

Knowledge, Talent Management, Knowledge Management, and Lessons from Knowledge Enterprises

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Abstract

This conceptual and review paper discusses knowledge and knowledge economy (KE) from the perspectives of talent management (TM) and knowledge management (KM). The discussions include history of knowledge and KE, globalization, environmental factors, KM, change management (CM) and leadership, TM and succession planning, talent assessment, talent pool, KM process and influencers/enablers, KM implementation. The summary of KM meanings and benefits, the relation between organization and environment and between KN, CM, and leadership, are provided in this paper.

This paper further discusses survey findings on KM implementation conducted by a consultant in Indonesia. Four state owned enterprises (SOEs) and three private companies, are pointed and briefly discussed to see how successful implementation of KM in Indonesia provide lessons learned on how to be knowledge enterprises. This paper summarizes the lessons learned that showed that KM must be supported and led by committed and conscious change leaders. TM, KM and KM system, are *unity package* to support business expansion and transformation sustainability of organization. Knowledge is the one sure source of lasting competitive advantage that needs to be managed properly.

The discussion in this paper also reveals that TM, performance management, and people development become the central issues of human capital management. Talent assessment helps organization to set clear standards and goals for people performances and potentials. TM and KM may facilitate business organizations, as economic players, to deal with many business and economic issues. Both knowledge and innovation are highly associated in KE and industry revolution 4.0 era with its disrupted technologies, and even in pandemic covid-19 era, knowledge remains important.

Key words: knowledge, talent management, knowledge management, change management, leadership

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I. INTRODUCTION

1.1. History and definition of knowledge economy

The idea of knowledge industries and knowledge economy, rooted from F.W. Taylor's idea on scientific management, is first coined by Fritz Machlup, 1962 through his book *The Production and Distribution of Knowledge in the United States*. Machlup, 1962, stated that knowledge production refers to any human or human-induced activity effectively designed to create, alter, or to confirm in human mind, a meaningful perception, awareness, cognizance, or consciousness or whatever it may be. Consulting firms. The term knowledge economy became famous in 1969 when Peter Drucker through his book *The Age of Discontinuity*. Drucker highlighted the social dimension of human experience and existence and the rising importance of knowledge and of formal education that result in implications for work, life, leisure, and leadership.

Knowledge economy is the system of economy that is based on intellectual capital, the ability to capitalize scientific discoveries and research, both basic and applied research. Intellectual capital, the intangible assets, becomes the main component of value in the economy supported by innovation-based research. Knowledge economy or knowledge-based economy describes trends in advanced economies towards greater dependence on knowledge, information, high skills level, and the increasing needs for ready access to all of these by business and public sectors. Knowledge and technology become increasingly complex, raising the importance of link between firms and other organizations as a way to acquire specialized knowledge (OECD, 2007).

The World Bank, 2007, views knowledge economy from four perspectives; 1) the incentives for entrepreneurship and the use of knowledge by organization, 2) the skilled people and good education system availability, 3) the access to information and communication technology (ICT), and 4) the innovation landscape that include academia, private sector, and civil society. The value of creativity and innovation is highlighted. Some elements of knowledge may be rooted from communities' indigenous knowledge that in nature

is communally owned like symbols, artifacts, music, etc. All knowledge become part of the circuit of knowledge production, distribution, and commercialization (Moahi,2007).

1.2. Knowledge economy and globalization

The development of knowledge economy is centrally linked to globalization. As stated above, the sources of knowledge and people expertise, as important economic resources, become the main factors in supporting economic growth, and knowledge and technology become increasingly complex. Within that complexity and in line with the development of knowledge economy, globalization opens up and interconnecting the world, economically and culturally (Moahi,2007).However, some view globalization as also creates mismatch of economic and political power between industrial/developed countries and emerging and under developed countries.

Despite the disparity of economic growth and development among countries, economic cooperation within countries in many integrated economic clusters keeps moving towards strengthening the cooperation of countries in keeping up with global economic development of the world. Economic cooperation among countries provides advantages such as more open market and somehow protect economic interest of the member countries. The cooperation in innovation and ICT among ASEAN countries for instance, is aimed at providing easy access on new invention and information for each member countries (Tocan,2012).

1.3. Knowledge and the need of skilled human capital

Within the organization or economic players in the economy, knowledge is normally perceived as the most significant competitive advantages (Davenport and Prusak,1998) that may put the organization becomes more competitive with its knowledge management as a trigger to achieve a better performance of organization (Andhara et.al,2018, Andreeva and Kianto,2012).The competitiveness of people/human capital in organization, relies on their specified skills and expertise. The quality people or knowledge workers, competent people with proper knowledge, skills and attitudes, are those who are needed by organization to produce quality products/services that meet the conformance of market place/customers

The quality people which are needed by any organization, are those who are *capable* to carry out and accomplish their jobs properly (“*can do*”)willingly with *commitment* (“*will do*”) together/*connected* with another member of organization within the same working unit or with other people in the other units of organization (“*must do*”), to realize individual or group and even organizational effectiveness (Mattone,2013).These three C’s,are in line with what Gibson (2012)stated that organizational effectiveness can only be achieved through group effectiveness and group effectiveness can only be achieved through individual effectiveness.Effective individuals/talent/ skilled people/skilled human capital, essentially are those who are capable, committed, and connected.

Organization needs talent and cannot rely the achievement of its goals and objectives and organizational effectiveness on underperformed people/group or those whose performances are far below the targeted figures,known as the deadwood,non performing people(Ulrich,2009). The performances of effective individuals/group contribute to effective organization, a high performance and high commitment organization that is resilient in facing the dynamic of changes(Beer, 2009).Resilient organization is an organization that conducts psychological/people alignment, performance alignment, and capacity for learning and change.

The important of skilled human capital (knowledge workers/talent/quality people), as stated earlier, lies in their contribution to the effectiveness of organization or to the creation of high-performance or resilient organization that in turn contribute to the economy/industry. It is within this context, the discussion of knowledge in this paper is limited and highlighted from talent management and knowledge management perspectives. The reasons have been that talent management deals with quality/knowledge workers with their potentials and performances that help contribute to the effectiveness of organization, and that knowledge management is a trigger to achieve a better performance of organization that contribute to the economy.

II. MATERIALS AND METHOD

This paper is a conceptual and review paper to some extent. The discussion in this paper is based mostly on articles related to talent management and knowledge management supported by some literatures on knowledge economy, strategic management, change management, and leadership. A model of relation between organization and environment and the need of quality leader, quality people, and quality products/services is figured out in this paper, also a model of relation between knowledge management, change management, and leadership with transformation.

This paper provides summary of KM meanings and benefits and an insight of how to deal with employees in general, and with talent in particular, within the nine-box matrix of talent map that refers to talent assessment of a state-owned enterprise in Indonesia. The summary is based on the discussion on talent management, talent assessment, talent pool, succession planning, new paradigm of human resource/human

capital management, knowledge management, knowledge management system, knowledge management influencers/enablers and benefits, which are highlighted in this paper.

This paper also discusses survey findings conducted by a consultant in Indonesia in regard with knowledge enterprises. The survey was conducted in 2013-2015 and revealed 20 winners of the most admired knowledge enterprises that fulfilled all criteria settled by the consultant. Seven out of 20 winner companies are pointed and briefly discussed in this paper to see the successful implementation of knowledge management. Four companies are state-owned enterprises that are relatively main players in the industry, and so do three private companies. This paper summarizes valuable points as lessons learned that showed KM must be supported and led by committed and conscious change leaders, and that TM, KM, and KM system are all *interrelated* in supporting business expansion and sustainability of transformation of organization.

III. DISCUSSION

3.1 Environment and factors that drive change

Any organization or firm in any economy in anywhere else will always be faced with the dynamics of environmental changes, both external and internal environments. From strategic management point of view, the external factors are normally known as PESTLE (political, economic, social, technological, legal, and environmental factors). The internal factors are normally known as PRIMO-F (people, resources, innovation, marketing, operation, and finance factors). Both factors, which are to be analyzed using, among others, SWOT matrix, will portray the strategic position of organization in the industry/economy relative to its competitors (Wheelen and Hunger, 2012, David and David, 2017, Ansoff, 2013). The strategic position of organization or firm will help organization/firm to formulate the right and convincing strategies to compete at corporate level, business level, and functional level.

To face the dynamic of environmental changes, organization needs to be adaptive, promote continuous learning and continuous improvement. Organization also needs quality leader who drive quality people to produce quality products/services, aim at satisfying and maintaining or enhancing customer satisfaction and loyalty in line with maintaining and expanding its competitive advantages (Yasin, 2014). The dynamic changes of environment as the driver that affect or encourage the need to organizational change, basically has long been discussed by many authors. Porter, 1990, 2004, for instance, discussed the five competitive forces model which may threaten the competitiveness of business organization. Further, in 1997, Bower and Christensen discussed about rapid and progressive technological changes through his books *Disruptive Technologies*.

The discussions on technological change/disruption fascinates almost all business organizations since it creates a *VUCA* (volatile, uncertain, complex, and ambiguous) situation in economy. The discussions flourish, and further in 2012, Done raised 13 issues within the global trends context and discussed, among others, issue on technology, issue on geopolitical shift from America and Europe to Asia Pacific and China, and issues on education, food and energy. Technology seems to be the main common factor that drives change and force organization to adapt to environmental changes.

The following figure is a model that shows the relation between organization and environment and the need of quality leader and quality people to produce quality products/services.

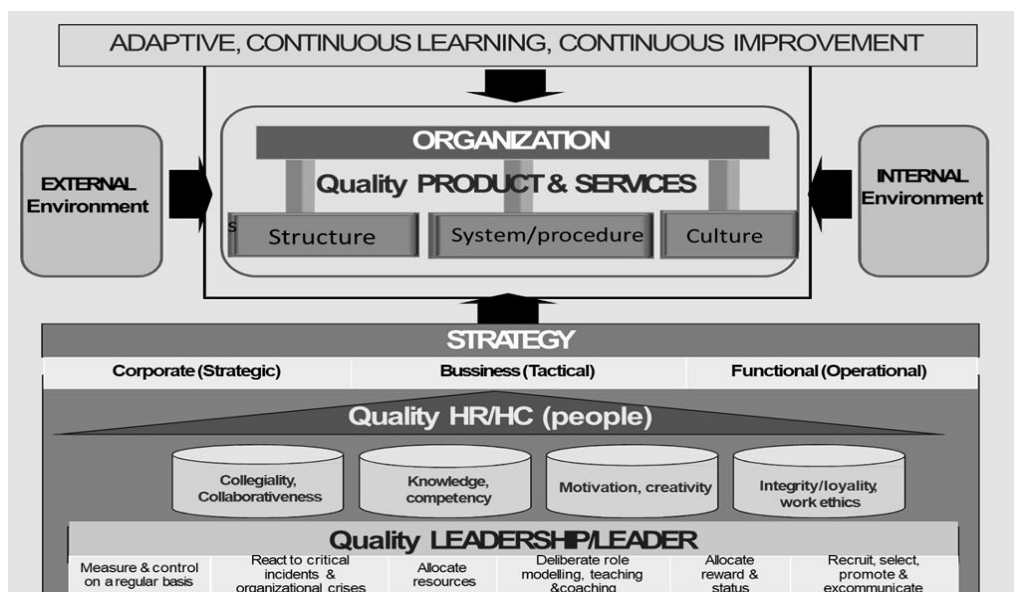


Figure 1. Organization, Environment, and Quality Leader, People, and Products/Services

3.2 KM, change management (CM), leadership, and transformation

From transformational change perspective, quality leader or leadership also play a central role in managing knowledge and change for a sustainable transformation. Leadership intersects with KM in supporting continuous learning while KM and CM intersect to encourage continuous improvement. Leadership intersects with CM in driving the adaptability of organization to environmental changes. All are interrelated and interconnected in managing sustainability of organizational transformation (Yasin,2014). Figure 2. below shows the relation between leadership, knowledge management, and change management with transformation.

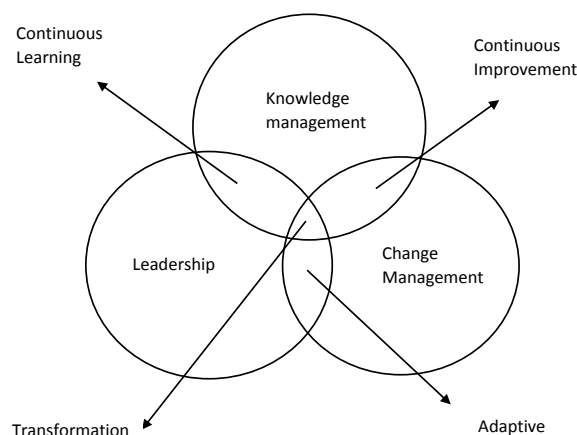


Figure 2. Leadership, Knowledge Management, Change Management, and Transformation

3.3. Talent management: the important of talent and new paradigm of human resource/human capital management

Management of talent, firstly revealed by McKinsey 1997, becomes a holistic approach to optimize human capital (as part of intellectual capital on which knowledge economy relies) to enable organization, as an economic player, to realize its objectives and goals, both short-term and long-term. TM is an integral part of human capital management that concern with attracting, selecting, developing, and retaining quality or the best people in their strategic roles (Scullion and Collings, 2011). Strategic roles of talents refer to the fact that they are leader candidates due to their high performances and potentials.

TM is an integrated system designed to increase productivity by utilizing, developing, and retaining skilled people to meet current and future needs of organization. It is a set of integrated corporate initiatives which aim at developing accuracy, availability and utilization of people with high potentials who can contribute positive impact to business performance (Smilansky, 2006). Ensuring the availability of skilled people/talent with high potentials and performances, especially in the era of digital economy, becomes a main concern for organization to support the adaptability, continuous learning, continuous improvement (creativity and innovation) of organization to face the even faster rate of global environmental changes.

TM also helps organization to set clear standards and goals for skilled people. The importance of quality people (talented human capital, skilled people) in the era of knowledge economy, digital economy, is discussed by many scholars. Some scholars said that quality people are the value creator and the foundation of organization (Balzac, 2011, Mayo, 2001). Quality people/talent/skilled people, are also main drivers for the success of organization and the best resources to develop the competitive advantage of organization (Adams & Oleksak, 2010).

In the rapidly global environment changes, quality people/talent/knowledge workers, are expected to support organization to increase the productivity, efficiency and effectivity of organization. For that reasons, the role of human resource/human capital management has to shift from focusing more on administration/data management (people advocate and developer) to business/strategic partner and agent of change (Ulrich, 2009, see figure 3). As business/strategic partner, HR/HC professionals/managers/supervisor have to have a business strategy that is formulated and outlined in line with organization long-term plan.

As agent of change (AOC), HR/HC professionals/managers/supervisors, are responsible for building the capacity of organization to meet the challenges within the environmental changes. They play the role of facilitator and catalysator to ensure people act in line with core values of organization, of motivator to encourage people behave accordingly, and of problem solver to help people solve the problem they are facing in the workplace. Requirement to keep up with rapid changes and to shift the paradigm in managing people in information era/digital era, for HR/HC professionals/managers/supervisors to support the effectiveness of organizations, is inevitably a *must-criteria* to be fulfilled.

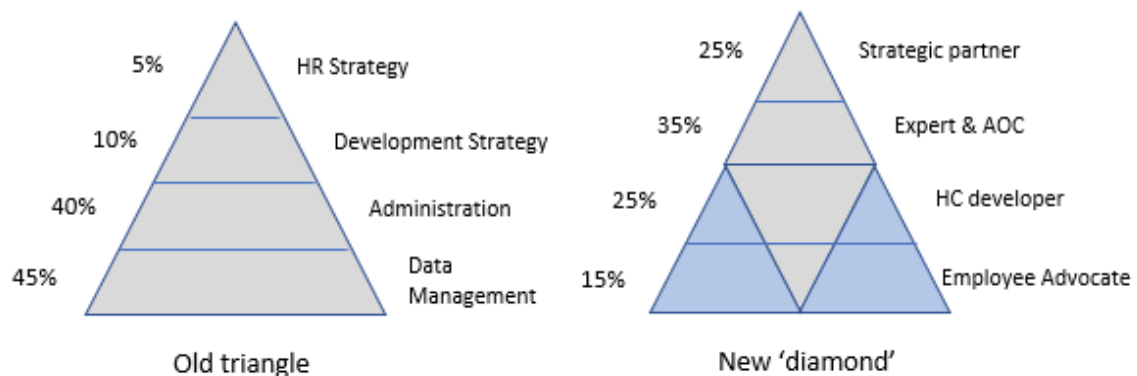


Figure 3. New Paradigm in HRM/HCM, adapted from Ulrich,2009

We can see that the issue of people-related business is a critical starting point for paradigm change in managing human resource/human capital. HR/HC management policies should take into account how to manage organizational competitiveness and global market condition (Schuler and Walker, 1990). HR/HC professionals, then; 1) must possess high levels of professional and business knowledge, 2) must establish links to enhance organizational performance and be able to demonstrate on a continuing basis how HRM/HCM activities contribute to the success and effectiveness of organization.

3.4. TM and succession planning

Organization needs to manage succession planning properly by recruiting and retaining good quality people/talent (leader candidates). The awareness of talent existence and the shortage of talent availability in the marketplace has put organization in competing situation to acquire talent. TM, along with performance management and people development become the central issues of human capital management to support competitive advantage, intellectual development, value creation, and the success of organization (Ingham,2007, Becker,2009, Baron and Armstrong,2005). The following figure shows the relation between talent management/competency management and succession management/planning that all relate to leadership.

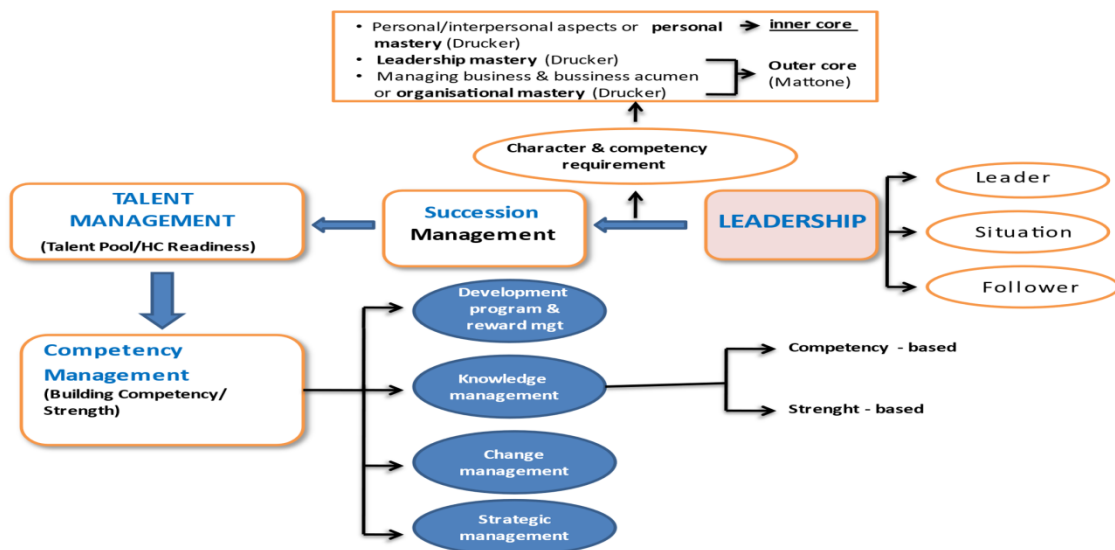


Figure 4. Talent Management and Succession Planning

All organizations need to develop and maintain their talent (leader candidates) in an effort to properly run and managed their businesses in turbulent times. TM is important not only to win competition but also to maintain and expand the competitive advantages of organization. The strategies, business models, products/services, may be copied by competitors. While competent, skilled people are source of unlimited differentiation, the best source of developing competitive advantages, the only assets that can be further developed, and are the critical factors in deciding organizational success (Hay Group,2008).

Organization has to note that TM is not only people related issue but also a leadership issue (Sizzler and Dowell,2010). The implementation of talent management needs the support from top management and all managers and supervisors. The availability and the necessity of talent to implement business strategy comes right after the strategy is formulated (Cheese, Thomas, and Craig,2008).The need to manage talent in organization usually based on the fact that business environment is increasingly complex and dynamic, paradigm change in people management and people expectations, change in workforce demographics, and talent is closely related to organizational performances and value creation (Smith and Ekker,2006).

TM and leadership issues also mean that talent/skilled people as leader candidates who will fill strategic positions, need to poses fundamental skills of leadership; strategic thinking, innovative thinking, and situational thinking (Wilkins and Carolin,2013). They have to be able to assess the environment, determine the business strategy and business concept, develop a coherent and paint a full strategic profile, and anticipate the implication of the strategy. Talent has to be able also to search, assess, rank opportunities and construct a plan to pursue the opportunities. Lastly, talent also must be able to analyze situation and problem/potential problem, and solve the problem.

TM needs to be designed to ensure competitive advantage of organization and needs to be developed through optimum utilization of skilled people especially in the key positions (managers and supervisors). TM is done by determining the needs of talent, finding the source of talent, developing individual and collective talent and confirming that talent keep up with the pace and goals of organization. Within this context and to ensure leader candidates availability, TM should be integrated into HRM/HCM process to manage the talent that aim at supporting the succession planning, improving workplace productivity, and creating value for organization.

3.5. Talent assessment and talent pool

By realizing the important of talent, all organizations or businesses need to develop assessment tools to map/assess their talents, evaluating the employees' performances, developing training and development program, and preparing related action plan (Burger and Burger,2004,2010). They can also build a talent pool or reservoir, as one model of TM, which is intended as employees' shelter with high talent to support current and future development of organization. The pool is an employee or group of employees who meet criteria and have passed the selection as candidate/candidates in a key position changing plan. Talent mapping/assessment normally include behavioral event interview (BEI) and competency assessment. An example of the result of BEI coupled with competency assessment which is mapped using the nine-box matrix (NBM), is provided below. Figure 5 below shows the NBM matrix of a talent mapping/assessment of a state-owned enterprise (SOE) in Indonesia (Yasin, 2018).

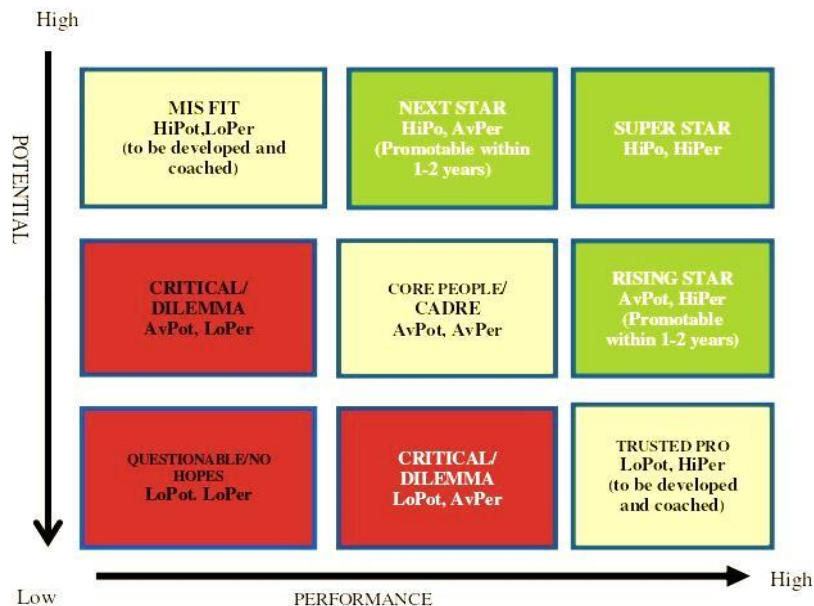


Figure 5. Talent Mapping and NBM Matrix of an SOE.

The Super Star in the NBM matrix are talents who are ready to be promoted, ready to *fly and shine* with speed and flexibility. The Rising Star and The Next Star are those who are promotable within one or two years. All the stars (people in the “green boxes”), with the support and direction from quality leader, are the quality people or those who are generally expected to support organization to produce quality products/services

and to realize the goals and objectives of organization. The management of organization needs to pay attention on people in the “yellow boxes” (diagonal boxes), by aligning knowledge management system, performance management system, training and development system, and HR/HC planning to encourage, motivate, and promote them to move into the green boxes. People in the “red boxes” (critical dilemma and no hope), are those with capacities and problem-solving problems. For no-hopes people, however, organization needs to take firm and assertive action if necessary (Yasin, 2018).

Talent management in line with training and development and performance management, and supported by knowledge management system, in short is needed to support succession planning, competitive advantage, intellectual development, and the value of organization (Ingham, 2007, Becker, 2009, Baron and Armstrong, 2007). Talent assessment helps organization to set clear standards and goals for people performances and potentials. Training and development as the primary aim of learning activities help people to master and execute their knowledges, skills, attitudes, and abilities needed by organization (Mahapatro, 2010).

3.6. Types and the important of knowledge

Knowledge is basically a contextual information that is ready to be used in decision making and its related actions. It refers to information in people’s mind comprises or contain people’s understanding and experience, skills, and expertise (Chang and Lin, 2015, Anand and Walsh, 2016). Anand and Singh, 2011, provide the table of definitions of knowledge from many scholars, such as Alexander and Schallert, 1991, Wiig, 1993, Bohn 1994, Nonaka and Takeuchi, 1995, Grant, 1996, Beckman, 1997, Davenport and Prusak, 1998, Davenport and Long, 1998, and Bender and Fish, 2001), all definitions generally refer to useable contextual information.

The need to make knowledge visible is to 1) avoid knowledge becomes obsolete and useless by encouraging people to behave accordingly and fostering knowledge sharing/transfer, and 2) encourage organization to manage knowledge properly by applying related process and supported infrastructure. According to Anand and Singh, 2011, knowledge can be obtained from outside sources and then can be stored in a repository to be accessed and shared by other members of organization.

There are five types of knowledge correspond to the sources of knowledge (Anand and Singh cited Davenport and Prusak, 1998); 1) acquired knowledge from outside, 2) dedicated knowledge (for specific purpose) developed within the organization (usually by research and development unit), 3) fusion knowledge created by project team comprises different people with different perspectives, 4) adaptive knowledge, resulted from responding to new process or technology, and 5) networking knowledge, acquired from information sharing activities formally or informally.

Knowledge has become the main source of organization in enhancing its productivity in the era of digital economy, and is seen as a center to transform the economy which no longer dependent on the scarcity of economic resources. Knowledge has become the basis of creativity and innovation emphasized in knowledge economy. Organization needs to maximize its knowledge assets to create new capabilities to increase customer value. To enable organization to efficiently and effectively manage the process of gathering, organizing, and communicating both tacit and explicit knowledge in the workplace, knowledge management is needed (Massey and Montoya-Weiss, 2006, Alavi et al., 2005).

3.7. Between data, information, knowledge, and wisdom: the pyramid

Data is basically an unprocessed or raw representation of fact. Information is data that has been processed in some meaningful ways, while knowledge is information that has been processed and used contextually. Wisdom is considered as knowledge that has been processed in some meaningful ways. Data is put in the context to create information and information that is actionable become knowledge (Anand and Singh, 2011). However, Nissen, 2002, cited by Anand and Singh, 2011, differentiate between knowledge seekers and knowledge creators and propose dual ways from data to information to knowledge to wisdom (from knowledge seeker point of view) and vice versa from wisdom up to data (from knowledge creator point of view).

What is discussed in Anand and Singh, 2011 about general knowledge pyramid that shows the hierarchy of knowledge from data up to wisdom, and vice versa from wisdom up to data according to Nissen, 2002, as stated above, does not stop at wisdom as the highest understanding. According to Faucher, 2008, cited by Anand and Singh, 2001, the highest understanding above wisdom is enlightenment. The following figure 6 shows the general knowledge pyramid (left arrow), where wisdom is at the top of the pyramid, and the proposed pyramid by Faucher, 2008 (right arrow), where enlightenment is at the top of the pyramid.

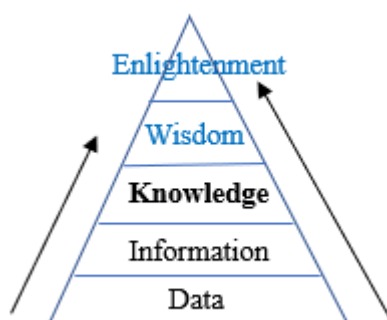


Figure 6. The Pyramid of Knowledge (adapted from Anand & Singh,2011)

3.8. General Types of Knowledge: Tacit Knowledge and Explicit Knowledge

Besides the above five types of knowledge stated by Davenport and Prusak,1998 (acquired knowledge, dedicated knowledge, fusion knowledge, adaptive knowledge, and networking knowledge), in general and mostly discussed, knowledge can be divided into two types; tacit knowledge and explicit knowledge (Nonaka and Takeuchi,1995).The interaction between the two types of these knowledges may create a new ideas or new knowledge (Nonaka et.all,2000).

According to Anand and Singh,2011, tacit knowledge refers to personal knowledge, stored in human mind/the head of people and organization, accessible indirectly only with difficulty through knowledge elicitation and observation of behavior. Tacit knowledge according to Si Xue,2017, is made up of values, beliefs, assumptions, perceptions, experiences. On the other hand, explicit knowledge is a codified knowledge in a formal and structured form.It has been captured and expressed in the form of text, table, diagram, product specification, and so on (Si Xue,2017, Anand and Singh,2011). Within the two most discussed types of knowledge, tacit and explicit, Anand and Singh,2011, tried to introduce implicit knowledge, an informal knowledge accessible through querying and discussion.

3.9. Knowledge management (KM)

As stated earlier, to manage knowledge efficiently and effectively, KM is needed. KM is the creation, transfer and retention of knowledge by organizations. It is a conscious effort to gain from knowledge, that lies within an organization, by using it to achieve organization's mission (De Holland and Philips,2004, McInerney,2002). KM is a cycle of activities carried out by organization to identify, create, structure, use and audit the knowledge as an intellectual capital that support organizational objectives (Tung,2018). Nonaka and Takeuchi, 1995, defined KM as a tool for management to create a better organizational-capabilities to carry out the jobs more effectively. KM is all about the management efforts to manage knowledge, tacit and explicit, in the organization to support the realization of mission, goals and objectives of organization.

There are still many other definitions of KM and each definition views KM from different angles. Singh et.all,2006, cited by Anand and Singh,2011 helped classifying all definitions into the following perspectives/theoretical points of view; 1) the need of KM perspective, 2) what KM demands perspective, 3) KM practices perspective, 4) KM and IT perspectives, 5) KM strategy perspective, 6) what KM can do perspective,7) KM processes perspective, 8) the nature of KM perspective, and 9) KM and intellectual capital perspective.

From *objective* perspective (perspective 1), KM is to create new capabilities, enable superior performance, encourage innovation, and to enhance customer value. From *KM demand,IT, and process* perspectives(perspective 2, 4, 7), KM is a process which comprises policies, procedures,andtechnologies,ofcreating, capturing, distributing/transferring, using/applicating knowledge, to ensure peopleand organization development, by providing/encouraging individual and organizational learning with expertise needed to support the operation system of organizations.From *KM strategy and practice* perspectives (perspectives 5 and 3), KM is a formal way of consolidating the use of knowledge and opening an access/portal to knowledge workers to continuously promote knowledge activities to support the works.From *the nature of KM and intellectual* perspectives (perspective 8 and 9), KM concerns with exploitation of the intangible assets of organization to create value in an organizationally systematic way.

The terms knowledge creation, acquisition and generation in KM are usually used interchangeably and synonymously by many authors/scholars. However, the terms knowledge transfer and knowledge sharing, according toPaulin and Suneson,2012, need to be clarified.Clarification on these two terms is considered important since a fundamental part of KM is to spread and make knowledge accessible and usable within, between or among organizations. From analysis point of view, knowledge sharing is more frequently used by

authors focusing on individual level while knowledge transfer is more frequently used focusing on group/organization level (Paulin and Suneson,2012, cited Argote and Ingram,2000).

3.10. KM process and influencers/enablers

The process in KM in general comprises the following elements; 1) knowledge creation/generation/acquisition, 2) knowledge storage, 3) knowledge sharing/transfer/dissemination/donation, and 4) knowledge use/application. According to Anand and Singh,2011, KM process can be referred to many scholars such as Wiig,1999, Mayer and Zack,1996, McElroy,1999, Wong and Aspinwall,2004, Lee et. all.,2005, and Daghfous and Kahn,2006. There are some factors/enablers that affect or influence the process of KM. Anand and Singh,2011 cited Holsapple and Joshi,1999, provided general factors which is organized in three categories; managerial influences, resource influences, and environmental influences. Riviera. 2006, called these as KM enablers that include strategy, technology, people, conducive environment, and KM process itself, that may affect the implementation of KM.

3.11. KM implementation and knowledge management system (KMS)

The implementation of KM is expected to improve organizational agility, business process that support faster decision making and problem solving which may increase innovation rate. KM is also expected to support better communication and people development. All in all, organizations' efficiency and knowledge saving within organization become the main objective of KM. Retained knowledge is used and converted into sustainable competitive advantage of organization through the enhancement of performances of organization (Fitz-Enz,2000, Bontis and Fitz-Enz,2002).

The implementation of KM needs to be supported by knowledge management system (KMS), an information and communication technology system that support the management and distribution of knowledge within organization (Andhara, et al.,2018). KMS are technologies that support KM in organization, specifically knowledge creation/generation/acquisition, storage/codification, and transfer/sharing/dissemination/donation that support and ease the use/application of knowledge.

3.12. KM benefits

There are many benefits that can be listed since business organizations as economic players in the economy have to deal with many business/economic issues. From this perspective, KM may facilitate organization to deal with such issues; market/competitive issue, product/services issue, technological issue, people issue, and other related issues. Many authors, cited by Anand and Singh, 2011, indicate potential benefits of using KM in organizations. Those benefits include the followings:

- 1) enhance learning and use/reuse of information and knowledge;
- 2) improve employee skills, communication, collaboration, and better way of working
- 3) increase people empowerment and shape best practices;
- 4) improve employee productivity, loyalty and reduce retention;
- 5) provide better management of intellectual capital, encourage best decision making;
- 6) increase speed on innovation;
- 7) improve business core competencies, enhance responsiveness and flexibility;
- 8) improve faster new product development, and reduce risk;
- 9) enhance customer satisfaction and loyalty; and
- 10) increase sales and profitability.

3.13. Some examples of successful implementation of KM in Indonesia

Dunamis Consulting, Indonesia, published a book about successful implementation of KM in Indonesia in 2013 covering 20 organizations/corporations during 2005 – 2013 as the winners of MAKE study conducted by Dunamis. The study continuously conducted every year and has been the 9th one when the book is published. The study deals with Indonesian *Most Admired Knowledge enterprise (MAKE)*. In this part, we will summarize in brief some important points from four state-owned enterprises (SOEs); Bank Mandiri, PT. Telkom, and PT. Pertamina (oil and gas company), PT. Wijaya Karya (construction company), and three private companies PT. Toyota Astra Motor (automotive), PT. Unilever Indonesia (consumer goods manufacture and distribution), and PT. Tigaraksa Satria (consumer goods distributor), in implementing KM.

The MAKE study applies 8 criteria for evaluating and deciding the winners, these include; 1) establish knowledge organization culture, 2) develop knowledge workers through senior management leadership, 3) develop knowledge-based products/services, 4) maximize intellectual capital values, 5) create and maintain the environment to share knowledge, 6) create and maintain learning organization, 7) manage customer and stakeholder knowledge to create value and intellectual capital of organization, 8) manage organization knowledge to create values for shareholder and stakeholder.

Bank Mandiri is a public listed company, listed in Indonesia Stock Exchange in 2003, and majority shares are still owned by the Government of Indonesia (GOI). Bank Mandiri, a second largest banks intotal assets in Indonesia (as of end of 2018 total assets is Rp. 1.202 Trillion) and with around 1.300 branches, is well known as a bank that deals with corporate banking. In its long-term plan and business plan, Bank Mandiri has planned to expand its businesses by expanding its retail banking business by reducing its corporate banking coverage from initially around 70% to around 55%, and by increasing retail banking coverage from 30% up to around 45% in 2013. The bank applies, conducts, and manages all necessary activities to develop and run its businesses. From promoting innovation and continuous improvement to create values, to creating learning organization and encouraging knowledge sharing and develop KMS to develop knowledge workers and knowledge culture, up to establishing a corporate university, all are done by Bank Mandiri to be a knowledge-based enterprise.

PT. Telkom, one of the main players in telecommunication business with total assets of around Rp 220 Trillion at end of 2019, is also a public listed company and majority shares is also still owned by GOI. With support from top management, managers and supervisors, Telkom implements KM to conduct a business transformation from just information and telecommunication businesses into telecommunication, information, media, edutainment and services (TIMES). Telkom develops knowledge workers, encourage innovation, understand customers' wants, create values to customers, shareholders, and stakeholders, and also establish a corporate university for KM development. KM in Telkom plays an important role in establishing knowledge culture and building a learning organization. With the support of KM, KMS and quality human capital, Telkom portrays clearly its future business steps in its roadmap with clear strategic initiatives, including among others, digital networks, invest in people, global talent, and leadership.

PT. Pertamina, a wholly-owned government oil and gas company with around US \$ 23 billion total assets at end of 2019, manages knowledge through corporate university to support product/business development and profitability. Pertamina develops knowledge-based culture and implement KM coordinated by a dedicated team for KM, supported by KMS and community of practice. Within the context of innovation and continuous improvement program, Pertamina uses PDCA (plan, do, check, and action) model as a *cycle* in planning innovative idea to be implemented in all working units, and then monitor/check the implementation and necessary corrective actions for the refinement of next development. Pertamina also develops talent pool to strengthen company human capital, that together with enterprise/organizational capital and customer/social capital, is expected to strengthen the intellectual capital of Pertamina.

PT. Wijaya Karya (WIKA), established in 1960, is one among four main players in construction industry with total assets at end of 2019 amounted to Rp. 62,11 Trillion. The businesses of WIKA comprises; concrete precast fabrication, realty, solar water heater, and EPC (engineering, procurement and construction). From initially deal with only construction business, WIKA expands its businesses into backward and forward integration related businesses. The company went public in 2007 and GOI still hold majority stakes. The business expansions of the company are supported by knowledge management with the icon/tag line "*sharing everyday*", and the implementation of its core values CIBERTI; commitment, innovation, balance, excellence, relationship, teamwork, and integrity, which in turn is expected to support its vision, mission, and objectives. The company wants to be the one of the best integrated EPC and investment company in South East Asia. Knowledge aspect, people aspect, technological aspect, leadership aspect, all become important elements in supporting the business expansions of the company.

PT. Toyota Astra Motor (TAM), a private company in automotive, is an authorized sole agent and brand holder of Toyota, established in 1971. TAM implements *Toyota Way* principles, continuous improvement and respect for people, as a *winning concept*. In 2015, TAM managed around 36% market share in automotive industry in Indonesia. As a sole agent and brand holder, TAM general policy includes apply, maintain, and ensure quality standard among all dealers of TAM. TAM develops global inter-company transfer to support knowledge transfer among dealers. TAM also develops the triangle systems comprises HR/HC management system, people development system, and supply chain knowledge development to compose a *winning team*. In line with its *winning concept* and *winning team*, TAM creates *winning system*, a KM-based system to promote/encourage people motivation and smooth operation system (two points in a triangle base), and people self-reliance (on the top of a triangle). With the *winning concept*, *winning team*, and *winning system*, TAM has proved to be the *MAKE* in Indonesia.

PT. Unilever Indonesia, established in 1930 and listed in Indonesia Stock Exchange in 1981, deals with manufacturing and distributing various consumer goods from margarine, soy sauce, milk, bath soap, toothpaste, cosmetics, and so forth. The company always try to maintain its business aggressivity by introducing new products and understanding customer needs and wants. This encourages the firm to apply continuous improvement as a regular program that has to be followed by all members of organization from management levels up to field operators. Business expansions are carried out by establishing new ventures jointly with third parties that support firm's marketing, distribution, technology, people development, and knowledge distribution

without limited by geographic condition. Every year, around 250 up to 350 applications are registered for its property right/patents. Skilled human capital, talent management and knowledge management are all managed in an integrated way to support its business aggressivity.

PT. TigaraksaSatria (TIRA) is a consumer goods distributor that successfully cope with a very tight competition in the industry with the help of applying knowledge management to produce as much as knowledge workers. Market information, by product, by geography, by channel, become a *breakfast menu* for sales leaders to keep up with tight competition in line with firm's mission to be a fast-moving consumer good (FMCG) company. The success in business development supported by knowledge workers/talent and knowledge management, has provided the firm an opportunity to further expand its businesses by spinning of its marketing unit and distribution unit, each become a business entity. With these two business entities TIRA as the shareholder, went public in 1990 to raise funds to strengthen its capital requirement. The firm applied enterprise resource planning (ERP) as a backbone of its information technology and define, measure, analyze, improve, and control (DMAIC) tool to support its continuous improvement program.

3.12. Lessons Learned

The 20 winner-companies of the MAKE study, including the 7 most admired knowledge enterprises (MAKE) companies pointed and discussed above that fulfilled all the criteria set by Dunamis Consulting; culture, leadership, innovation, intellectual capital, knowledge sharing, learning organization, customer knowledge, values of organizations, provide the following valuable points to note:

- 1) KM must be supported and led by committed and conscious change leaders;
- 2) knowledge workers/talent, with talent management, KM, and KMS, are *unity package* that support business development and the sustainability of organization;
- 3) KM, change management and leadership, all are also *integral-parts* of organizational transformation that support the adaptability of organization, continuous learning and continuous improvement;
- 4) "*in an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge*" (a quote by Nonaka), therefore, both tacit and explicit knowledge in organization needs to be managed properly.

3.13. Knowledge, industry revolution 4.0, and economic development

As it has been discussed earlier above, knowledge economy describes trends in advance economies towards greater dependence on knowledge, information, and high-skills level people. Knowledge has become the main source of organization in enhancing its productivity and is seen as a center to transform the economy. Knowledge and innovation are emphasized and highlighted in KE. The discussion on disruptive technologies that create VUCA situation in the era of industry revolution 4.0 and the factors/drivers of environmental changes, shows that technology seems to be the main common factor that drives change and force organization to adapt to the environmental changes.

Technological changes shape the new way of doing businesses and new products/services development, with digitation, deception, disruption, demonetization, dematerialization, and democratization (six D's) characteristics. Disrupted technologies, in fact, are loaded with knowledge and innovation that color the industry 4.0 era, and are simply meant to make everything simpler and cheaper (Bower and Christensen, 1997). Within this context we can see that both knowledge and innovation are the sources of organization and economic development in KE and industry 4.0 eras.

Even in the covid-19 pandemic era, which has *killed* many businesses and brings about economic recession in many countries, has also created jobs scarcity where many people across 35 countries start a business simply "to earn a living". People just seek something simpler; a little autonomy over their works and economic interests (Razavi, 2020). Global economic recession after the pandemic could create less incentives for people to become entrepreneurs, where as in the decade to 2020, entrepreneurship rises worldwide. In the new era of *thought leaders* to define opportunities and jobs choices for *thought people*, knowledge and creativity are needed to reshape economic landscape. Within this context, knowledge and innovation are in parallel with the need of thought leaders and thought people to promote innovative activities

IV. CONCLUSION

Knowledge, globalization, and environmental changes, become main drivers of economy, and knowledge becomes a centre to transform the economy. Organization needs to have quality leader who drive quality people to produce quality products/services, to contribute to the effectiveness of organization that in turn will contribute to the economy/industry. Organization also needs to ensure the availability of skilled people/talent with high potentials and performances and implement TM as an integral part that become the central issues of HC management, to support succession planning, competitive advantage, intellectual

development, value creation, and the success of organization. Talent assessment helps organization to set clear standards and goals for people performances and potentials.

Organization needs to maximize its knowledge assets to create new capabilities to increase customer value. Organization needs to implement KM to efficiently and effectively manage the process of gathering, organizing, and communicating both tacit and explicit knowledge in the workplace. KM implementation that may help organization to deal with many market and economic issues, needs KM enablers; strategy, technology, people, conducive environment, and KM process, and needs to be supported by KMS. KM is expected to improve organizational agility, business process that support faster decision making and problem solving which may increase innovation rate.

TM, KM and KMS/ICT, and leadership are all the important elements and the driver that support the business expansion and transformation sustainability of organizations/economic players (at micro level) which in turn are expected to support all business organizations to contribute to the development of economy (at macro level).

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REFERENCES

- [1]. Adam, M. and Oleksak, M., 2010. *Intangible Capital: Putting Knowledge to Work in 21st Century Organization*. Santa Barbara: Praeger.
- [2]. Alavi, M., Kayworth T., & Leidner, D. 2005. An Empirical Examination of the Influence of Organizational Culture and knowledge Management Practices. *Journal of Management Information System*, 22 (3), 191-224.
- [3]. Armstrong, M., 2009. *A Handbook of Human Resource Management Practice* (11th ed). Kogan Page, UK.
- [4]. Armstrong, M. & Baron, A. (2005). *Managing Performance: Performance Management in Action*. UK: CIPD Publishing.
- [5]. Anand, Apurva, Singh, M.D., 2011. Understanding Knowledge Management: A Literature Review. *International Journal of Engineering Science and Technology*, 3 (2), Feb 2011. ISSN 0975-5462. 926-939.
- [6]. Anand, Apurva and Walsh, I., 2016. Should Knowledge be Shared Generously? Tracing Insight from Past to Present and Describing a Model. *Journal of Knowledge Management*, 20 (4), 713-730.
- [7]. Andhara, B.A., Umara, F.R., Lubis, C.H.T., 2018. *Knowledge Management; Strategi Mengelola Pengetahuan agar Unggul di Era Disrupsi* (Edisi 1). PT. Gramedia Pustaka Utama, Jakarta.
- [8]. Andreeva, T. and Kianto, A., 2012. Does knowledge management really matter? Linking knowledge management practices, competitiveness, and economic performance. *Journal of Knowledge Management*, 16 (4), 617-636.
- [9]. Ansoff, H. Igor, 2013. *Strategic Management. Classic Edition*. Palgrave, Mc Millan, New York
- [10]. Ahlstrom, David and Garry D. Bruton, 2010. *International Management: Strategy and Culture in the Emerging World*. USA: International Edition.
- [11]. Azijah, Z., Findi A., Irawan, T., 2015. Knowledge-based Economy, Konvergensi dan Pertumbuhan Ekonomi: Studi Kasus di ASEAN Plus Three 2001-20014, 4 (2), 153-167.
- [12]. Balzac, Stephen R., 2011. *Organizational Development*. USA: The McGraw-Hill 36 Hour
- [13]. Course.
- [14]. Becker D, et al. (2009) Impaired interdomain communication in mitochondrial Hsp70 results in the loss of inward-directed translocation force. *J Biol Chem* 284(5):2934-46
- [15]. Beer, Michael, 2009. *High Commitment High Performance*. Jose-Baas, A Wiley Imprint, San Francisco.
- [16]. Berger, Dorothy R., Berger, Lance A., 2010. *The Talent Management Handbook*. McGraw-Hill Education, 2nd edition. USA.
- [17]. Bontis and Fitz-Enz, J., 2002. "Intellectual capital ROI: a causal map of human capital antecedents and consequents". *Journal of Intellectual Capital*. Vol. 3 No. 3. pp. 23-47.
- [18]. Bower, Joseph L. and Christensen, Clayton M., 1997. *Disruptive Technologies: Catching the Wave*. Harvard Business Review. hbr.org, retrieved on 3rd December, 2020

- [19]. Chang, C.L., and Lin, T.H., 2015. The Role of Organizational Culture in the Knowledge Management Process. *Journal of Knowledge Management*, 19 (3), 433-455.
- [20]. Cheese P., Thomas, R. J., and Craig E. 2008. *The Talent Powered Organization: Strategies for Globalization, Talent Management and High Performance*. Kogan Page: London and Philadelphia.
- [21]. Davenport, T.H. and Prusak, L.L., 1998. *Working Knowledge: How organization Manage What They Know*. Harvard Business School Press, 35 (6), 199. <https://doi.org/10.5860/choice 355167>
- [22]. David, Fred R. and David Forest R., 2017. *Strategic Management, A Competitive Advantage Approach*, 16th Edition. Pearson Education Limited.
- [23]. Done, Adrian, 20012. *Facing Up to A Changing world*. IESE Business Collection.
- [24]. Drucker, Peter F., 1969. *The Age of Discontinuity; Guidelines to Our Changing Society*. Harper and Row, Publisher Inc., New York.
- [25]. Fitz-Enz, J., 2000. *The ROI of Human Capital: Measuring the Economic Value of Employee Performance*. AMACOM, New York.
- [26]. Gibson, John E., 2012. *Organizational Behavior, Structure, Processes*, Fourteenth Edition.
- [27]. McGraw-Hill, New York.
- [28]. Hay Group, 2004. *Rush to the Top*. London.
- [29]. Ingham, Jon. (2007). *Strategic Human Capital Management*. Netherlands: Elsevier
- [30]. Machlup, Fritz. 1962. *The Production and Distribution of Knowledge in the United States*. Princeton University Press, USA.
- [31]. Mahapatro, B.B., 2010. *Human resource Management*. New Age International (P) Limited Publisher, New Delhi.
- [32]. Mattone, John, 2013. *Intelligent Leadership: What You Need to Know to Unlock Your Full Potentials*. AMACOM.
- [33]. Mayo, A, 2001. *The Human Value of the Enterprise: Valuing people as assets – monitoring, measuring, managing*. Nicholas Brealey Publishing, London.
- [34]. Moahi, Kgomotso H., 2007. Globalization, Knowledge Economy and the Implication for Indigenous Knowledge. *International Review for Information Ethics*, 7 (9), 1-8.
- [35]. Massey, A. & Montoya-Weiss, M. 2006. *Unravelling the Temporal Fabric of Knowledge*
- [36]. *Management Conversion: A Model of Media Selection and Use*. *MIS Quarterly*, 30 (1), 99-114.
- [37]. Nonaka, I. and Takeuchi H., 1995. *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York, Oxford University Press.
- [38]. Nonaka, I., Toyama, R., Hirata, T., 2008. *Managing Flow: A Process Theory of the Knowledge-based Firm*. Palgrave MacMillan, Houndmills.
- [39]. OECD, 2007. *Globalization and Regional Economics. Final Report*, Paris.
- [40]. Paulin, Dan and Suneson, Kaj, 2012. *Journal of Knowledge Management*, 10 (1), 81-9.
- [41]. Porte, Michael E., 1990. *The Competitive Advantage of Nations*. The Free Press, New York.
- [42]. Porter, Michael P., 2004. *Competitive Strategy Techniques for Analysing Industries and*
- [43]. *Competitors*. Free Press, New York.
- [44]. Pynes, John E., 2009. *Human Resource Management for Public and Nonprofit Organizations*. Jossey-Bass, San Francisco.
- [45]. Riviera, G. and Riviera, I. A., 2006. *Design, Measurement, and Analysis of a Knowledge*
- [46]. *Management Model in the Context of Mexican University*. *Revista Innovar Journal* *Revista de Ciencias Administrativas y Sociales*, 26 (59), 21-34.
- [47]. Scullion, H. and Collings, D.G., 2011. *Global Talent Management*. Routledges. New York and London.
- [48]. Smilansky, J., 2006. *Developing Executive Talent, Best Practices from Global Leaders*. John Wiley & Sons Ltd., Chichester.
- [49]. Si Xue, Colin Ting, 2017. *A Literature Review on Knowledge Management in Organizations*. *Research in Business and Management* 4 (1), 30-41.
- [50]. Tung, K.Y., 2018. *Memahami Knowledge Management* (B. Sarwiji, ed), Cetakan 1. PT. Indeks
- [51]. Tocan, M.C., 2012. *Knowledge-based Economy Assessment*. *Journal of Knowledge Management, Economics and Information Technology*, 2(5).
- [52]. Todaro, Michael P. dan Stephen C. Smith. 2006. *Pembangunan Ekonomi* (edisi kesembilan, jilid D). Penerbit Erlangga, Jakarta.
- [53]. Ulrich, Dave, 2009. *Human Resource Champion: The Next Agenda for Adding Value and Delivering Results*. Harvard Business School Press.

- [54]. Wheelen, Thomas L. and Hunger, J. David, 2012. Concepts in Strategic Management and Business Policy, Toward Global Sustainability, Pearson Education, Inc., Publishing as Prentice Hall, the United States of America.
- [55]. Wilkins, David and Carolin, Greg, 2013. Leadership: Pure & Simple, McGraw-Hill Education
- [56]. World Bank, 2007. Building Knowledge Economies – Advanced Strategies for Development. The World Bank, Washington DC.
- [57]. www.thersa.org. Retrieved on 24th December, 2020.
- [58]. Yasin, Mahmuddin, 2014. Organisasi, Manajemen, Leadership; Pentingnya Continuous Learning dan Continuous Improvement. Expose/Mizan, Jakarta.

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