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Research Article

Human Capital Investment and Local Development in Digitalization Era

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Abstract.
This research is to describe human capital investment and local development in the digitalization era. This topic is highly relevant and widely discussed in the scientific literature. The research method used is a literature study by carrying out several main approaches to the definition of human capital investment, local development, and sustainable development in the midst of the digital transformation that is sweeping the world today. The purpose of this research is to get a critical reflection on human capital investment and regional development in the digitalization era in the context of diverse approaches and opinions. The method used in this study is to use systematic literature reviews. The results of research based on literature studies show that in facing the digitalization era, human capital is needed for investment and regional development. The development of the digitalization era requires the role of human capital that is oriented to the use of resources in local government by containing aspects of the use of technology as one of the developments of competencies. This orientation can of course be carried out through continuous and systemic education and training in maintaining the quality of the results of human capital development in the regions, including pentahelix in the regions.

Keywords: human capital investment, regional development, digitalization

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1. Introduction

The ongoing process of digitization has an impact on the formation and development of human resources (1). Digitalization is the cause of major changes not only in the economy but also in society as a whole, defining the need for a better understanding of its transformative path (2,3,4). Human capital plays an important role in economic growth (5,6,7). Regional development is currently considered the main supporting element for total social cohesion and development (8). Local governments, through their

own spending budgets, must intervene in improving the quality of human capital (9) .

For years, academics and practitioners have debated the extent to which organizations would benefit from investing in employee career development (10, 11, 12). It has been argued that while more competent employees are more productive and make a stronger contribution to organizational performance (13), investing in employee career development can have unintended consequences. More competent employees have ”a stronger likelihood of obtaining and keeping a job” (14) both internally (internal employability) but also in the external labor market (external employability). While internal employment is beneficial for organizations that can utilize human resources more fully (13), employees’ perceptions of their external employability could potentially result in them leaving the organization that developed it before the investment has been repaid (15) The dilemma surrounding the risks and rewards of investing in employee development has been encapsulated in what some have called the employability paradox (10, 12, 16).

In recent decades, the study of economic freedom and the study of human capital investment has become an important area of research (for surveys, see17, 18, 19). Rapid and continuous technological change impact on all field life (20). The diffusion of innovations and digital technologies is observed not only in the real economic sector, but also in the social sphere, namely, in education, health and culture (1). Modern science unrivaledly links economic growth with technological development. Humans with intellectual potential, knowledge, skills, and competencies are sources of technological development (21).

Human Capital is one of the most valuable components of any business and that is why investing in human capital is a necessary step to ensure that the business is successful in a changing market environment. The current trend also shows the growing importance of investment in human capital (22). The workforce is becoming increasingly intelligent, innovative and creative, manufacturing is turning into a quest for brains (23). Science and Education as Intellectual Structures will dominate industrial production, agriculture, construction, etc..In addition, some scientists predict that an era of no work, an era of wealth and enjoying life is coming soon.This era is expected to give every people the opportunity to express their best creative abilities (24).

The main problem for them is the reduction of jobs as a result of digitization, robotization and artificial intelligence (AI) intrusion. Mass Structural Unemployment , Inability of people to work in the digital economy, inefficiency of the existing education

system, mutation of personal characteristics for many people are major economic and social disasters that both developed and developing countries may face in the near future (25,26).The question of the conflict of interest between human resources and AI remains unresolved. As well as the risk of an impending society in which there is no place for human resources seems very high.

The goal of regional development is to build the capacity of a defined area, often a municipality or region, to improve the economic future and quality of life for residents. This definition emerged from a consensus between global institutions such as the World Bank, the United Nations, and the Organization for Economic Development and Cooperation (OECD), academics and from experienced practitioners in the field. Regional development makes an important contribution to the performance of national economies and has become even more important with increasing global competition, population mobility, technological advances, and consequential spatial differences and imbalances . Effective regional development can reduce the disparity between poor and rich places, increase the stock of locally generated jobs and firms, increase overall private sector investment, improve the flow of information with investors and developers, and increase the coherence and trust with which local economic strategies being chased. This also leads to a better diagnostic assessment of local economic assets and distinctive advantages and leads to a more robust strategic assessment (27). Regional development systems tend to be relatively complex, as they require effective CO–coordination between different types of organizations or stakeholder groups. This potential limi tation is also the most significant strength of the regional development system. It is often the task of local government to assist a system that unifies all the various component parts (sector organizations public and private; society and business, knowledge-based institutions and development agencies) in a positive tension in maximizing the use of resources, expertise and experience (27).

This study intends to elaborate on human capital investment and regional development in the context of digitalization. The digitalization era is a challenge as well as an opportunity that can be taken in the context of long-term socio-economic development for developed and developing countries (1). In order to implement regional development, which means special institutions such as local governments, design and determine the most effective goals and convenient ways to achieve the goals of regional development (28).

2. Literature Review

2.1. Human Capital Investmen

Challenge for company is get and utilise source power which precious , rare and nothing _ comparison for get superiority competitive which sustainable compared competitors (29). Source power this including assets, capabilities , processes organization , information , and knowledge which allow company for develop and implement a strategy that increase performance company . Various source power this which could classified in three categories (29): Source Physical Capital Power (30), Source Human Capital Resources (31) and Source Organizational Capital Power (32). In article this we focus on human capital , defined as ' knowledge , information , ideas, skills , and ' health individuals ' (31). Human capital has Becomes source success company which important because environment business has Becomes the more competitive (33).

Human Capital is the company's most important resource, given that such resources are valuable, unique and difficult to imitate, due to specificities such as knowledge, experience, skills, abilities, and emotional intelligence. In addition, his interest is evident in managing and directing all other resources, giving the company a competitive advantage, including innovating and modernizing the company's organizational processes or strengthening the overall success of the organization. Various authors view HC as including employees who possess individual and collective knowledge, skills, abilities, attitudes, potential, behaviors and emotions. It also includes the knowledge, abilities and expertise of personnel (34). HC is observed from social and economic aspects for the company. HC can be summarized as a result of investment and accumulation of education, skills, abilities, motivation, energy and cultural development to create a group of people who are engaged in public reproduction, promote economic growth and have an effect on the magnitude of income for the owner of the company (35).

Human Capital is a phenomenon that reconciles the current requirements for improving performance, competitiveness and sustainability with the requirements for a high level of expertise in the field of information technology of employees working in e-business (36). Many have investigated the relationship between human capital expenditures investment (outcomes of employee education and training) and company performance (financial indicators)(35) Investing in human capital is a multi- stage process that starts early in life. As a result, investment in human capital is an intergenerational family problem . We develop a human capital-based family theory that incorporates the

dynamic nature of investments in children, intergenerational transfers , and loan constraints faced by parents and college-age youth. Our theory explains the fact that later investments build on previous investments, that early childhood investments are made by young parents early in their careers, and that desired loans may differ substantially over the life cycle (37).

Becker (38) argues, that human resources are not only resources but also capital that produces a compensatory return on all costs invested, developing itself in quantity and quality over time during human investment. In the labor market, human resources represent the value of a worker so that it determines the ability of the worker to produce goods and services. Human capital investment is primarily assumed to be adding an extra year of schooling to earn a certain additional unit in future earnings. Forgotten income due to additional years of study in school, tuition fees, fees for books and other equipment, transportation and other relevant costs amount to the total investment that must be borne by future earnings.

Furthermore, Becker (38) considers the following activities as human capital investment : 1) Job training . Job training provides essential skills demanded by the job. Generic training provides basic skills that are generally applicable in almost all occupations. Company-specific training provides the distinctive skills needed to complete certain jobs that may not be available elsewhere thereby building stronger bonds between employers and trainees; 2) School . School is an attempt to acquire cognitive knowledge in one or more majors; 3) Other efforts in seeking knowledge . In addition to schools and training, human investment can include migration and accessing economic information which can be geographically difficult and expensive; 4) Self development . Companies usually invest in maintaining the physical and mental well-being of their employees by providing medical services, nutrition, protection from hazardous work and creating positive work policies.

Investments in Education, Improvements in obtaining qualifications, development of the education and science systems—investments in human resources—are very important for our society if we are to solve current problems and increase the national budget. Unless we invest in human resources, especially our young generation, we can be threatened by the lack of knowledge and skills in the future to compensate for the more advanced problems that are to come. While investing in human resources can be expensive at first, it can prove to be a huge benefit in the future, so we need to make a decision - invest or fall behind (39).

In the literature , there are many studies and research results described, showing the importance of HC and investment in increasing its value (increasing the individual HC

component), especially through training in information technology (IT) for companies in the field of e-business. The framework (technology-organization-environment) is applied here, using three aspects that influence the implementation of technological innovations (e-business) identified. The technology context represents the technology currently used in the company and the relevant technical skills of the available employees. Organizational context is characterized by a company's internal specifics, such as its size. The environmental context represents the external environment in which the firm operates, thus its industry, competitors, and business partners. In this case, human resources are first included in the elements of technical skills that employees need (40).

2.2. Development Area

Development area intrinsically related _ with draft change multi-dimensional which unite dimensions economic , social, cultural and environment ; with innovation cross and in the room Among dimensions this . This could seen as a method that help increase quality live , support or speed up empowerment person ordinary , develop or preserve local assets, address failure market , strengthen cohesion , and define and give project development roots . Local development can be marked as process dynamic throughout _ three line main : inputs, outputs and outcomes (28).

1. Inputs: Area, sense of belonging , community , bottom - up, partnership , endogenous potential , closeness .
2. Output: Receiver local benefits , self-help , improvement income and income , access to service , quality , efficiency , relocation , diversification , methods new , and improvement local value .
3. Result : Item collective and common , development , strategy, regeneration , effectiveness , future , innovation social , empowerment , legitimacy , welfare , facilities , and intelligence collective (41).

Development area very related with understand ability area and specific of one region . It's good because if development area no supported by source power area , section area from source power national will not be sufficient for reach level expected development . _ holding local capabilities and get benefit from them on level maximum must Becomes destination main . But very important for have local knowledge in order to achieve this goal . Spread local knowledge through local institutions too _ _ very important . in every region there is a number of institution official or no official who brought knowledge and / or experience profitable . each _ _ this institution can

apply tasks _ _ important . But arrange they for work same and make they work together is something different and more _ important . For make they strive in clockwise harmony is _ type skill another . On point this institution Specific required like institution development . bodies development can and should arrange local ability and try for get benefit from source local power on level maximum . Type this organization holds position key due to the fact that they could help institution single in the region for set up , work together and collaborate . They could awaken local dynamics and let all actors in the region the pay together , which will make effect significant on development region locally and hence on total development country (28).

2.3. Market Knowledge and Experience

Private sector is basic elements of a liberal economy. With thereby development will increase especially on the shoulders of the private sector . Dependency knowledge market and experience having effectiveness consequential . Every company important for local development , so also their experience . Gather knowledge market and company experience together this is expertise of development agencies . Not only direct knowledge available companies _ but also help they for expand their knowledge and experience , to direct vision they to more fields _ effective and for find points intervention critical for they is between _ many Duty institution development . Company is organizations looking for profit . But effort they for profit by direct effective area and by no direct level development country .

Study addition consider knowledge market as booster fundamentals of performance innovation product . Knowledge market have four dimensions : area , depth , stealth and specificity . _ _ Information dimensions knowledge market about environment market , especially about customers and competitors , are source stimulation for knowledge company and driver strategy that oriented market . This implies that companies that correctly identify , collect and use _ information about condition customers and competitors considered knowledgeable about market.

2.4. Basic Education

Currently , education considered as basic and necessary component in the globalized world and is tool important for local development . Because university considered as the main locus production and deployment knowledge , there discussion public , in institutions education (formal and systemic), about process referenced knowledge _

on learning and also connection between teachers and students . Consider needs urge for discuss role university in Public based on contributing knowledge and partnership _ on local development , model triple helix relevant as approach that delivers strategic relationship of the field trees : universities , business and government.

In this case, we could identify two ways in which universities contribute on the economy; First , activities education and training increase the level of human capital of the individuals attending university and society by whole ; Second , activities basic and applied research university , ok contract or no , contribute for increase knowledge economy stock scientific and economic technology .

2.5. Internationalization

Model innovation describe internationalization as evolution company through Step learning is different from improvement commitment foreign , with company at first no interested but Becomes involved as exporter ” experimental ”, developing along time Becomes exporter ” active ”, and in later stage day to be exporter ” committed ”. Commitment market foreign correlated positive with accumulation experiential knowledge. There are two approaches for internationalization ; One, Approach static : Investment foreign direct , approach behavior Aharoni , cost economy transaction , approach internalization , paradigm electricity of approach strategic behavior , approach based source , and Two, Approach dynamic : cycle life model product , model innovation , model Uppsala internationalization , Model Network.

2.6. Sustainable Development

A new trend and challenge in managing governance in the era of globalization is the implementation of sustainable development (5). Sustainable development consists of three pillars. The three pillars are economic development, social development , and environmental development. The essence of this pillar is to maintain and improve the capabilities and capabilities of future generations as well as to fulfill tasks that are multi-dimensional, requiring human capital to be maintained and strategically positioned to sustain current and future economic growth and development.

2.7. Digitization

Digitization is the cause of major changes not only in the economy but also in society as a whole, defining the need for a better understanding of its transformative path. Accepted definition of the digital economy universally not _ could found in literature ; However Thus , this concept is interpreted by experts from two dimensions . Approach first considered narrow , and has limit draft for reference regarding information and telecommunications technology , e - commerce , services delivery of digital, software and information (42), or digital data creation. Approach second succeed expand lyrics term to the digital economy, including also intelligence artificial , internet, reality virtual , computing cloud , blockchain , robotics and vehicles autonomous , exploiting part of the economy technological changes in the market , Model business and operations transformative daily activities , including traditional technology , media and telecommunications services and e- commerce , systems digital banking , digitization in agriculture , mining or manufacturing, or frame term the as an " economic and social model " that is is Pushed by Computer Technology.

What appears continously in all effort for defined the digital economy from 1996-2017 , because the result of the presented synthesis by Bukht and Heeks (43) and Vyshnevskyi (44), are reference for information and communication technology , wide use of the Internet and web platforms for connect person for reach different purposes (productive , entertainment , cultural , educational , trade , banking) , the technology viewed as an important factor in increase productivity , optimization of the economic structure, and at finally , creation value on the border new world business.

3. Methods

This research was conducted by using a literature study to explore information about how the dynamics of research on human capital investment and local development in the digital era.

4. Results and Discussion

4.1. Human Capital Investment in the digital era

Becker (38) considers the following activities as human capital investment : 1) Job training . Job training provides essential skills demanded by the job. Generic training

provides basic skills that are generally applicable in almost all occupations. Company-specific training provides the distinctive skills needed to complete certain jobs that may not be available elsewhere thereby building stronger bonds between employers and trainees; 2) School . School is an attempt to acquire cognitive knowledge in one or more majors; 3) Other efforts in seeking knowledge . In addition to schools and training, human investment can include migration and accessing economic information which can be geographically difficult and expensive; 4) Self development . Companies usually invest in maintaining the physical and mental well-being of their employees by providing medical services, nutrition, protection from hazardous work and creating positive work policies.

In the era of digitalization, the competence and quality of human resources is taking on a new dimension, highlighted by a series of studies

Among the new requirements and competencies required for human resources in the modern era are:

1. increasing levels of education due to technological change require new qualifications through special education (45)
2. Digital skills to select, cut, synthesize and evaluate large amounts of information in the form of statistics, graphs or narrative information from logs or blogs , websites, and emails, to request verification from multiple sources, to formulate opinions and to develop action plans (46)
3. A set of technical skills to search for information, to engage in dialogue, to play computer games , to realize that Internet use implies responsible use of cyberspace (47)
4. Skills train to understand different perspectives or points of view, to learn critical skills to analyze and evaluate the credibility of information, to gain experience in accessing various forms of information, to be exposed to the digital environment, to understand digital Technology and to adapt to this virtual environment, considering long time spent online (47)
5. Digital competence involves the critical and confident use of information society technologies for work, pleasure and communication. It is based on utilizing computer skills to find, access, store, produce and exchange information and to communicate and participate in collaborative networks over the Internet .

Digital competence is not enough in a digital society to ensure the utilization of new information and technologies for the benefit of society and society. It is important to have

a set of rules, norms, values that ensure responsible use by each individual. Another series of studies focused on digital citizens, trying to highlight the skills required and the rules that must be followed by them while engaging in digital activities.

4.2. Regional Development in the era of digitalization

The results of research based on literature studies show that in facing the digitalization era, human capital is needed investment and regional development. The development of the digitalization era requires the role of human capital that is oriented to the use of resources in local government by containing aspects of the use of technology as one of the development of competencies. This orientation can of course be carried out through continuous and systemic education and training in maintaining the quality of the results of human capital development in the regions, including pentahelix in the regions.

This is shown by paying attention to the key elements in regional development, where there are several things that must be considered in regional development, namely: understanding the new pattern of development; address sub-regional development problems; improve governance; contribute to policy cohesion, territorial integration and improvement of financial mechanisms, as well as promote international cooperation (41).

Broadness of Market Knowledge, as a company's understanding of the various types of customers and diverse competitors and the factors that describe them. In other words, a company is said to have broad market knowledge if it has knowledge of various segments and competitors of current and potential customers and also uses various parameters related to customers (e.g. needs, behavior, characteristics) and competitors and competitors (Products). , market, strategy) to describe and evaluate it. Companies with a broad knowledge base have a greater potential to recombine different knowledge elements to increase the recognition of creative opportunities and potential .

The depth of market knowledge is the level of sophistication and complexity of a company's knowledge of its customers and competitors. It captures the degree of sophistication a company can relate to which can link the unique and interdependent relationships among factors that describe key issues about customers and competitors. Knowledge of taste elements such as customer needs, behavior and preferences and competitors' products and strategies indicates that a company has a deep understanding of its market. Thus, whereas breadth captures the horizontal dimension of knowledge, depth captures the vertical dimension (48)

Market Knowledge Safety, is the extent to which market knowledge is not explicit but difficult to codify and communicate. Market knowledge is tacit when people and functional units find it difficult to articulate explicitly what they know about customers and competitors and cannot explain effectively the casual relationship between their actions and related outcomes. Tacitness slows down the internal transfer of market knowledge because tacit knowledge cannot be fully codified and articulated even by an expert.

Specificity of market knowledge, refers to the extent to which a company's knowledge is adapted to the requirements of a particular context. Specific market knowledge is likely to be acquired and used by experienced people and experts in a particular market domain (48)

To stimulate entrepreneurship , local development practitioners can reflect potential strategies that encourage entrepreneurs to build new businesses. This may include encouraging local universities to develop partnerships with local businesses and industry, or encouraging commercial activity among their researchers—to benefit from universities and the local economy. Relevant university activities may include spinouts and company creation, offering technical advice to local companies, developing courses for students that meet labor market needs, and placing students on industrial experience projects in local businesses. Such knowledge-based approaches are increasingly popular in local economic development strategies, and can have important benefits in advancing or maintaining competitive advantage.

Knowledge is the main source in the process of economic growth. Resources are tangible and intangible entities that are available to people, companies, and countries, and that enable them to produce and consume them efficiently or effectively. The type of coordination network of economic relations in industrial districts has been linked to horizontal, trust-based relationships among local firms and between firms and institutions. The general assumption is that firms in these regional concentrations are in a similar position and that their access to local resources is similar. Trust means easier access to knowledge, especially from similar companies. Short distances not only facilitate the coordination of individual actors, they also play a role in the institutionalization of rules of behavior and the transfer of knowledge and learning. The result is a market structure in which small businesses can thrive and even compete in world markets (49).

Regarding the question of whether people with higher education, whom we consider to be holders of a higher level of human resources, earn on average more than people with secondary education, we come to the conclusion that individuals with university

education have higher levels of wages than Individuals with middle education. Therefore, if one wants to maximize future earning potential, then the university education level can be optimal. Similarly, the state can maximize future income tax revenues through investments in human resources and subsidies to students (39)

5. Conclusion

Human capital Investments in the digitalization era are job training, schools, self-development and other efforts to seek knowledge without forgetting digital competence. The three main elements, market knowledge, academic basis and internationalization, are the supporting poles of regional development and development institutions are the main institutions to collect the potential of these key elements and combine this with the potential of certain regions within a country to have a successful regional development and sustainable. In addition, local governments need to understand the new pattern of development; address sub-regional development problems; improve governance; contribute to policy cohesion, territorial integration and improvement of financial mechanisms, as well as promote international cooperation.

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