanka	23.7	26.4	19.4	20.6	21.9	20.7	21.6	n.a
Thailand	n.a	6.6	4.8	2.5	2.4	3.1	3.1	3.7
Viet Nam	3.6	4.8	5.2	6.7	7.2	7.3	7.5	n.a

Source: ILO (2018a)
Note: n.a = not available

4.8 *Youth unemployment in selected Asian countries*

Table 8 reveals that youth unemployment rates have been persistently high in most Asian countries. At the same time, lower youth unemployment rates have been reported in Thailand and Japan. India's growth rate of 7% per year has been unable to generate youth employment in recent years, which is evident from the fact that the youth unemployment rate remained significantly high at double-digit, for instance, 10.1% in 2015 (UN, 2018b). Most youths faced the constraints of getting their first job. Therefore, robust ALMPs are needed for successful STWTs. In some East Asian countries, unemployment is more cyclical in nature, which highlights the need for strengthening the unemployment insurance system and retraining workers (ILO, 2018a) through robust HR policies to improve their participation, well-

being and inclusion in the workplace (Meacham et al., 2017). The gender gap in labor market participation is high in South Asia, and unlikely to close at the earliest. Most women lack social protection. Disadvantaged workers experience a high level of job insecurity, underemployment and unemployment. Existing HR policies and practices fail to consider their inclusion in the labor market. Therefore, both formal and informal HR practices can improve their labor market participation and well-being. Concerted efforts are required to improve their participation in the labor market through comprehensive policies (ILO, 2016, 2017b). In this context, the development of industry-compatible technical and soft skills is highly needed via stronger HR practices and vocational education for sustainable employment.

5. TVET programs in Asia

TVET is a vital HRD strategy to prepare Asian youth to cope with the new challenges of the labor market. Numerous programs have been implemented to increase youth enrolment in TVET by providing financial incentives and exempting them from entrance examinations in Cambodia and Lao PDR. Indonesia, Malaysia, the ROK, and Sri Lanka have introduced National Qualifications Frameworks for skills accreditation and recognition to address skills mismatches and improve youth employability. The Philippines has launched the Apprenticeship and Employment program to support new entrants in acquiring basic skills and work experience to meet the needs of the industry (UN, 2015).

Some Asian countries have implemented programs for youth entrepreneurship, including business incubators and digital skills training to promote small and medium-sized enterprises (SMEs). For instance, Mongolia has implemented the National Programme on Promotion of Youth Development to boost business start-ups, while China and India have implemented business incubators to empower marginalized youth through rural enterprises and urban start-ups (OECD, 2010). In 2015, Malaysia adopted a digital entrepreneurship curriculum in major TVET institutions to retrain and upgrade the skills of workers. Recently, Singapore, Thailand and Vietnam have launched programs for imparting digital skills to foster ICT startups. Singapore has also started programs to boost skills in artificial intelligence, data analytics, and financial technology. China has been developing its digital economy, launching the Made in China 2025 initiative in 2015, following which India also initiated its Make in India program to boost manufacturing (UNESCO-Bangkok, 2013).

In early 2017, Vietnam launched a scheme to export highly skilled labor. The ROK has a robust infrastructure for vocational education due to which around 75% of students entered TVET. China has also been implementing advanced tertiary TVET (OECD, 2010). The Philippines has partnered with employers and industry to develop labor market-compatible skills development (UNESCO-Bangkok, 2013). Similarly, Cambodia has developed an information base for employers to communicate information on job opportunities (UNESCO, 2013a).

India has implemented a program for transforming TVET institutions, while Cambodia has initiated specialist TVET programs for self-employment (ILO, 2009). Indonesia, Japan, Malaysia, and Thailand have developed TVET programs for novel skills (UNESCO-Bangkok, 2011). Likewise, Lao PDR has introduced a new scheme focusing on vulnerable youth (UNESCO, 2013b), while Cambodia has focused on providing basic income-generating skills (UNESCO, 2013a). China has developed strategies to link disadvantaged TVET institutions with the best-performing institutions (OECD, 2012), while Singapore, Malaysia, and Japan have been implementing programs to increase enrolment in formal upper secondary, post-secondary and tertiary TVET levels, respectively (UNESCO Institute for Statistics, 2006).

Some Asian countries have created novel avenues for youth to meet the changing labor market needs by developing and maintaining connections with industry through regular consultations and dialogues. Many Asian countries have maintained strong collaboration between public players and firms. Community-level institutions have not been roped in promoting TVET system and decentralizing the education and training system for establishing a lifelong learning system (Yang & Valdes-Cotera, 2011). Nevertheless, many Asian countries also have very limited industry involvement in the TVET's curriculum design, development, and implementation, which should be operationalized to cater to the needs of changing labor markets. Employers also require training in HR practices like supervision (Brendle et al., 2019). HR practices need to adjust to meet the requirements of individual employees (Cavanagh et al., 2017) and higher organizational performance (Bartram & Cavanagh, 2019) through TVET (Bartram et al., 2018). Governments, HR

practitioners and other relevant stakeholders in Asian countries intend to identify TVET programs to leverage youth employment. However, many fundamental questions on leveraging youth employment through HR practices and TVET remain unanswered. More evidence is needed to understand how HR practices and TVET interventions may affect youth employment outcomes in developing Asian countries.

6. Conclusion

Understanding what works to improve youth employment outcomes through HR practices and TVET is practically relevant in emerging Asian economies. With the goal of impacting policymaking and programming, this paper captured the existing facts and evaluated youth employment outcomes driven by the HRM practices and TVET programs. However, research on firms' HRM practices through TVET and youth employment outcomes does not exist in emerging Asian countries. This paper identified the gap by reviewing the existing studies and how HRM practices help achieve firms' competitive advantages over their competitors. This paper filled the above research gaps and contributed to existing knowledge on how HRM practices improve young employees' skills for the superior organizational performance through TVET. This paper identified a new path through which HRM practices inspire young employees' skills and provide further research evidence for the human capital theory. Our study expanded the understanding of the linkages between HRM practices and human capital development through TVET for leveraging youth employment in emerging Asian countries.

Automation makes some jobs outdated, while innovations create some new jobs. HRM practices in creating a skilled workforce depend on developing advanced cognitive skills, socio-behavioral skills, and adaptability skills through TVET programs for leveraging youth employment. Therefore, this paper intends to inform HR policymaking on how TVET benefits organizations in leveraging youth employment. Existing research shows a positive association between firm productivity and human capital investment, which enhances career opportunities in organizations and better wages. The chain effects of an investment in human capital development, TVET returns and ALMPs are not sufficiently explored. Therefore, TVET policymakers should reinforce the linkage between research and policy to capitalize on returns from investment in TVET.

7. Policy implications

This paper has drawn some HR policy implications. Initiatives for human capital development must be part of organizational HRM practices. High-quality talent in organizations must be fostered through innovative HRM practices including training and skill development through TVET for sustainable employability and adaptability. Young employees' training must be augmented by strong HR practices through suitable TVET interventions. HRM practices that can increase human capital development and organizational commitments are essential to increase retention and ensure the job security of young employees. Innovative labor market employment services and information mechanisms should be developed through the HR network to address the complex obstacles faced by NEETs. Youth should be equipped with much-needed employable skills through robust HR practices and TVET interventions to tackle the constraints imposed by emerging technological innovations and the digital economy.

Conflict of interest

The author declares no competing financial interest.

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