

THE DEVELOPMENT OF CREATIVITY SKILLS AND FORMATION OF CREATIVE HUMAN CAPITAL IN THE KNOWLEDGE ECONOMY: THEORETICAL BENCHMARKS

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Abstract: *The goal of the research is to examine and analyse the key challenges for the development of creativity skills in the view of the creative human capital formation, a topic of high interest for both developed and developing countries. The latter have to nurture, assess and develop creativity skills and creative human capital via their infrastructure and investments strategies, policies to manage the outflow of creative human capital abroad.*

Key words: *creativity skills, creative human capital, knowledge economy, innovative companies.*

JEL CLASSIFICATION: D83, D89, D9, I21, O15, O31

1. Introduction

The pace of development of technologies and innovations requires considerable investment in research and development, and these in turn are based on human creative brain and skills that lay the path for the formation of the creative human capital. “It’ll be decades - and maybe never - before the computer can replicate many of the things that the brain can do in terms of imagination, synthesis, and creativity” (Dalio, 2017). This represents a research topic, since the products and services, following the robotization, leave their imprint in the context of the knowledge economy. Thus, human creativity becomes the key factor for solving problems and facing challenges at the level of individuals, enterprises, national or global economy.

The quality and sustainability of the economic policies, of the decision-making processes, directly depend on the expertise and competence level of the employees. The creative human capital as a whole system of skills, knowledge, and personality traits, which is reflected in the ability to produce innovation with economic value, means also investments in the development of creativity skills, a process that lays the foundation for the formation of creative human capital (Amabile, 2012), (Tkachuk, 2017).

The analysis, assessment, promotion of creativity skills and creative thinking have a direct impact on the management of human resources and of creative human capital. The research also testifies and confirms the phenomenon of creativity-related skills’ factors and the formation of creative human capital conditions targeting high scale investments strategies and well-thought programs for implementation (Armstrong, 2009).

Apart from Introduction and Conclusions, the paper contains three chapters presenting literature background of the subject of creativity skills and formation of creative human capital, methodology framework, findings and discussion, which for their part, contain the assessment and development of creativity skills and creative thinking, creative and innovative skills for businesses, systemic and integrated approach towards creativity skills and formation of the creative human capital.

2. Literature background

Several decades ago the phenomenon of creative economy started to win more and more place at the global level and the concepts of creative individual, creative employee, creative

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economy started to be used and approached more frequently in the scientific sources, being also explored by industries.

The authors consider the management of human resources and human capital represent the key process leading to the formation of creative human capital via assessing and developing the necessary skills (Benea-Popușoi & Duca, 2021). Human resources as the most precious assets of an organization, work in the organization and contribute individually and collectively to the achievement of the mission and objectives (Armstrong, 2009) and stay in the centre of the creative economy fostering the evolution and the progress of technology, as the driving force of the new type of economy, creative economy. The challenging side of the phenomenon, refers to the formation of the creative individual which turns out to be an objective much more difficult to achieve than the preparation of a specialist in a certain activity field (Moldovanu, 2014) not least because of complex series of strongly correlated, interdependent actions on every single component in the value chain of the educational system. Furthermore, creativity may be seen as a social value to be cultivated during the life-long learning.

Creativity is a process that intervenes throughout all the stages of the skills cultivation, starting from primary level teaching up to ideas' production and implementation. Teresa Amabile holds that creativity is often involved in decision-making process, in solving problems with efficiency and elegance. The author also defines creativity as a set of skills that once applied will generate innovations (Amabile, 2012).

In the view of Weisberg, creativity includes a “step-by-step problem-solving”, as a result of the systemic approach, and constitutes the basis for creative products following the individual experience (Weisberg, 1993). Furthermore, the following are the steps we go through in a creative approach: (i) solving the problem starting from what is already known; (ii) modification of the solution scheme by referring to new requirements; (iii) the intervention of creative thinking that allows a distancing from the previous ways of thinking, and generates the ability to formulate several possible solutions.

The role and rise of the creative class are described as essential by R. Florida “It wasn't just the Internet, or the rise of new technologies, or even globalization that were upending our jobs, lives, and communities, though all those things were important. Beneath the surface, unnoticed by many, an even deeper force was at work – the rise of creativity as a fundamental economic driver, and the rise of a new social class, the Creative Class.” (Florida, 2012).

According to Rhodes, “the phenomenon to which the term creativity applies is the phenomenon of knowledge synthesis. The hope for greater unification of knowledge is the continuation of creative studies” (Rhodes, 1961). To approach creativity in people and to make use of it in the context of economic development, we must consider the development of creativity skills, a process that, over time, forms creative human capital. In this connection, knowledge economy requires creative human capital, which means promoting the personality of a creative person, as a source of human capital, which brings economic value (Seleim et al., 2007).

3. Methodology framework

The authors have explored both theoretical sources and empirical evidence in their attempt to further elaborate on the creativity skills and creative human capital. For this purpose, we capitalized on theoretical-structural approaches such as the analysis, synthesis, comparison, and on the theoretical-logical approaches including the inference method, the method of analogy, scientific induction and deduction.

Thus, to explore the concepts of creative economy, creativity skills, creative human capital, particularly in the developed post-industrial countries, we used collections of secondary data, extracted from specialized reports, journals, edited over the last decades. Insightful perspectives into the issue of human creativity have also been provided by approaches in the field of education economics.

Overall, the authors rely on multidisciplinary and systemic approaches to construe the conceptions on creativity skills and creative human capital. Furthermore, we consider the research on assessment and formation of the creativity skills and creative human capital has a transdisciplinary and multidimensional character and presupposes a systemic approach, which is located at the confluence of the fields of behavioural economics, welfare economics, humanistic economics, identity economics, neuroeconomics, and others. In particular, humanistic economics seeks to replace the concept of the economic man with a more holistic human image, including the concept of human personality, which is closely related to the ability to be creative.

As we argue in our article, the notion of human resources refers to the human factor in general, and the notion of human capital is based on the personality of the individual, which needs creativity to further evolve into creative human capital.

4. Findings and discussion

The conceptions on the development and assessment of creativity skills have been of great interest throughout the recent periods, which is also showed in the research “Scientific views of creativity and factors affecting its growth” conducted by the famous expert E. Paul Torrance (1965). The author mentioned the term creativity is approached differently, sometimes as a product, sometimes as a process. The author himself states “I defined creativity as a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them, and finally communicating the results” (Torrance, 1965).

E. Paul Torrance mentions the identification of creative skills, creative thinking, and behaviour can be done through tests and non-tests procedures with tasks administration, scoring, based on targets and interest groups. However, regardless of the targets, the procedures involve asking questions, guessing causes of different actions, guessing results, to help “formulate hypotheses concerning cause and effect” (Torrance, 1965).

”Ask and guess” tests, those on thematic apperception, product improvement task, the unusual uses, the ”just suppose” tests, sounds, image, and picture construction: such tests may be applied at all levels of targeted groups, starting from kindergarten to graduates, and at various occupational groups. The tests, based on results and higher scores, help to identify creative children, pupils, students, and people of various ages who can think differently, initiate a large number of original ideas, or explain unfamiliar things. E. Paul Torrance holds that identified creative thinkers could apply their original ideas in the context of their area and knowledge. While the tests are widely considered a very pragmatic solution to identify creative potential and make people aware of it, the non-tests solutions and indicators may be obtained also in simple classroom activities, by preparing and creating situations to provoke creative behaviour (Torrance, 1965).

Like E. Paul Torrance, in regard to the creative thinkers, the scholars A. Newell, A. Simon and J. C. Shaw in their work “The process of creative thinking”, also connect the idea of problem-solving aspect to the creative thinking process “to the extent one or more of the following conditions are fulfilled: the product of the thinking has novelty and value; the thinking is unconventional, as it requires modifications or rejection of previously accepted ideas; the thinking requires high motivation and persistence; as the problem was initially undefined, the part of the task was to formulate the problem itself” (Torrance, 1965).

There are seven stages of the creative thinking process: (i) Idea accumulation. Creative thinking starts with accumulating ideas, knowledge, information, experience connected to a concrete question or problem. (ii) Problem finding. Once there is the list of the ideas accumulated, “finding weaknesses, flaws, exceptions, and limitations” follows as the next step by a creative thinker (Dalio, 2017) (iii) Idea generation. Once knowing the weaknesses, new ideas are generated, that may contain solutions to the respective arisen problems. (iv) Subconscious process

presupposes that the mind needs some time for conscious or subconscious processing. (v) Idea evaluation. The conscious evaluation of the ideas, “convergent thinking comes into play, as the thinker starts to move away from the open phase of accepting ideas but rather to the critical phase of rejecting those of lesser potential”, (vi) Idea development focuses on an “iterative divergent-convergent process to figure out how to transform the provisionally best solution” and (vii) Idea implementation that is putting it into reality (Wikipedia, 2021, July 22).

Thus, creativity, creative skills, creative thinking is not only about artists, writers, musicians. It’s about targeting management of human skills for everyone, for people in general, no matter in personal or professional life. “Florida defines the creative class as scientists, engineers, architects, designers, writers, artists, musicians, lawyers, and people in specific jobs in education, healthcare, or business. To Florida, these professions employ individuals who are uniquely creative. The creativity of these individuals is expressed in the form of inventions and innovations within their line of work, which thereby promotes economic growth” (Fairlie, 2012).

Hence, the development and assessment of creativity skills become a must. There are also other general approaches that assume thinking differently and more strategically may be helpful in the formation and development of creativity skills: making connections between things or ideas that may never seem compatible, but which may help to achieve excellent results; asking questions helping to prioritize, categorize and identify new ways for doing tasks or revising relevance of procedures; making observations on everything around can help to discover new ways of doing things and generating ideas; brainstorming, rewarding curiosity, experimenting, fighting fear and failure.

Likewise, the management of human capital presupposes the analysis, measurement, and systemic evaluation, the policies and practices of human resources management can generate value. The existing sources in the field define the management of the human capital as “an approach that considers the management of the people a high level strategic activity, and not an operational aspect that may be left for human resources specialists” (Moldovanu, 2014). Therefore, the performance of the company is directly proportional to the number of labour force trained, certified professionally, knowledge and aptitudes acquired, experience and practices accumulated (Tkachuk, 2017).

As previously stated, creativity leads to innovation, and innovation leads to entrepreneurship, or in other words, creativity is the central part of innovative ideas that being implemented represent the central part of entrepreneurship. Respectively, creativity and innovation are the key aspects to target the development of the sectors of the national economy, and crucial for the future and welfare of individuals and companies.

GlaxoSmithKline CEO Ann Byrd holds: “We need creative people. They know how to think outside the paradigm, to kick-start a new idea, to get a job done better” (Tkachuk, 2017). The idea of thinking out of the box, approaching things within the production of services and goods in a different way, looking for and selecting alternatives for existing already options is a dream for any company that looks for scalability, growth, and sustainable development.

In general, business leaders describe ‘creative employees’ as those who can ‘see the problems that no one else sees’, as they may really generate better solutions, thus innovations, which bring new ideas to market. Respectively, if there is no creativity and innovation, there is big doubt about successful business.

Steve Jobs and Apple company, constitute an example and model of a creative and innovative company with creative and innovative people. They knew how to think and re-think ideas for new products of high value that followed in appreciation and being sold worldwide.

A giant that set up, developed, and ensures maintenance and scaling up of an e-commerce company, the most sophisticated online retail system in the world: Alibaba Group, with Jack Ma founder and executive chairman, represents the excellent example of a global innovator. The company, with its team, turned to become, transforming “the digital into real-world shopping experiences to create the best of both worlds” (Alibaba Group, 2021).

It is quite difficult to imagine how a company could be developed without a creative and innovative approach or without investing in capacity building and/or inspiring the human capital to become more creative and more innovative. The act of transforming the ideas generated by the creativity of the human capital into reality, into the practice, thus into value-added goods or services ensures the road to success for any company or organization.

The human capital of an organization represents the people of the respective organization, thus the human factor, that ensures the combination between intelligence, capacities, and good experience that gives to the organization a distinctive character. Thus, the human factor of the organization is the only capable to learn, to change, to innovate and to ensure the creative vital force, which once well motivated can guarantee the long-term existence of the organization/company (Cappelli & Crocker-Hefter, 1996).

Cappelli and Crocker-Hefter (1996) consider that the human resources distinguished practices set up the fundamental abilities that determine the way the companies manage to compete, and these practices will have a considerable impact on the performance of the companies (Cappelli & Crocker-Hefter, 1996).

Like the most relevant asset of the company, the human capital needs strategic investments to ensure competitive advantage, development and growth, that involves actions that will totally engage them into the process, keeping them in the organization by managing their talent and abilities to be creative through development programs, training and instructions (Moldovanu, 2014).

5. Conclusions

Several decades ago the phenomenon of creative economy started to win more and more place at the global level and the concepts of creative individual, creative employee, creative economy started to be used and approached more frequently in the scientific sources, being also explored by industries. The authors have explored both theoretical sources and empirical evidence in their attempt to further elaborate on the creativity skills and creative human capital.

As we argue in our article, the notion of human resources refers to the human factor in general, and the notion of human capital is based on the personality of the individual, which needs creativity to further evolve into creative human capital. We consider the research on assessment and formation of the creativity skills and creative human capital has a transdisciplinary and multidimensional character and presupposes a systemic approach.

The act of transforming the ideas generated by the creativity of the human capital into reality, into practice, thus into value-added goods or services, ensures the road to success for national economies, which means the development and assessment of the creativity and creativity skills for human capital has become a must. The success of companies and countries' economies is now directly proportional to the creativity level of the employees at all levels.

Consequently, national institutions and businesses are expected to launch pilot programs and scale them up to combine their efforts towards formation, development, assessment of creativity skills and creative human capital.

As the specifics of developing countries to rely on political decisions and tools is strong, there is a need of an integrated program on the analysis and assessment of the strategies and other policy documents in the fields of educating, researching, and developing creativity skills and creative human capital.

The necessity for setting up creativity fostering structures - centres or hubs for creativity and innovations - to involve undergraduate students and businesses, proves to be indispensable in the context of creative human capital formation. Likewise, it is recommended to conduct trainings of the trainers at the national level to include creativity development and maintenance in schools as a compulsory object for pupils and students.

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