

Enhancing Thailand's Competitiveness through the Understanding of Human Capital

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Received: December 3, 2017

Accepted: December 26, 2017

Online Published: January 29, 2018

doi:10.5539/ass.v14n2p98

URL: <https://doi.org/10.5539/ass.v14n2p98>

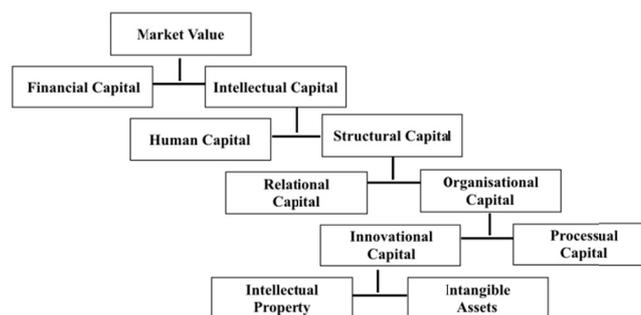
Abstract

This paper explores the meaning and importance of human capital, the basic investment, as well as the earning it returns. In essence, human capital is a crucial factor for management to keep pace with change and disruption. From Adam Smith to Nelson Mandela, education has always been the powerful impetus that has enriched and enabled human potential for effective production. To localize this concept, Human Capital Competiveness indices were explored to map Thailand's status and strength compared to other Asean communities. Most importantly, based on the exemplary teaching of His Majesty King Bhumibol, a model of functional citizenry is constructed to decode this notable concept of human capital and thus put it into actual practice.

Keywords: Human Capital, Human Resource Management, Functional Citizenry, Investment in Education

1. Introduction

As businesses are more affected by volatile changes, and technological trends are becoming ever more disruptive, what possibly is the most viable choices for corporate leaders? A simple question that used to be asked by Skandia's expert, Leif Edvinsson (as cited in Gurteen Knowledge Log, June 2017) was "When does the future start?". Based on research done in Japan, he indicated that the future starts in about 14 seconds from now, meaning that by the time the question is posted, the future has arrived or even passed already. Given this incredibly fast speed of change, Edvinsson (1997) prepared a flow in order to identify key capitals that a company need to have (see Illustration 1); in it human capital is identified as crucial to have in order to handle the future. Edvinsson called this kind of capital as the 'knowledge navigator'. Put into a practical analogy, if a company is a tree, then the knowledge navigator is not the fruit, but rather the roots of that that can expand to offer more nutrients that nourish the tree itself. Therefore, a focus on human capital development is a sure win for any company to compete and survive, and even prosper especially in a disruptive era.



Source: Edvinsson, 1997 (p. 369)

Illustration 1. Intellectual Capital at Skandia

2. The Definition of Human Capital: Then and Now

"The purchase of a cannon causes an outlay of public funds, whereas human beings are to be had for nothing by means of a mere conscription decree." H. von Thunen (1875, as cited in Patterson & Schott, 1979, p 200)

In *The Wealth of Nations*, Adam Smith in 1776 (as cited in Spalletti, 2014) noted that production depended not just on equipment or land, but also on people's abilities. Smith stated that production depended on four types of

fixed capital: tools, buildings, land, and the acquired and useful abilities of all the inhabitants or members of the society that eradicates the treatment of labour as undifferentiated mass of workers.

According to Becker (1964) and Mincer (1981), human capital increased worker productivity and thus became a useful factor in the production process. Investment in human capital influenced a nation's wealth through the set of skills and knowledge found in the workers. Mankiw, Romer, and Weil (1992) and Lucas (1988) furthered the importance of education regarding human capital indicating that education could help individuals acquire knowledge, enrich job opportunities, improve health, and reduce poverty. Nelson and Phelps (1966) and Benhabib and Spiegel (1994) further indicated that nations without enough human capital could not manage their other resources/capital effectively.

In a much simpler sense, Investopedia defined human capital as a measure of the economic value of an employee's skill sets. The concept of human capital recognized that not all labor is equal and that the quality of employees can be improved by investing in them; the education, experience and abilities of employees indeed has an economic value for employers and for the economy as a whole.

From a CFO's perspective, as reflected in a survey conducted by Mercer Human Resource Consulting, human capital was the sum of the skills, knowledge, and experience of a particular workforce, and thus should become a strategic responsibility shared by all departments.

According to this study, CFOs should want to be more involved in human capital decisions and see human capital as a key value driver, not merely an expense. Of those surveyed, 92% saw human capital as having a major effect on customer satisfaction, and 82% on profitability, 72 % on innovation/product development, 68% on revenue per employee, and 64% on growth. (Amble, 2003)

3. Human Capital and the Need for Education Investment

Education has been found to be an effective enabler to develop human capital. This thinking is reflected in the following statements.

"To human capital theorists, then, educational investment is a surefire route to socioeconomic mobility. With adequate educational investment, nothing can hinder one's socioeconomic progress. Those who invest bountifully in education will always reap bountiful socioeconomic rewards; those who invest stingily will reap sparingly." Baptiste (2001, p. 191).

"While land per se is not a critical in being poor, the human agent is: investment in improving population quality can significantly enhance the economic prospects and the welfare of poor people." Theodore W. Schultz — Prize Lecture. *The Economics of Being Poor*. December 8, 1979. (Lecture on the memory of Alfred Nobel)

The economist, Theodore Schultz (1979), believed that human capital was like any other type of capital; it could be invested in through education, training, and enhanced benefits that then led to an improvement in the quality and level of production. Wozniak (1984) agreed with Schultz (1975), saying that education helps improve decision-making and enables individuals' capacities to think systematically and creatively meet the advancing technology.

In 1928, Arthur Cecil Pigou, a British economist, wrote about an investment in human capital as being similar to other investments in material capital. This view is especially important in connection with children, as reducing unduly expenditures on their learning consumption may greatly lower their efficiency in later life. Pigou's thinking aligned with that of The World Bank's Education Department, which also supported more investment in early childhood. The World Bank cited research that showed that the first years of life are the most important period for brain development, including acquiring cognitive, social and emotional skills. The World Bank found that 39% of all children in the developing countries are 'stunted' or living in poverty. Many lower income and middle-income countries spend only 0.1-0.2% of their GNPs on pre-school education. Early childhood development improves primary school learning. Rigorous studies show that children who benefitted from quality early childhood development programs learn better when they enter primary school and earn higher wages as adults. A study in Jamaica also showed that children who benefitted from quality early childhood programs earned 25% higher income as adults. In 2013, 184 million children enrolled in pre-primary education, an increase of 57% since 2000. Yet, 159 million children were still deprived of access to pre-primary education. The world is still facing a literacy challenge, as around 250 million children at the primary and lower secondary levels cannot read or write, even though they have been to school. (Education for All, UNESCO, 2015)

Kaoru Ishikawa (as cited in Ken Inove, 1985), a Japanese Professor of Engineering at the University of Tokyo and best known for the fishbone cause and effect diagram, and noted for his quality management innovations, stated that quality starts and ends with education in that quality control is one of the management philosophies;

therefore, systematic and repeated education is essential to understand and implement this new philosophy. The realization of education importance became evident in Deming’s Point 6 on Training, which states that a “Japanese plant manager faces much the same pressures to reduce costs that his American counterpart does. He has flexibility to cut costs in many areas, but one area he cannot reduce is the training budget, because training and education are the cornerstones of greater consistency.” (Scherkenbach, 1994, p. 91). Deming distinguished between training and education based on their purposes. Education aims at improving the level of general knowledge, while the intent of training is to learn the use of specific tools.

Gary Becker's view of human capital (The Economist, 2017) in relation to education states that the abilities and qualities of people then make them productive, as having knowledge is the most important driver. As investment in physical capital can produce gains, as does investments in human capital, which can also pay off for individuals. Earnings of well-educated persons are found to be higher than those in the general population.

Becker distinguished between specific and general human capital. Specific capital refers to the acquisition of knowledge that is directly attached to their companies and this is beneficial only while the human capital is working there, similar to the use of branded software. In this regard, the company bears the responsibility for the training. However, general human capital has the knowledge to enhance overall job mobility or raise the productivity of a worker in all firms. The returns from a general human capital investment are reflected in higher wages; therefore, workers have to acquire it at their own expense. In doing so, workers have to compare their expected future earnings for various career choices in order to maximise their investment, which Becker describes as a successful and ‘economic way of looking at life’.

Becker based his assumption on the fact that people are purposeful and rational in their decisions and that characteristics helps explain the reason why young people should spend more time in schooling than the older individuals because the younger people can reap more profit from their knowledge longer. It also explains why education matters because it imparts knowledge and signals the more likely people will become productive workers. In particular, people of greater abilities are the ones who are most likely to achieve higher degrees. As evidenced in Taiwan and South Korea, even with few natural resources, their population became the most valuable capital for investment. That productivity is not beneficial solely on the individuals or the companies they work for; it also contributes to a more educated population. There is a strong correlation between a country's investment in its workforce and the strength of its GDP.

UNESCO conducted a study on how much countries invest in R&D. The findings were: Global spending on R&D has reached a record high of almost US\$1.7 trillion. Those closer to the top have higher numbers of researchers per 1 million inhabitants. The top countries have strong spending from their business sectors, which is an underlying factor for success. Investing in education can have enormous benefits on poverty, peace, GDP growth, and child welfare. Not investing in education has serious drawbacks. (UNESCO Institute of Statistics)

Table 1. Education on GDP and Investment in R & D

Countries	Government Education Expenditure in % of GDP (Year 2012)	R & D Expenditure in % of GDP	Total R & D Expenditure	R & D Contribution by Business in PPPdollar	R & D Contribution by Government in PPPdollar	R & D Contribution by Universities in PPPdollar	Number of Researchers per million inhabitants (Ratio Male : Female)
Israel	6	4.3	12 263.5 M	10 395 M	215 484 K	1,504 M	8255
Republic of Korea	5	4.3	73 216 M	57 272 M	8 209 M	6,625 M	6899 (82:18)
Japan	3.8	3.4	170 589 M	132 644 M	14 202 M	21,457 M	5386 (85:15)
USA	5.6	2.8	479 358M	340 728 M	54 103 M	64,796 M	4231
Germany	5.1	2.9	110 170 M	74 351 M	16 341 M	19,476 M	4363 (72:28)
Singapore	3.3	2.2	10 068 M	6158M	1147 M	2,761 M	6658 (70:30)
Malaysia	5.1	1.3	9728 M	4441 M	799 K	4 488 M	2,017 (51:49)
China	4	2	370 589 M	286 453 M	58 564	25 572 M	1133
India	3.3	0.8	48 063 M	17 044 M	29 066 M	1952M	156
Thailand	5.8	0.5	5165 M	2802 M	1055 M	1287 M	973 (47:53)
Vietnam	6.6	0.4	1777 M	919 477K	750 851 K	94 533 K	674 (56:44)

Source: UNESCO Institute of Statistics, 2017

4. Human Capital and Potential Earnings

Michael Spence's job-market signalling model explained that job candidates send a signal about their respective

skill levels to the employer by acquiring a certain degree of education or credentials which can be costly for the learners. The informational value of these credentials derives from the fact that the employer believes the credential is positively correlates with that person's having greater ability and also ability that is difficult for low ability employees to obtain. Thus, a credential enables the employer to reliably distinguish low ability workers from high ability workers and to pay a higher wage to their more educated employees.

The increase in wages associated with obtaining a higher credential is sometimes referred to as the “sheepskin effect”, (Spence, 2002), since “sheepskin” informally denotes a diploma. This viewpoint can be observed empirically in the wage differences between 'drop-outs' and 'completers' even with an equal number of years of education. In reality, education serves many different purposes for individuals and society as a whole. Spence discovered that even if education did not contribute anything to an employee's productivity, it could still have key value for both the employer and employee. If the appropriate cost/benefit structure exists (or is created), "good" employees will buy more education in order to signal their higher potential productivity to their employers.

However, as the cost of college has been increasing, Derek Bok (as cited in Ann Landers Column, *The Washington Post*, October 6, 1975), the President of Harvard University, offered a provocative perspective, saying that “If you think education is expensive, try ignorance.” Georgetown University’s Center on Education and the Workforce Study looked at how lifetime earnings change based on education level and also by occupation. It was found that a college degree pays off. The data were clear: A college degree is the key to economic opportunity, conferring substantially higher earnings. Education and earnings data from the Organisation for Economic Cooperation and Development (OECD) also showed that the higher the education, the more will be the earnings.

Table 2. Relative earnings by education attainment: Upper secondary = 100 (OECD)

Country / Education Attainment	Upper secondary	Short tertiary	Bachelor's	Master's	Doctoral
Australia	100	108	143	151	179
Canada	100	118	147	160	189
Germany	100	153	158	167	185
UK	100	124	151	162	181
USA	100	114	166	191	232
Thailand	100	113	164	122	159
OECD Average	100	122	146	164	198

Source: Organization for Economic Cooperation and Development (OECD), 2017

Table 3. Education Attainment and Earnings (Age 25 Years and Over)

Education Attainment 2016	US Weekly earning \$	Percentage difference from the previous	Thailand's Monthly Salary (Baht)	Percentage difference from the previous
High School Diploma	714		9 700	
Associate Degree	801	112%	11 000	113%
Bachelor's Degree	1164	145%	18 000	164%
Advanced Degree	1470	126%	22 000	122%

Source: Current Population Survey, U.S. Department of Labor, U.S. Bureau of Labour Statistics (2017)

5. Human Capital and Thailand’s Status

According to the World Economic Forum (WEF), human capital is vital for growth as it generates a good return on investment. However, a WEF The Future of Jobs Survey (2016) reported that a third of the world’s employers face difficulties in finding strong candidates for their opening jobs, and nearly half expected that shortage of talent to have a negative impact on their businesses. The Human Capital Index Report (2016), tracked and ranked 130 countries on their engagement in developing people.

This section thus explores Thailand's status regarding human capital. First, in the Human Capital Index 2016, Thailand’s score was 71.86, which ranked 48th on a world scale and ranked 7th among all the East Asia and Pacific countries, led by Japan (83.44). Among the Association of Southeast Asian Nations (ASEAN), Thailand ranked 3rd and was superseded by Singapore (80.94) and Malaysia (74.26). In terms of income classification, Thailand was listed as the upper middle income and was somehow considered as a trap since 1997, partially due to economic stagnation, lagging innovations, and ineffective education. To get out of that trap, TDRI (2015) suggests a Public Private Partnership Model or PPP, which will place strong emphasis on investment in

innovation to increase the country's competitiveness.

The last two factors to be considered are the scholastic achievement of Thai students and the educational attainment of Thailand's workforce. It is noted that the PISA score in Science for Thailand was 444, ranked third in Asean, after Singapore (551) and Vietnam (528). In terms of workforce education attainment, Thailand has a high percentage of its workforce with tertiary education (13%), second only to Singapore (22%). However, considering the average school attendance of its population (15 years and above), Thailand had a low attendance rate of 7 years, compared to Malaysia (10 years), Singapore (9 years) and The Philippines (9 years).

6. Human Capital and Functional Citizenry

"His Majesty considered all the people of Thailand to be his family. How fortunate the Thai people were to have had His Majesty as a member of their family. And how fortunate we are to be able to learn from the way that this remarkable king chose to live his life." Samantha Power (2016). UN General Assembly

These remarks by Ambassador Samantha Power, at the UN General Assembly Tribute to the Memory of His Majesty King Bhumibhol Adulyadej on October 28, 2016, were excellent demonstration of the greatest human capital the world ever had. To illustrate what the King had lived his life for, Power recalled, "In retrospect, his words can just as easily be applied to the way that he lived his life. A life of always looking for ways to be useful to those in need. A life of giving, and of serving, every single day. Not to earn praise, not to get something in return, but rather because that is what one does for family." (Power, 2016)

To follow in the King's footsteps, it is critical to redefine human capital, at the other end of the production continuum as people of the nation, so it will be accepted and shared by the society. A model of functional citizenry has been proposed to describe the target output that the education is obliged to produce for the public at large. Essentially, the function of citizenry is defined as having the desirable senses to function effectively as both a member of manpower and a member of society.

Therefore, the six senses of a functional person are the following (Chat-uthai, 2013)

6.1 *A Sense of Purpose and Urgency – knowing what to do and when to do it.*

This sense may be considered the first and foremost sense that must be enhanced in a person. A sense of purpose provides an individual with definite goals and directions. A clear purpose enables a person to become fully aware of a circumstance - knowing what needs to be done and why it has to be done. It is analogous to having a built-in compass that closely maps and monitors the current situation and thus automatically allows a person to elicit appropriate responses. It is equally important for the person to feel the need to accomplish a set goal in due time. Knowing what to do is equally as important as knowing when to do it. Many projects and plans fail simply because they are carried out in an untimely manner. A sense of urgency puts a person on caution and alerts each individual to want continuous development and improvement so as to achieve better results.

6.2 *A Sense of Independence and Sufficiency – being able to assert one's ideas, and stand firm on one's beliefs.* Independence in this sense is close to being self-reliant both socially and economically. It is important that this sense of independence be instilled in a person early on. Being independent does not mean living in isolation. To the contrary, a sense of independence enables a person to develop and acquire necessary competency in as much as one can then live in harmony with others and, more importantly, be less of a burden to the society.

6.3 *A Sense of Excellence and Quality – striving for excellence in all aspects, systems thinking, continuously improving, and developing to become a qualified member of the society.* A sense of quality is compatible to the notion of excellence that is reflected in all of an individual's initiatives and actions. The functional person is one who is knowledgeable, quality conscious and continuously pursues greater self-improvement and development. A sense of quality ensures that maximum efforts will always be put into the work process.

6.4 *A Sense of Autonomy and Responsibility – accountable, reliable, participating in decision-making and the sharing of consequences.* A fully functional adult is one who demonstrates a noticeably high level of civic responsibility and self-discipline. It obviously is everyone's responsibility to help bring about a higher quality of life. What the society needs most especially during a crisis is the realisation that each and every one of us becomes the doers and be less of the blamers.

6.5 *A Sense of Civic and Community – pro-social, caring, looking for/ seeking the common good.* Realising the fact and the necessity that nothing can exist in isolation. What unites the nation is a strong community. Thailand will gain its strength from the King's exemplary works and the traditional Thai ways of giving and sharing -- the only social asset perhaps that has remained undamaged by the current economic crisis. Group strength and cohesiveness serve together are the strong foundation of the community and the nation on a larger scale.

6.6 A Sense of Ethical/Moral – high morals and a shared belief in universal virtue, and the high value of personal integrity, ability to live consciously and spiritually. People who have a strong moral ground will serve as the pillars of their society. They are individuals who respect others and live their lives in harmony with all humankind and the nature.

These six senses need to be cultivated as well as conserved through a supportive social infrastructure comprising both education and culture; a shared belief in and experience of the past and future; and a family and kinship system. These three elements are the social fabrication and work in a concerted effort to enable the cultivation and conservation process. Such social infrastructures reflect how important the role of higher education and their contributions are to the development of the functional person. In this model, the family and kinship are included as the sources of support, strength, and inspiration of each individual. The success of many is often attributable to the strong and happy family.

A functional citizenry shall demonstrate congruency in its patterns of thinking, working, and living life purposefully. All in all, they are truly committed folks who look outwardly, always sharing concern and commitment by putting society before self. They then serve as a productive manpower as well as a morally grounded humankind.

7. Conclusion and Final Thoughts

"Education is the most powerful weapon which you can use to change the world...

Nelson Mandela, Former President of South Africa." (Nelson Mandela Website, 2017)

It is well noted that the wealth of nations rests in its people, among all other capitals. Investing in human capital is still a mandate of the government and remains the highest of all key agendas. From Adam Smith's words to Mandela's bold statement, the quality of human capital needs a strong educational system as enabler and enhancer. Although Thailand has made a steadily increasing move on the world competitiveness index, what is left to be explored should not lure developers/thinkers to only view these international economic-oriented measurement and indices. It is the time for Thailand to look at the societal side of this continuum. While Thailand takes pride in its second to none and abundant natural resources, it is questionable whether the country sees enough pride in its human resources. If the Thai people have to count the blessings they have, that list would be included being born and raised under the reign of King Rama IX, who left a precious legacy and lived by gracious examples. It is not a vague or faint hope that Thailand's human capital will be rising, given the strength of its functional citizenry who possess the requisite six senses to create a better society and a better world for all its people.

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