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# HUMAN CAPITAL DEVELOPMENT IN EAST ASIA: AN EMPIRICAL IMPLICATION FOR VIETNAM'S EDUCATION AND TRAINING NEEDS\*

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## Abstract

*Human capital development is a contemporary issue facing Vietnam's academia, private organizations, and public policymakers. This paper illustrates Singapore as one of the highly developed countries in East Asia that successfully invests, designs, and manages human capital, asset, and resources for its economic growth. The discussion suggests certain propositions with a conceptual framework as an empirical implication to Vietnamese counterparts for further examining the relationships among human capital investment, human asset development, and human resources in the context of Vietnamese education and training needs.*

**Keywords:** *Human capital, human asset, human resource, education, training*

## 1. Introduction

Human resources, human assets, and human capital are the three intertwined concepts in the literature of business management and financial accounting. Yet, each of these elements has its distinctive role to play in the pursuit of organizational excellence and national growth.

A resource is the supply of usable ingredients, parts, or components mandatory in the process of converting the basic materials to finished goods. It is also considered the availability of one's capability to create or add value to the services rendered. The notion of "resource"

is conceptualized by different schools of economic thought. The classical economics of Adam Smith and David Ricardo characterize resources as physical and tangible factors of production such as Land, Labour, and Capital. The neoclassical economics of Robbins (1932) argues that resources are scarce and limited to meet people's unlimited needs and wants. As such, the allocation of scarce resources is a fundamental economic problem for organizations. In the literature of strategic management, Barney (1991) has developed his resource-based view (RBV), postulating that firm resources are heterogeneous and

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thus can lead to both comparative and competitive advantage. The RBV theory also redefines the paradigm of classical economists by contending that resource is not only tangible but also intangible in nature. In addition, Barney (1991) extends his conceptualization of resources by characterizing them as value, rare, imperfectly imitated, and non-substitutable (VRIN). Such conceptual definition of resource from Barney reinforces the resource's role in developing competitive advantage.

In addition, Barney (1991) extends his conceptualization of resources by characterizing them as value, rare, imperfectly imitate, and non-substitutable (VRIN). Such conceptual definition of resource from Barney reinforces the resource's role in the development of competitive advantage, for which Porter (1985) argues as a firm's sustainable competitiveness is driven by its core competencies such as knowledge, technique, or skill identified as a company's internal superior or outstanding strengths (Prahalad and Hamel, 1990). Synthesizing the works of Smith, Richardo, Barney, Porter, Prahalad, and Hamel can argue that labour or people as human resources for production can be sacred, intangible, valuable, sustainable, difficult to imitate, and hard to substitute.

In business accounting, asset means economic resource. An asset can be either tangible or intangible, monetary or nonmonetary, and valuable or valueless. In financial accounting practice, assets are classified as current assets and fixed assets. The International Accounting Standards Board (IASB) provides the IFRS

Framework, which defines "An asset is a resource control by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise". The formal definition of an asset by the IASB suggests that employees cannot be considered assets due to the fact that people as human beings cannot be controlled, owned, and hold by employers to yield unlimited economic benefits. In this regard, the term "human" cannot be measured and included in a company's balance sheet as a form of assets. According to Stanko, Zeller, and Melena (2014), human asset accounting is a highly complex, controversial, and challenging process because human beings with different magnitudes of free will can hardly quantify their respective values towards an organization's success. In this regard, management scholars and business practitioners are turning to the human asset management approach for a better understanding of humans as an uncontrollable but managerial "asset" of their organizations. The function of employees as a company's primary asset rather than a resource has also been supported by Allen (2010), who posits humans are key assets that produce economically favorable results. Human asset management is an advanced version of human resource management (HRM) in accordance with the strategic business management perspective of Kriege et al. (2016). Employees should not be treated as "resources" because they are non-disposable. People should be managed as assets because of their appreciable capabilities in creating value for enterprises (Andrew, 2001). Examples of human assets

are knowledge, skills, abilities and competencies, to name a few. However, human assets are alike financial assets, such as machineries, inventories, and equipment that can be depreciated for valuable or valueless. In financial accounting practice, assets are classified as current assets and fixed assets. The International Accounting Standards Board (IASB) provides the IFRS Framework, which defines “An asset is a resource control by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise”. The formal definition of an asset by the IASB suggests that employees cannot be considered assets due to the fact that people as human beings cannot be controlled, owned, and hold by employers to yield unlimited economic benefits. In this regard, the term “human” cannot be measured and included in a company’s balance sheet as a form of assets. According to Stanko et al. (2014), human asset accounting is a highly complex, controversial, and challenging process because human beings with different magnitudes of free will can hardly quantify their respective values towards an organization’s success. In this regard, management scholars and business practitioners are turning to the human asset management approach for a better understanding of the human as an uncontrollable but managerial “asset” of their organizations. The function of employees as a company’s primary asset rather than a resource has also been supported by Allen (2010), who posits humans are key assets that produce economically favorable results. Human asset management is an advanced version of

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The notion of the human as “capital” has been conceptualised by Schultz (1993), who defines human capital as an instrument through which firm assets, productivity, and competitive advantage is improved and sustained. According to the studies of Marimuthu et al. (2009), human capital refers to knowledge-based initiatives or mechanisms such as education and training to continuously enhance the knowledge, skills, abilities, and competencies level of an employee. The Human Capital Theory, which has been pioneered by Schultz (1971), Sakamota and Powers (1995) as well as Psacharopoulos and Woodhall (1997), suggests that formal education is highly instrumental and education infrastructure is the most productive capital to enhance workers’ productivity and efficiency. As such, investment in education and training is an integral part of the human development process for both developing and developed countries to generate rapid economic growth and returns

for the nation and society (Fagerlind and Saha, 1997).

## **2. Objectives of study**

This paper entails a qualitative approach to studying the respective concepts in the development of human capital, human assets, and human resources. It attempts to illustrate Singapore as one of the East Asian countries that has successfully achieved impressive socio-economic growth through the effective application of human development models. The study would draw out a conceptual framework on the basis of Singapore's human capital development experience and Vietnam's existing education and training agendas for continuous improvement of the latter's workforce productivity and performance. It is the main aim of this study to provide insightful implications for the Vietnamese to benchmark Singapore's success in becoming another industrially advanced country in the East Asia region.

## **3. Literature Review**

### **East Asia's human capital development**

East Asia is commonly used to refer to the Northeast and Southeast regions of the ASIAN continent. Northeast Asia constitutes mainland China, Mongolia, North Korea, South Korea, Japan, and Taiwan. Southeast Asia consists of Vietnam, Laos, Cambodia, Thailand, Myanmar, Malaysia, Singapore, Indonesia, Brunei, and the Philippines. These 10 countries also collectively established a geopolitically regional bloc called ASEAN on 8th August 1967. In this paper, the discussion on human capital development focuses on Singapore as the unit of analysis to better understand the extent to which

human capital investment, human asset development, and human resource management affect the training needs of the higher education institutions and policymakers in Vietnam as a whole.

### **The Singapore experience**

In 2017, Singapore became the single largest foreign direct investor (FDI) in Vietnam, contributing \$477.80 million in capital to its member neighbour in ASEAN. The increased influx of Singapore's investment activities in Vietnam implies both pleasure and pressure for the latter's local business partners and government agencies. As far as human resource management (HRM) is concerned, Singapore is ranked the best in the world for its workforce productivity (Standard, Productivity and Innovation Board, 2003). The competitiveness of productivity in Singapore is also at par with that of the United States and other advanced nations (Ministry of Manpower, 2003). World-class accomplishment in Singapore's manpower productivity and quality is attributable to its strong focus on human capital infrastructure as an integral part of the national policy.

Singapore had been a small city-state and island country with extremely poor natural resources when it was expelled by Malaysian Government in 1965. Since its independence in 1965, Singapore has been enjoying an annual growth rate averaging 6.8% until 2014 under the leadership of Lee Kuan Yew government. The initial success of human asset development can be traced back to the Country's early stage of quick industrialization through Singapore Economic Development Board (EDB) which adopted an outside-in perspective by

engaging an Israeli and Dutchman to be the Board's Managing Director and international director, respectively (Wilfred, 2014).

Human capital development has been expedited by Singapore's remarkable investment in human assets as a priority of its national policy. The policy infrastructure for HCD is supported by two HRM strategies, namely a tripartite approach and a multidepartmental approach (Osman-Gani, 2004). The former characterizes 3-party inter-organizational cooperation among government, employers, and unions, whereas the latter exhibits intra-organizational coordination within all relevant government agencies to safeguard the execution of HRM strategies in Singapore. Examples of the tripartite system are the Skills Development Fund (SDF), the Tripartite Council, the Skill Re-Development Program (SRP), the Lifelong Learning Fund, the School of Lifelong Learning Fund, the DomesticCaRE Program, the National Trade Union Congress (NTUC), and the National Wages Council (NWC). Under the initiative of the Ministry of Manpower, the tripartite system necessitates all local employers contribute 1% of the total wages earned by each and every employee with S\$1,500 per month or \$2 per employee a month to the SDF, which will then subsidize 90% of the training expenses to update and upgrade company workers' skills for the sake participating company's growth and performance improvement (Ministry of Manpower, 2003; Skills Development Fund, 2003). Frequent dialogues between employers and unions moderated by the relevant government agencies to encourage mutual

understanding of wage packages and employment terms are the key feature of the tripartite approach to facilitating the effective execution of HCD strategy in the Singapore job market.

On the other hand, the Ministry of Manpower has adopted a multidepartmental approach to implementing Singapore's HCD strategic plan called "Manpower 21". Various government agencies such as the Investment Board, the Economic Development Board (EDB), the Council for Professional and Technical Education (CPTE), the National Manpower Council (NMC), the Employment Review Committee (ERC), the Workforce Development Agency (WDA) are working closely to enforce the vision of Manpower 21 in making Singapore a world-class talent capital with updated and upgraded human skills and competencies (Workforce Development Agency, 2003).

Workforce Education and training have been the main investment instruments in the development process of human capital in Singapore. Despite its small geopolitical dimension and restricted population size, the Country has, since its independence, liberally and progressively provided ample opportunities to all-level residents to acquire the possible knowledge and skills for lifetime learning. There is no lack of local public and private universities, branch campuses of foreign universities, professional institutions, business colleges, international schools, and training centres offering academic education programs, professional certification programs, and vocational training to local school leavers, working adults, business practitioners, and foreign students. Examples of certain

prominent and feasible HCD programs that effectively increase the quality pool of workforce equipped with industry-driven skills and competencies are:

Institute of Technical Education (ITE) Apprenticeship Training Program.

Basic Education for Skills Training (BEST).

Worker Improvement Through Secondary Education (WISE).

Adult Cooperative Training Scheme (ACTS).

Training Initiative for Mature Employees (TIME).

Reskilling for New Economic Workforce (ReNEW).

Skill Redevelopment Program (SRP).

In addition to the above-mentioned vocational training programs delivered in the public sector, the Singapore government is also supportive of human capital development via a strategic partnership in distance learning programs between private, professional institutions and foreign universities. The Singapore Institute of Management (better known as SIM University), Management Development Institute of Singapore (MDIS), and Singapore Human Resource Institute (SHRI), to name a few, are prominent examples of local private organizations that offer distance education mode contributory to the advancement of human asset management and development under the Singapore National Policy.

### **The Vietnamese challenge**

The Socialist Republic of Vietnam, as one of the ASEAN member countries, has experienced impressive GDP growth of more than 7% per year since 2002. Such rapid and sustainable economic

development has prompted Vietnam Government to initiate the Higher Education Reform Agenda (2006-2020) (HERA), supported by the Human Resources Development Master Plan (2011-2020) (HRDMP) and the Human Resources Development Strategy (2011-2020)(HRDS) in accelerating human capital development within Country to become an industrialized country by 2020. In this regard, the Ministry of Education and Training (MOET) and the Ministry of Labour, Invalids and Social Affairs (MOLISA) are the two main government units responsible for addressing the issues of education and training needs in the context of human capital investment and development in Vietnam (JICA, MOET, MOLISA, 2012).

The challenging HRM issues faced by Vietnam are:

Workforce skills and competencies remain poor to meet the requirements of Vietnam's industrialization and modernization process.

The research capacity of high education institutions remains low and inadequate.

Lack of strong financial support and alternative sources to fund higher education development.

Education and training contents are more theoretical than practical to encourage the application of subject matters and concepts.

The higher education system is too centralized and structured by the socialist government.

The problem of strategic drift occurs in HCD planning and execution by policymakers.



The expected goals of the HERA by 2020 are summarized as follows:

Increase investment in university infrastructure.

Increase training of new teaching staff.

Increase the quality and efficiency of the university system.

Enhance research activities and experience among teaching staff.

Upgrade international visibility of Vietnamese universities.

Provide greater autonomy for individual universities.

Create an inter-organizational and intra-organizational competition between and within universities.

The expected objectives of the HERA by 2020 are summarized as follows:

Increase revenue from science and technology activities to 25% of total university revenue by 25%.

Increase the proportion of university teaching staff with master-level degrees to 60% by 2020.

Increase the proportion of university teaching staff with doctoral-level degrees to 35% by 2020.

Reduce the ratio of university students to teaching staff to 20:1 by 2020.

On the other hand, awareness of the importance of vocational training in meeting the human resources requirements of the Vietnamese labor market has increased in the period 2001-2010. Occupation and Vocational Training is acknowledged as an alternative learning platform that supplements the role of the higher education system in addressing a country's human capital development issues. In this regard, the Vocational Training Development Strategy 2011-2020 (VTDS) was approved by the Prime

Minister of Vietnam on May 29, 2012 and regulated by the Ministry of Labour, Invalids and Social Affairs (MOLISA). Several significant action plans have been initiated with performance indicators as follows:

Increase the rate of trained employees.

Increase the number of vocational teachers.

Expand the networks of vocational institutions.

Upgrade the vocational programs and curriculums.

Develop the national vocational qualifications framework.

Improve the connectivity between vocational training and employment.

The above initiatives were attempted in order to minimize the impact of the following vocational training-related weaknesses on Vietnam's human capital development and human resources management:

A mismatch between training course outcomes and enterprise expectations.

Lack of qualified trainers with both theoretical and practical skills to apply theories in real situations.

Lack of understanding of the industrial requirements and employers' recruitment criteria.

#### **4. Methodology**

Implementation of "Đổi mới" by the Socialist Government since 1986 is believed to have produced a positive impact on Vietnam's socio-economic development and growth. In 2021, Singapore was the top foreign director investor (FDI) in Vietnam, with registered capital amounting to US\$10.7 billion. Other East Asia countries such as Republic of Korea, Japan have inflowed their FDI capital to Vietnam with

a total registered capital of US\$8.9 billion (Ministry of Planning and Investment, 2021). The continued influx of FDI capital from East Asia countries reveals Vietnam's competitiveness in labor population size which can serve as either an absolute advantage or a comparative advantage to attract FDIs. Despite these advantages, Vietnam is suffering from the pressure of a conservative higher education system and legislative restrictions on vocational training operations leading to its inability to produce a sufficient workforce that is skillful, articulate, and all-rounded to meet the increasing demand of industries and employers, locally and internationally.

It is particularly interesting to note that such words as "education" and "training" are used interchangeably or simultaneously in the communities of Vietnamese universities, scholars, researchers, and government units. Overlapping education and training tend to create a common perception that both concepts are sharing a similar semantic understanding associated with theories, teaching, reading, writing, memorizing, and memorizing. There is indeed a distinction in conceptual definition between the term "education" and "training". Education is defined as a passive or reactive way of acquiring and storing knowledge via teaching and studying a specific subject, whereas training is defined as an interactive or reflective way of learning and knowing a specific subject issue through consultancy, coaching, and mentoring. The goal of education is understanding, while the goal of training is performance. Pure educationalists emphasize cognitive qualifications via thinking, whereas typical trainers focus on conative skills through doing.

Vietnam has much to learn and apply the human capital development model of Singapore in the former's Higher Education Reform Agenda (HERA). It is argued that the quality of human resources management (HRM) in Singapore has been made possible by the appropriate planning and execution of human asset development (HAD) that focuses on blended learning mode characterizes classroom lectures, forum discussion, independent study, one-to-one counseling, online tutorial, and industrial visit. The goal of human asset development is to improve students' knowledge, expertise, skill, and experience through a mixture of delivery methodologies mentioned above. These intangible assets of students become value-added human resources ready to deploy for improving firm performance across industries. Based on this argument, a proposition is therefore suggested as follows:

**PROPOSITION 1:** The better the human asset development, the better the human resources management.

To ensure its delivery effectiveness and efficiency, Singapore Government has accelerated human capital investment by building better and faster IT infrastructures such as fibre optics, digital technology, and Internet system with an attempt to enhance the actual value of human assets in terms of innovativeness, knowledge sharing, skill transfer, and competence development. Investing in human capital is also believed to produce a better quality of manpower as valuable resources for firm success. In this regard, two more propositions are suggested as follows:

**PROPOSITION 2:** The more human capital investment, the better human asset

development.

**PROPOSITION 3:** The more human capital investment, the better human resources management.

The different nature of education and training suggests that each type of qualifications framework may affect the relationships among human capital investment, human asset development, and human resource management. As such, six additional propositions are suggested as follows:

**PROPOSITION 4:** The better the education qualifications framework, the better the human capital investment.

**PROPOSITION 5:** The better the education qualification framework, the better the human asset development.

**PROPOSITION 6:** The better the education qualifications framework, the better the human resource management.

**PROPOSITION 7:** The better the training qualification framework, the better the human capital investment.

**PROPOSITION 8:** The better the training qualification framework, the better the human asset development

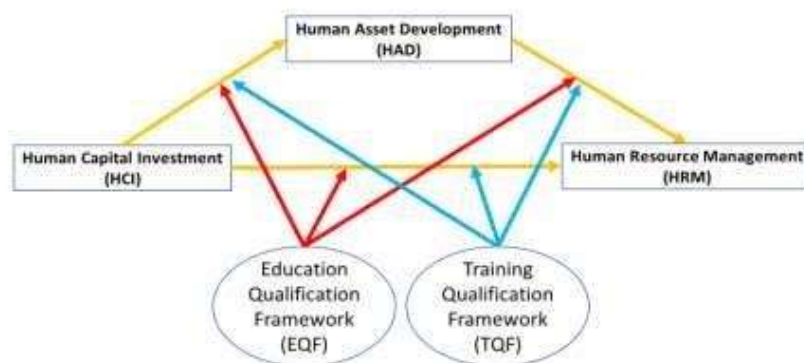
**PROPOSITION 9:** The better the training qualification framework, the better the human resource management.

### Conceptual framework

Drawing from the above nine propositions, a conceptual framework is suggested below for further examination and understanding of the relationship among human capital investment (HCI), human asset development (HAD), and human resources management (HRM), education qualification framework (EQF), and training qualification framework (TQF).

This conceptual framework suggests the use of moderated mediation analysis to understand and explain the mediating role of human asset development in the association between human capital investment and human resource management. Also, the model reveals if education and training, given its distinguished objectives and outcomes, can moderate (interact) the relationships among human capital investment, human asset development, and human resource management in this study.

Proposed Conceptual Framework for Vietnam's Human Resource Management Master Plan 2020 – 2030



Source: Developed for this study

## 5. Results and findings

This paper attempts to arouse the research interest of scholars, management consultants, public agencies, and private enterprises in investigating the extent to which the current education and training system of the Vietnam Government provides the right strategic direction to improve its human resource management. Such research findings would provide significant and empirical implications for scholars (textbook writers, teaching staff, and academic researchers) to determine if the conventional education methodologies should be revised and refined by incorporating training approaches to make students' learning exposure more appealing and productive. Company decision-makers can benefit from the future research of this study to strategize their human resource management plans for productivity and performance improvement better, faster, and cheaper. Last but not least, the Vietnamese Government at the ministerial level could leverage the latest report of this study to restructure its legislative departments and units on the nature of education and training.

## 6. Conclusion and Recommendations

This paper discusses what and how human capital investment and development turnaround Singapore into a high-ranked country of human resource management, which provides its counterpart - Vietnam, with useful development models to further improve the quality of manpower as a competitive advantage to attract more FDIs and increase job opportunities in the Country. This paper also attempts to explore the distinction between education

and training concepts in the proposed conceptual framework for examining the significant role of each concept in the relationships among human capital investment, human asset development, and human resource management. Vietnamese Government is recommended to distinguish education from training and identify different market segments for each service provider. The "Train The Trainer" program is recommended to the MOLISA to equip the Vietnamese trainers with consultancy, coaching, and mentoring skills and competencies to develop all learners who are performance-based, tactical, and hands-on in their approach to doing better things and doing things better. Trainers should not be developed like a teacher who only explains theories without knowing what and how to guide the learners towards performance excellence.

### Conflict of Interest

The authors declare no conflict of interest.

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