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# Transformation of Human Capital of Female Scientists in the Era of COVID-19 and Digitalisation

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### Abstract

The paper reflects an analysis examining the human capital transformation among female scientists in STEM and NON-STEM sectors in the era of COVID-19 and digitalisation focusing on young scientists in Ukraine. The human capital of these young female scientists is categorised into three groups within Ukrainian science: Doctor of Sciences, PhD and scientists without a scientific degree. The research methodology includes the method of analysis and synthesis for the theoretical and statistical analysis of the sociological survey for the results. The main issues regarding the realisation of the potential of young female scientists in the era of COVID-19 and digitalisation are defined. Innovativeness is proven to be the key indicator in the context of digitalisation. The main limitation of the research is the COVID-19 restrictions present at the time of conducting the sociological survey.

**Keywords:** human capital, female scientists, education, transformation, pandemic, digitalisation, innovativeness

**JEL Classification Codes:** I15, J24, O31

## Introduction

Since 2020, modern society has faced a rage of risks, influencing both national economies and social sector. In particular, COVID-19 pandemic has impacted both educational and economic systems, causing problems in education and science along with a global economic crisis. Consequently, it is extremely important to preserve and develop the human capital of scientists.

It is becoming increasingly important to identify the particular ways and opportunities to mitigate existing risks to science development using the available possibilities in the era of digitalisation. In accordance with the Digital Science Consultancy Team report (Jackson, 2020) the research landscape has changed a lot in response to COVID-19. The research world has advanced faster than many would have anticipated. As a result, many issues in the scholarly communication system, which many have been striving to improve in recent years, are now being highlighted under these extreme circumstances.

Thereby, the research problem lies in the potential of providing a flexible system for transforming women scientists' – human capital to overcome risks in STEM and NON-STEM sectors, using the available potential of digitalisation.

The research is conducted through a review of scientific articles from the last ten years, evaluating the trends in human capital management and the current transformation tendencies of women scientists' human capital. It includes a deeper understanding of peculiarities of human capital development in STEM and NON-STEM sectors in the post-COVID-19 era, the influence of digitalisation on scientific development transformation, and the role of human capital of scientists within the recovery strategies.

## Theoretical background of the research

The scientific problem of human capital management in the conditions of post-COVID-19 era is new in its specifics and requires deeper research. Besides, a set of factors connected with COVID-19 have an impact on human capital management of scientists. The following factors should be considered: economic decisions as a response to COVID-19 (Gans, 2020); the behaviour of businesses in times of crisis, as presented in the report "Implications of Policy Initiatives for MSMES amid Economic Disruptions Caused by COVID-19" (Sharma, 2022); reorientation of ecological legislation towards protecting people and preserving their health, as presented in the report "The Coronavirus Pandemic Drove Life Online. It May Never Return" (Abbruzzese, Ingram, Click, 2020), and "The Impact of COVID-19 Pandemic on Corporate Social Responsibility and Marketing Philosophy" (He, Harris, 2020); the economic impact of COVID-19 on trade flows, the global economy, and the worldwide transfer of technologies, as discussed by O. Guinea, I. Monterosa (2020), ("Trade Policy and the Fight Against Coronavirus"), P. Legrain (2020), ("The Coronavirus Is Killing Globalisation as We Know It"); P. Haenle (2020), ("What the Coronavirus Means for China's Foreign Policy"). The impact of anti-pandemic measures on a global scale has been studied in the reports of research departments of international organisations (WTO, 2020), "How COVID-19 Is Changing the World: a Statistical Perspective" (World Bank, 2020), «World Bank Group Announces Up to $ 12 Billion Immediate Support for COVID-19 Country Response»), UNCTAD (2020), «COVID-19: Response and Recovery», Fitch Ratings, 2020 "Economics Dashboard – Impact on Jobs of Coronavirus Crisis, Fri 17", Shared Responsibility, Global Solidarity: Responding to the socio-economic impacts of COVID-19 (UN, 2020).

The important note for this paper is that in Ukraine, young scientists are considered by legislation (Parliament of Ukraine, 2015) as scientists under the age of 35 for those who have a PhD or without a scientific degree, or under the age of 40 for doctors of science (the equivalent of a habilitation doctor's degree in some countries). In previous research, the authors (Gernego, Shkoda, Savych, 2021) considered marketing tools in the strategic management of young scientists' human capital.

## Main focus of the human capital of scientists in the era of COVID-19 and digitalisation

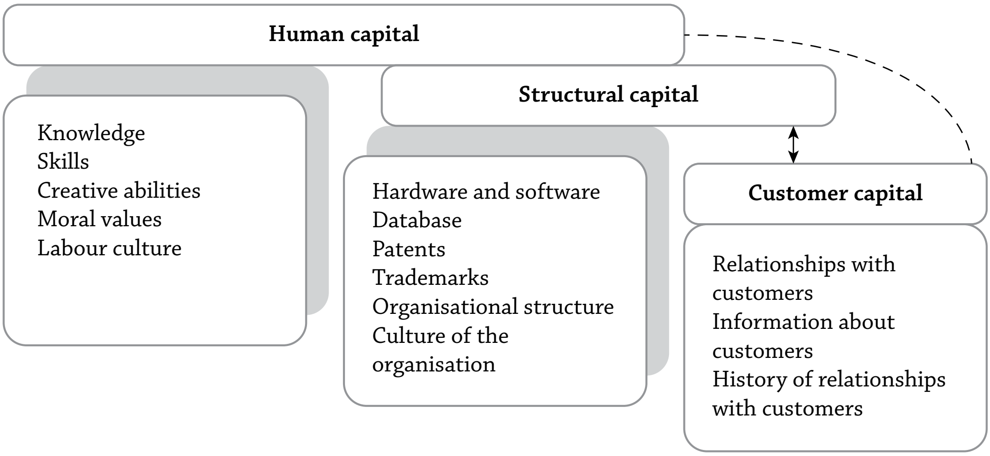
The paper aims to provide a scientific review of the following major research approaches: 1) the impact of increasing social and economic risks on human capital development; 2) highlighting the special status of human capital and the human potential of scientists; 3) concerning the digitalisation potential for scientists' assistance, including an overview of increasing role of digitalisation in building scientific networks; 4) the potential of human capital of development strategies for scientists by focusing on the development of funding sources in in the post-COVID-19 era and the era of digitalisation, including national, regional and global funds.

The foundations of the theory of human capital arose in the works of A. Smith, who, in the context of the interpreting the essence of capital, noted: "Acquiring... talents during the period of... training or increasing one's own level of education is a real value that forms human capital. These talents are a component of success, both for a person and for society" (Smith, 2007). In the economic context, I. Fisher was one of the first to use the term human capital in 1897 (Fisher, 1897). However, this term did not become generally accepted until the middle of the 20th century, when representatives of the "Chicago School" such as T. Schultz, G. Becker, B. Weisbrod, J. Minser and L. Hansen drew attention to the problem of human capital. Thus, in 1958, J. Minser's article "Investments in Human Capital and Distribution of Personal Income" was published in the journal "Political Economy" (Mincer, 1958). In the1960s, the works of H. Becker "Investments in Human Capital" and "Human Capital: A Theoretical and Empirical Analysis with a Special Emphasis on Education" appeared (Becker, 1962; Becker, 1964). T. Schultz in his article "Investments in Human Capital" emphasised the role of human capital in the development of contemporary society, connecting his concept with a number of economic anomalies and the historical aspect of the differentiation of the essence of human capital (Schultz, 1961).

However, there are a number of theories, considering the connection between human capital and research. For instance, on the order of the Swedish insurance company Skandia, L. Edvinsson developed a complex structural model of intellectual capital known as "Skandia Value Scheme" (Edvinsson, 2000). This model became the basis of the traditional approach to the structuring intellectual capital: 1) human capital (HC); 2) structural or organisational capital (C); 3) client capital (CC) (Figure 1).

Given the considered structure of intellectual capital, its basic component is human capital, which lays the foundation for the formation and development of other components. Structural capital plays the function of providing support for the transition to a new level of intellectual capital. Customer capital is an indicator of the success of the interaction of the specified components. Thus, in the practice of management and in the theory of economic science, we observe a reorientation from the problems of using labour resources to the problems of forming the workforce in the conditions of scientific and technical progress, and the postulates of the theory of human capital are being updated.

**Figure 1. Human capital in the context of intellectual capital development – structural approach**




Source: own study based on (Edvinsson, 2000; Rosińska-Bukowska, 2019).

## Methodology

The methodological part of our study is based on the analysis of young female scientists in Ukraine, taking into account the context of COVID-19 and digitalisation. The research analytics are based on a mass sociological survey within the Project "Realisation of Potential of Young Scientists in Integration of Science, Education, Business" (2020–2022), with state registration number 0120U102126. This survey aimed to assess the current state of the potential realisation of young scientists (in science, education, business, and socio-political sphere) using Google-Form in 2020 and was presented in 2021 (Shkoda, Semenets-Orlova, Zhabin, Tepliuk, Kyryliuk, Maliarchuk, Chebakova, 2021). The profile of the modern young scientist in Ukraine was prepared based on the results of this survey. The survey included 579 respondents, representing the young scientists in Ukraine, of which 9.7% held a Doctor of Science degree, 51.8% held a PhD degree, and 38.5% of the respondents were without degree (Table 1).

**Table 1. Human capital of Ukrainian young female scientists**

| Sectors | Scientific degree, % | | |
|---|---|---|---|
| | Doctor of sciences | PhD | Without scientific degree |
| NON-STEM | | | |
| Humanities: Linguistics, Philology, Literary Studies, Culturology, Pedagogy, Psychology, History, Art Studies, Ethics, Aesthetics | 3.4 | 49.2 | 47.4 |
| Social sciences: Sociology, Social psychology, Law, Political Science, Political Economy, Demography, Social Statistics, Social Hygiene | 17.5 | 55.3 | 27.2 |
| STEM | | | |
| Natural: Physics, Chemistry, Biology, Astronomy, Geography, Geology, Engineering | 5.8 | 56.9 | 37.6 |
| Formal sciences: Mathematics, Logic, Cybernetics, Statistics (Probability Theory), Theoretical Computer Science, Information Theory | 3.4 | 55.2 | 41.4 |

Source: own study based on the survey results.

## Comparative analysis of young female scientists activities in STEM and NON-STEM sectors of Ukrainian science and their human capital development in the era of COVID-19 and digitalisation

The research shows the prospects for further human capital development in STEM sector, considering the highest level of P.D. degrees and the likelihood of obtaining a Doctor of Science degree. On the other hand, the future of human capital depends on the opportunity to satisfy one's needs (Table 2).

**Table 2. The potential of young female scientists in Ukraine to be breadwinners in their families**

| Sectors | % | |
|---|---|---|
| | Yes | No |
| NON-STEM | | |
| Humanities: Linguistics, Philology, Literary Studies, Culturology, Pedagogy, Psychology, History, Art Studies, Ethics, Aesthetics | 28.0 | 42.4 |
| Social sciences: Sociology, Social Psychology, Law, Political Science, Political Economy, Demography, Social Statistics, Social Hygiene | 26.2 | 47.6 |

| Sectors | % | |
|---|---|---|
| | Yes | No |
| STEM | | |
| Natural: Physics, Chemistry, Biology, Astronomy, Geography, Geology, Engineering | 17.9 | 54.5 |
| Formal sciences: Mathematics, Logic, Cybernetics, Statistics (Probability Theory), Theoretical Computer Science, Information Theory | 37.9 | 37.9 |

Source: own study based on the survey results.

The survey indicates that currently, young female scientists from both STEM and NON-STEM sectors mainly don't consider themselves as breadwinners in their families.

The main problematic issues of realising the potential of young scientists in Ukraine in the era of COVID-19 and digitalisation:

- the most important factors influencing the decision to pursue a scientific career are scientific interest and career prospects – for 59.7% of respondents, the choice of field of knowledge, specialty, and research topic was influenced by these factors, while only for 13.5% was it to gain a good profit. About 25,7% of young female scientists in the STEM sector have a part-time job;
- financial support is inadequate – 2% of young scientists of STEM sector earn over 19,000 UAH; 17% earn up to UAH 5,000; 32% earn between 5,000 and 9,000 UAH; and 8% earn from 9,000 to 13,000 UAH;
- the average level of proficiency in a foreign language is a barrier for 21% preventing them from – applying for foreign grants. Around 15% of young female scientists in STEM maintain contact with their foreign colleagues and are familiar with their works;
- for continuing their scientific research, only 4% of young female scientists in STEM travel abroad, and only 15% believe that scientific mobility greatly impacts the efficiency of their work the social status of young scientists is considered low – 54.2% of respondents are dissatisfied with the social status of young scientists in Ukraine,.the grant application process is overly bureaucratised – 52.65% of respondents hope for a reduction in the bureaucracy involved in applying for state scholarships and grants and for an increase in the transparency of competitions, a low level of cooperation with the business sector – 58.75% of young female scientists in STEM lack experience in cooperating with businesses. While about 61.5% have their own startup ideas, only 5,9% have implemented them;
- a low level of scientific publications in SCOPUS, Web of Science;

- there is a constant lack of time and a need for more support from management for their endeavours and career development.

These issues pose barriers to the growth of human capital. Nevertheless, an increase in human capital is achievable through the effective dissemination of young scientists' researches. The most effective methods for promoting their research include:

- participation in conferences and forums – 73.15% in the NON-STEM sector and 76.25% in the STEM sector find this beneficial;
- publications in journals – 57.4% for the NON-STEM sector and 62.55% for the STEM sector;
- publication of own monographs, workbooks, and study books – 45.3% for the NON-STEM sector and 25.45% for STEM sector;
- internet projects on scientific, social, and technical topics – 37.85% for the NON-STEM sector and 35.4% for the STEM sector;
- competitions of scientific works – 32.6% for the NON-STEM sector and 44.05% for the STEM sector;
- social networks – 53.05% for NON-STEM sector and 45.5% for STEM sector.

Young female scientists identified the following soft skills as most developed (receiving the maximum 5 points):

- communicability – 54.3% for the NON-STEM sector and 44.5% for the STEM sector;
- team work – 49.1% for the NON-STEM sector and 51.2% for the STEM sector;
- creativity – 48.5% for the NON-STEM sector and 39.6% for the STEM sector.

The most pressing issues requiring a high level of soft skills among young scientists include:

- conducting effective cooperation with business (confirmed by 90% of young scientists);
- effective grant and project activities (only every sixth young female scientists applied for an individual research grant).

More than 50% of young female scientists in the NON-STEM sector and 45% of young female scientists in the STEM sector emphasise that there is a need to develop their soft skills in professional activity. It is also proved by the obtained results on such a soft skill as innovativeness among young female scientists from both STEM and NON-STEM sectors, presented in Table 3.

Innovativeness is considered by Zaltman, Duncan, and Holbeck (1973) as "openness to new ideas". At the same time, Avtonitis, Kouremenos, and Tzokas (1994) viewed innovativeness in technological and behavioural dimensions, including such components as a technological capacity and a willingness and commitment to innovate. From the authors' point of view, the soft skill of innovativeness among young female scientists should receive more attention in the activities of educational and scientific institutions in Ukraine as they develop their human capital. It should be noted that innovativeness is closely connected with the ability of young female scientists to apply modern digital technologies in their scientific activity.

**Table 3. Innovativeness of Ukrainian young female scientists (in %)**

| Sectors | Scale is from minimum 1 to maximum 5 points | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| NON-STEM | | | | | |
| Humanities: Linguistics, Philology, Literary Studies, Culturology, Pedagogy, Psychology, History, Art Studies, Ethics, Aesthetics | 5.1 | 2.5 | 17.8 | 47.5 | 27.1 |
| Social sciences: Sociology, Social Psychology, Law, Political Science, Political Economy, Demography, Social Statistics, Social Hygiene | 2.9 | 1.9 | 13.6 | 49,5 | 32.1 |
| **STEM** | | | | | |
| Natural: Physics, Chemistry, Biology, Astronomy, Geography, Geology, Engineering | 4.1 | 9.7 | 22.0 | 48.8 | 15.4 |
| Formal sciences: Mathematics, Logic, Cybernetics, Statistics (Probability Theory), Theoretical Computer Science, Information Theory | 3.4 | 3.4 | 17.4 | 51.7 | 24.3 |

Source: own study based on the survey results.

## Future research directions

To realise the potential of human capital among young scientists in Ukraine, especially women in STEM and NON-STEM sectors, it is proposed to research different possibilities for funding their projects. Before the Russian invasion in Ukraine, 357 projects by young scientists across 11 professional scientific directions were supported by the state over the last five years; the budget for state financing of young scientists' projects in Ukraine was about 100 million UAH as of 2020 and increased more than 100 million UAH by 2021 (MESU, 2022).

In the context of digitalisation and COVID-19 impact, it is proposed for future research to explore the idea of a State Venture Fund, whose investment strategy would be aimed at financing innovative projects and developments by young scientists. It is recommended to study the experience of such innovativeness leaders as the USA – SBIC; Finland – SITRA; Israel – YOZMA; and Japan – VAC.

## Conclusion

Human capital of young scientists is represented by a set of skills, knowledge, and motivation that ensure increased labour productivity. Provided that the efficiency of investments in education, healthcare, and cultural development increases, financial capital is formed. This financial capital enables the attraction of further investments for strengthening human capital, which in turn multiplies financial capital, boosting social and economic growth, despite the influence of COVID-19.

The study results can be used within programmes for sustainable development of education and support of scientists in the era of digitalisation. The research limitation is its survey stage during COVID-19 in 2020, prior to the Russian invasion in Ukraine. The practical issue concerns the potential of providing flexible support to overcome the human capital challenges in science in order to improve the operating national models, including leadership in science, management and human resources. This approach is essential for taking responsibility for effective human capital management in the scientific area.

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## References

Abbruzzese, J., Ingram, D., Click, S. (2020). *The Coronavirus Pandemic Drove Life Online. It May Never Return: What Passes for Normal Life Now Happens Almost Entirely Online*, NBC News, 28th March. Retrieved from: https://www.nbcnews.com/tech/internet/coronavirus-pandemic-drove-life-online-it-may-never-return-n1169956 (accessed: 21.11.2023).

Avlonitis, G.J., Kouremenos, A., Tzokas, N. (1994). Assessing the Innovativeness of Organizations and its Antecedents: Project Innovstrat. *European Journal of Marketing*, 28(1), p. 5–28.

Becker, G. (1962). Investment in Human Capital: A Theoretical Analysis. NBER Special Conference 15, supplement to *Journal of Political Economy*, 70(5), p. 9–49.

Becker, G. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. Cambridge, MA: Harvard University Press, p. 264.

Edvinsson, L. (2000). Some Perspectives on Intangibles and Intellectual Capital 2000. *Journal of Intellectual Capital*, 1(1), p. 12–16.

Fisher, I. (1897). Senses of 'Capital'. *The Economic Journal*, 7, p. 199–213.

Gans, G. (2020). *Economics in the Age of COVID-19*. Retrieved from: https://mitpress.mit.edu/9780262362801/economics-in-the-age-of-covid-19/ (accessed: 19.11.2023).

Gernego, I., Shkoda, T., Savych, O. (2021). Marketing Tools in Strategic Management of Young Scientists' Human Capital. *Baltic Journal of Economic Studies*, 7(4), p. 43–53. Retrieved from: https://doi.org/10.30525/2256-0742/2021-7-4-43-53 (accessed: 15.11.2023).

Guinea, O., Monterosa, I. (2020). *Trade Policy and the Fight Against Coronavirus*. Retrieved from: https://ecipe.org/blog/trade-against-coronavirus/ (accessed: 14.11.2023).

Haenle, P. (2020). *What the Coronavirus Means for China's Foreign Policy*. Retrieved from: https://carnegieendowment.org/2020/03/11/what-coronavirus-means-for-china-s-foreign-policy-pub-81259 (accessed: 18.11.2023).

He, H., Harris, L. (2020). The Impact of COVID-19 Pandemic on Corporate Social Responsibility and Marketing Philosophy. *Journal of Business Research*, 116, p. 176–182. Retrieved from: https://doi.org/10.1016/j.jbusres.2020.05.030 (accessed: 17.11.2023).

Jackson, A. (2020). *How COVID-19 is Changing Research Culture. Digital Science Consultancy Team Report*. Retrieved from: https://www.digital-science.com/blog/2020/06/new-digital-science-report-how-covid-19-is-changing-research-culture/ (accessed: 16.11.2023).

Legrain, P. (2020). *The Coronavirus Is Killing Globalization as We Know It*. Retrieved from: https://foreignpolicy.com/2020/03/12/coronavirus-killing-globalization-nationalism-protectionism-trump/ (accessed: 18.11.2023).

Mincer, J. (1958). Investment in Human Capital and Personal Income Distribution. *Journal of Political Economy*, 66, p. 281–302.

Ministry of Education and Science of Ukraine (MESU) (2022). *54 Projects of Young Scientists Were Approved for 2021*. Retrieved from: https://mon.gov.ua/ua/news/zatverdzheno-54-proyekti-robit-molodih-vchenih-na-2021-rik (accessed: 15.11.2023).

Parliament of Ukraine (2015). *The Law of Ukraine "On Science and Scientific-Technical Activity" no. 848-VIII as of 26.11.2015*. Retrieved from: https://zakon.rada.gov.ua/laws/show/848-19 (accessed: 19.11.2023).

Rosińska-Bukowska, M. (2019). Kapitał ludzki i kapitał intelektualny we współczesnym biznesie międzynarodowym. Na podstawie badań strategii korporacji transnarodowych. *Comparative Economic Research. Central and Eastern Europe*, 22(2), p. 141–158. Retrieved from: https://doi.org/10.2478/cer-2019-0017 (accessed: 18.11.2023).

Schultz, Th.W. (1961). Investment in Human Capital. *American Economic Review*, 51(1), p. 1–17.

Sharma, A.K. (2022). *Implications of Policy Initiatives for MSMES amid Economic Disruptions Caused by COVID-19*. Retrieved from: https://journals.sagepub.com/doi/full/10.1177/02560909221078460 (accessed: 17.11.2023).

Shkoda, T., Semenets-Orlova, I., Zhabin, S., Tepliuk, M., Kyryliuk, V., Maliarchuk, O., Chebakova, T. (2021). *On-line Presentation of the Preliminary Results of the All-Ukrainian Sociological Survey Regarding the Current State of Realizing the Potential of Young Scientists* *in Ukraine. Project "Realization of Potential of Young Scientists in Integration of Science, Education, Business" (2020–2022), State Registration no. 0120U102126*. Retrieved from: https://www.youtube.com/watch?v=-KW4VrqCWzU (accessed: 15.11.2023).

Smith, A. (2007). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Edited by S.M. Soares. Brazil: MetaLibri Digital library, p. 754.

United Nations Conference on Trade and Development (UNCTAD) (2020). *COVID-19: Response and Recovery*. Retrieved from: https://unctad.org/programme/covid-19-response-and-recovery (accessed: 18.11.2023).

United Nations (UN) (2020). *Shared Responsibility, Global Solidarity: Responding to the Socio-economic Impacts of COVID-19*. Retrieved from: https://unsdg.un.org/sites/default/files/2020–03/SG-Report-Socio-Economic-Impact-of-Covid19.pdf (accessed: 16.11.2023).

World Trade Organization (WTO) (2020). *How COVID-19 is Changing the World: A Statistical Perspective*. vol. 2. Retrieved from: https://unstats.un.org/unsd/ccsa/documents/covid19-report-ccsa_vol2.pdf (accessed: 17.11.2023).

World Bank (2020). *World Bank Group Announces Up to $ 12 Billion Immediate Support for COVID-19 Country Response*. Retrieved from: https://www.worldbank.org/en/news/press-release/2020/03/03/world-bank-group-announces-up-to-12-billion-immediate-support-for-covid-19-country-response (accessed: 17.11.2023).

Zaltman, G., Duncan, R., Holbeck, J. (1973). *Innovativeness and Organizations*. New York, NY: Wiley.

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