

Social capital: Evaluating its roles in competitiveness and ensuring human development

Halyna Mishchuk, Yuriy Bilan, Armenia Androniceanu, Vita Krol

Abstract

This contribution identifies the features of social capital (SC) development and its relationship with competitiveness based on a two-tier analysis: (1) the relationship of SC with key indicators of competitiveness and human development at the macroeconomic level; (2) the impact of social capital components on financial and non-financial indicators of enterprise competitiveness. The peculiarities of social capital development are revealed using the statistical data of 171 countries, in particular, the value of the social capital sub-index as a constituent of the global sustainability competitiveness index from 2014 to 2020. The differences in social capital development are determined via a cluster analysis performed by means of the software STATISTICA 10.0. As a result, it was uncovered that world countries are highly heterogeneous at the level of social capital development, and the differences, which narrowed slightly in 2017-2019, showed an increase again in 2020. The identified cluster countries, where SC development is the highest, are also among the leaders in terms of competitiveness and human development. Regarding the impact of social capital on competitiveness growth at an enterprise, we found out that it is influenced mainly by the development of relational and cognitive social capital. These findings were obtained as a result of our own survey conducted on a representative sample of enterprise owners and managerial staff in December 2020 – March 2021.

Keywords: *social capital, cluster analysis, index of social capital, competitiveness, global sustainability competitiveness index*

JEL Classification: D91, E71, L26, M14.

1 INTRODUCTION

Social capital (SC), despite the relative novelty of this concept in economic research, is gaining increasing recognition in the system of factors of economic development. In addition to understanding the importance of such an intangible asset at the enterprise level, social capital is increasingly one of the factors of prosperity (Legatum Institute Foundation, 2020a) and sustainable competitiveness (Solability, 2021), monitored internationally. Such assessments carried out by reputable expert organizations indicate that SC is becoming an integral and crucial prerequisite for sustainable economic growth and prosperity. In countries with economies in transition, including Ukraine, assessments of SC development are extremely important, as understanding the causes of SC underdevelopment can identify and address barriers to economic development through better use of the potential for trust, cooperation, cohesion and other components that are measured within the SC index by different approaches. Such assessments are important at the macroeconomic level, as they will allow more development and use of the country's competitive advantages by increasing investment attractiveness and positive changes in business support infrastructure, better use of human resources and entrepreneurial potential.

At the same time, SC is a factor that is primarily formed at the microeconomic level of relations – in the field of employment, interaction with authorities, and network relations of stakeholders of different levels. The SC of enterprises is therefore no less important an area of socio-economic research, because just this area primarily reveals the economic nature and consequences of the use of SC, and the levers of its management are the most accessible. Existing works in this direction increasingly have an economic context, focusing not so much on the study of changes in SC as its relationship to economic factors and outcomes. This is evident in recent works, in particular, those of Boutilier (2017), Chitsaz et al. (2019), Cismas et al. (2019), Deller et al. (2018), Marbuah et al. (2021), Theodoraki et al. (2018), etc.

Social capital is still one of the least studied theoretical concepts – both in terms of interpretation and factors. The insufficient theoretical justifications in the field of SC studies can be partially explained by some authors' positions. For instance, some researchers criticized the SC concept as being “theoretically underdetermined and fuzzy” (Bjørnskov & Sønderskov, 2013; Wu, 2021), which is a contradictory direction to the well-known and highly appreciated concepts of SC justified by leaders of this field of study like Bourdieu (1983), Fukuyama (1995), Nahapiet & Ghoshal (1998), etc. This leads to significant differences in the study of its impact on business performance and macroeconomic indicators. Different approaches are justified based on different research goals. But, the assessment of SC development and its components in relation to competitiveness remains an important issue, especially at the enterprise level, which is ultimately a factor in the competitiveness and socio-economic prosperity of countries.

With this in mind, the aim of our study is a two-tier analysis of the links between SC and competitiveness. This analysis requires new and original approaches. Our work proposes one of them: we propose to supplement the known methods of analysis with the use of international statistical information on the development of SC and competitiveness factors with estimates of SC development at the enterprise level. In this regard, we have developed a system of SC components suitable for the purpose of assessing the links with competitiveness in the perception of company owners and management.

2 THEORETICAL BACKGROUND

Since the works of Bourdieu (1983), Coleman (1988) and Fukuyama (1995), SC has steadily entered the economic circulation, drawing attention to previously unexplored characteristics of human capital and their manifestations in socio-economic interaction. The mechanism of the impact of SC on social (including economic and political) processes, is explained in the study of Putnam (2004), which identifies the links of trust, cooperation and interactions of the population and the government, with the results of such interactions in the forms of transparency of social relations and the increase of economic processes efficiency through the development of democracy and justice. These results are especially important in challenging times like the Covid-19 pandemic. In this regard, SC has proven to be a positive influence on innovative capability at the microeconomic level due to the possibility of expanding knowledge about customers, raw materials, and competitors, which is key to obtaining cheap and fast information (Putra et al., 2020) and achieving e-business proactiveness in responding to the pandemic (Al-Omouh et al., 2020).

Social capital is proven to be the latest driver of economic development of countries and regions because of the developed methods of its evaluation at the international level. At the same time, changes in the attitude to the concept of SC and the understanding of its role in social processes are clearly reflected in the development of relevant research. Thus, in earlier studies in this area, SC was seen as a valuable resource in itself, and dominant were component assessments,

formation prerequisites and links with other forms of capital (Bourdieu, 1983; Coleman, 1988); later came approaches to assess the relationship and impact of SC on the external and internal environments of its manifestation (Fukuyama, 1995), etc. To a large extent, the components and macroeconomic impact of SC are analysed through the prism of its components - trust, justice, relations in networks at different levels (Mishchuk et al., 2019), which can increase or decrease socio-economic efficiency of social relations through the formation or destruction of relations with the country, including through feelings of unmet needs (Piao et al., 2021; Tvaronavičienė et al., 2021), as well as the desire to innovate and realize their intellectual potential (Oliinyk et al., 2021; Setini et al., 2020). In addition to research, SC is nowadays part of recognized international methods of assessing complex economic phenomena and processes, such as the “prosperity” of countries (Legatum Institute Foundation, 2020a), sustainable competitiveness (Solability, 2021), prosperity in the development of SC (OECD, 2021), and achieving the goals of sustainable development on the basis of improving the use of SC (World Social Capital Monitor, 2019), in connection with which a special project, the Basel Institute of Commons and Economics as a United Nations Sustainable Development Goals Partnership, was launched.

Among studies with a clear socio-economic context (Legatum Institute Foundation, 2020a; Solability, 2021), it has become clear that SC is an integral factor in socio-economic development, not just its characteristic. Continuing this idea in our own research, we use one of the thematic indices, namely the sub-index of SC in the Global Sustainable Competitiveness Index (GSCI) provided by Solability, as it uses measurable, quantitative indicators derived from reliable sources, such as the World Bank, the IMF, and various UN agencies (Solability, 2021). The sub-index of SC covers the assessment of health, security, freedom, equality and life satisfaction within a country, which, to the greatest extent among other indices, allows linking the quality of social environment and relationships (measured by direct and indirect indicators) with an understanding of economic development on the basis of sustainability as the main priority of human development.

Social capital can have a significant impact on macroeconomic development, causing changes in investment, migration flows and other global processes. At the same time, SC is primarily manifested as capital at the enterprise level, so it is important to evaluate and manage it to achieve the overall strategic goals of the organization. In this regard, researchers consider SC as a factor in improving the performance of the organization through direct influence, including inclusion in the business strategies of organizations (Marjański & Sułkowski, 2021; Nguyen et al., 2020; Perez et al., 2020), or indirectly through enterprise resource planning (Akimova et al., 2020), quality of business environment assessment (Čepel, 2019; Tari et al., 2020), customer loyalty and purchase intentions (Khan et al., 2021), employee engagement (AlKahtani et al., 2021; Roto et al., 2018; Samoliuk et al., 2021; Smolarek & Sułkowski, 2020), financial inclusion of enterprises in business clusters (Onodugo et al., 2021), cooperation of enterprises for increased competitiveness (Kokthi et al., 2021; Matijová et al., 2019), and transparency in the business environment (Shkolnyk et al., 2020). Important scientific findings are obtained in the field of SC implementation development in corporate management. They are strongly connected with issues of corporate culture and corporate social responsibility development (Belas et al., 2021; Kaasa, 2019; Myšková & Hájek, 2019; Vo et al., 2020), particularly, due to their links with performance (Metzker & Zvarikova, 2021) etc. It is proved by Metzker & Streimikis (2020) that the importance of CSR development is essential for all types of enterprises, regardless of their size and the geographic scope of the business.

However, in the studies of SC as a factor of competitiveness at the microeconomic level, the most suitable are the methodological principles developed on the basis of partial factors of SC.

Among other methods, the approach to the deconstruction of SC into 3 basic components, namely its structural, cognitive and relational dimensions, proposed by Nahapiet & Ghoshal (1998), has the greatest recognition. This approach is widely tested in terms of studying the impact on the competitiveness of organizations, in particular, with the studies of the role of personal and professional relationship networks (Hernández-Carrión et al., 2019) and individual components of the internal and external SC of an organization or their combination (Akintimehin et al. 2019). At the same time, researchers have substantiated financial and non-financial performance indicators, the achievement and changes in the level of which may be due to the impact of organizational components of SC (Dai et al., 2015).

Combining such approaches to SC deconstruction with assessments of their impact on the performance of enterprises, we use these conceptual and methodological principles for our own empirical study of the SC impact on the competitiveness of enterprises.

3 RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The aim of our study is twofold: to identify the features of SC development in relation to key indicators of competitiveness and human development in the macroeconomic environment, as well as the prerequisites for forming such links through assessing the impact of SC components on financial and nonfinancial enterprise competitiveness indicators.

To find the links between SC and competitiveness, we define the objectives of the study in the form of two research questions (RQ):

RQ1: Is there a relationship between the level of the formed SC of countries and their indicators of competitiveness and human development?

RQ2: What SC components have a significant impact on the competitiveness of enterprises?

To respond to **RQ1**, we will cluster the world countries by SC indicators. This analytical approach is chosen because the results of clustering are important to identify the peculiarities of SC development in different country groups, which, in their turn, are essential to analyzing links between SC, competitiveness, and human development in certain clusters. For this purpose, we use the values of the GSCI sub-index for the period from 2014 to 2020 (Solability, 2021). The sub-index acquires values in the range from 0 to 100 points.

Clustering was performed using the STATISTICA 10.0 package. According to the method of k-means, the distribution of the analysed set of world countries into four clusters is approaching the optimal value. The values of intergroup variances exceed the values of intragroup variances of the features studied. The level of significance in all cases is much lower than 0.05 and indicates that the contribution of all features to the process of multidimensional clustering is significant. Such preliminary data allow using the four formed clusters of countries according to the level of SC development for further assessments and analytical conclusions.

We identified the following clusters of countries: IV - Countries with very high SC development; I - Countries with high SC development; II - Countries with average SC development; III - Countries with low SC development.

Clustering of the world countries is the first step in achieving the goals within **RQ1**. Further research is conducted using the method of comparative analysis, in connection with which we assess the affiliation of countries in the selected clusters to a certain group by level of the

following: Global Competitiveness Index - according to the WEF (2020); human development index - according to UNDP (2020); GDP per capita – according to UNDP (2020).

Clusters I and II were selected for further analysis, as they are those in which the positive patterns of SC formation and development are already relatively stable, and thus the conditions for determining the impact of SC on macroeconomic performance are the most stable and eliminate the impact of possible random behavioural responses, which is characteristic of unstable socio-economic systems.

In these two clusters of countries, we make a comparison with the indicators of competitiveness, assessed by the most common index in this area - the GCI of the World Economic Forum. In addition, we compare progress on overall competitiveness with achievements in the purely economic dimension of competitiveness, which best illustrates GDP per capita, and the impact of SC on human development as one of the most comprehensive indicators of real progress in socioeconomic terms.

To respond to **RQ2**, we conducted our own opinion poll of enterprises. The survey was conducted in December 2020 – March 2021 in a sample of owners and representatives of management staff of enterprises in the Rivne region, Ukraine. According to the State Statistics Service of Ukraine, the number of enterprises in the region, including natural entities-entrepreneurs was 41,741 units. That is, according to the Cochran formula (Cochran, 1977), the representativeness of the sample at confidence level 95% and confidence interval 5% is achieved if 381 respondents are interviewed. In our case, the sample was 392 respondents, i.e., the actual value of confidence interval is 4.93%. Therefore, the results obtained are representative and can be used to respond to **RQ2**.

For the study, we used the method of correlation analysis, namely the correlation matrix, which allows identifying the links between structural, cognitive and relational components of SC and the main indicators of enterprise competitiveness that are studied in the survey. Correlation analysis is the most appropriate method for this partial aim and dataset. It allows finding the links among investigated SC dimensions and competitiveness, being in line with the **RQ2**.

The main components of SC, which were analysed as factors of enterprise competitiveness, were identified on the basis of the recommendations set out in Nahapiet and Ghoshal (1998) and Akintimehin et al. (2019), specifying the composition of partial factors in accordance with the goals of our own research.

Thus, the components of SC that were assessed by the respondents are as follows:

- *part of structural capital*: x_1 – reputation of the company's products with consumers; x_2 – strategic partnership with suppliers; x_3 – quality of information flows in the cooperation of internal stakeholders; x_4 – quality of cooperation with the local community; x_5 – the importance of the employer brand;
- *part of relational capital*: x_6 – self-assessment of efforts in forming a positive image of the enterprise; x_7 – engaging personal contacts to achieve business goals; x_8 – satisfaction with relationships with management, familiarity with the strategic plans of the enterprise; x_9 – satisfaction with horizontal relationships; x_{10} – trust of employees in the management; x_{11} – management's trust in employees; x_{12} – taking into account the needs of employees in the processes of HRM of an enterprise;

- *part of cognitive capital*: x_{13} – satisfaction with the psychological climate at the enterprise; x_{14} – self-assessment of own efforts in maintaining a comfortable working relationship; x_{15} – level of compliance with internal business regulations and rules of conduct; x_{16} – availability of corporate values; x_{17} – level of development and perception of corporate values; x_{18} – development of corporate culture; x_{19} – self-assessment of own efforts to support and develop corporate culture.

Among the indicators of competitiveness, respondents rated satisfaction with the results of the enterprise performance in terms of components:

- *non-financial indicators*: y_1 – overall assessment of the company’s competitive position in the market (relative to the leader); y_2 – self-assessment of the impact of cooperation and interaction of staff on the economic success of the enterprise; y_3 – the level of customer orientation of the enterprise; y_4 – the effectiveness of responding to changes in market conditions;
- *financial indicators*: y_5 – assessment of satisfaction with the dynamics of the financial success of the enterprise (increase in assets, income, profits).

Interpretation of the values of the calculated Pearson correlation coefficients is carried out according to the principles set out in Hussin et al. (2014) and Babiarczyk et al. (2020, p. 88). According to them, the most significant relationships are those in which the correlation coefficient exceeds 0.6.

4 RESULTS

The cluster analysis conducted with the application of the k-means method using the STATISTICA 10.0 software allows concluding that the development of SC is quite unstable in the international dimension. As demonstrated in Figure 1, the average value of the index is gradually increasing: for the whole set of countries, there was an increase in the average index by more than 3 points, which is a positive trend and indicates an increasing role of this type of capital in public relations. However, the differences in its value, which decreased in 2017 - 2019, became quite significant in 2020, increasing the heterogeneity of countries in SC development. Such results are obvious from the sharp change in 2020 of the standard deviation of the SC index, which reached values within $\pm 7.38 - 7.67$ points from the average value in the previous three years.

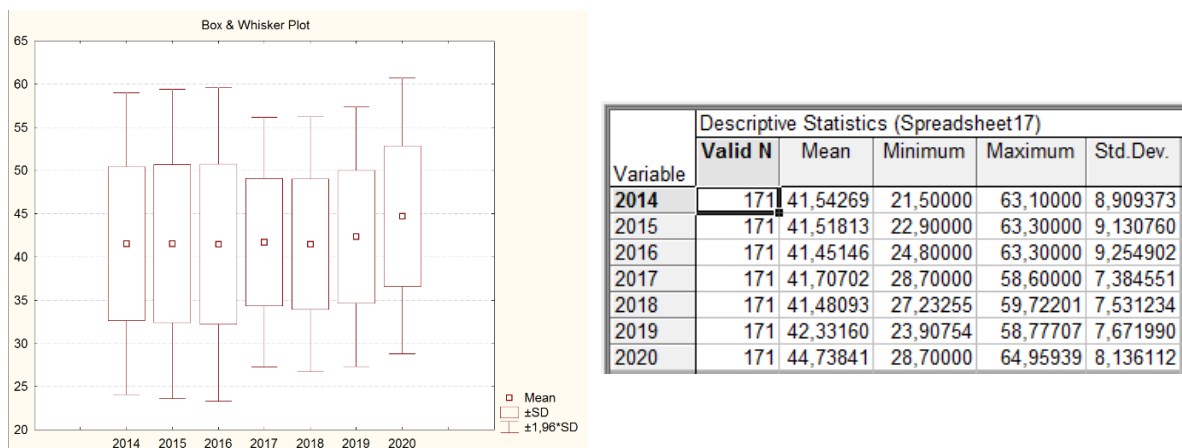


Fig. 1 – Basic statistical characteristics of the SC index. Source: own research based on Solability (2021)

The clustering of countries allows for the identification of four groups of countries – from countries with the highest values of SC (cluster IV) to countries with low SC (cluster III), which is shown in Figure 2.

At the same time during 2014-2020, the differentiation of the world countries by the level of SC development is as follows: 18.7% are the countries with the highest value of the SC index, 26.9% with a high value, 22.2% with an average value, and 32.2% with a low level of SC development.

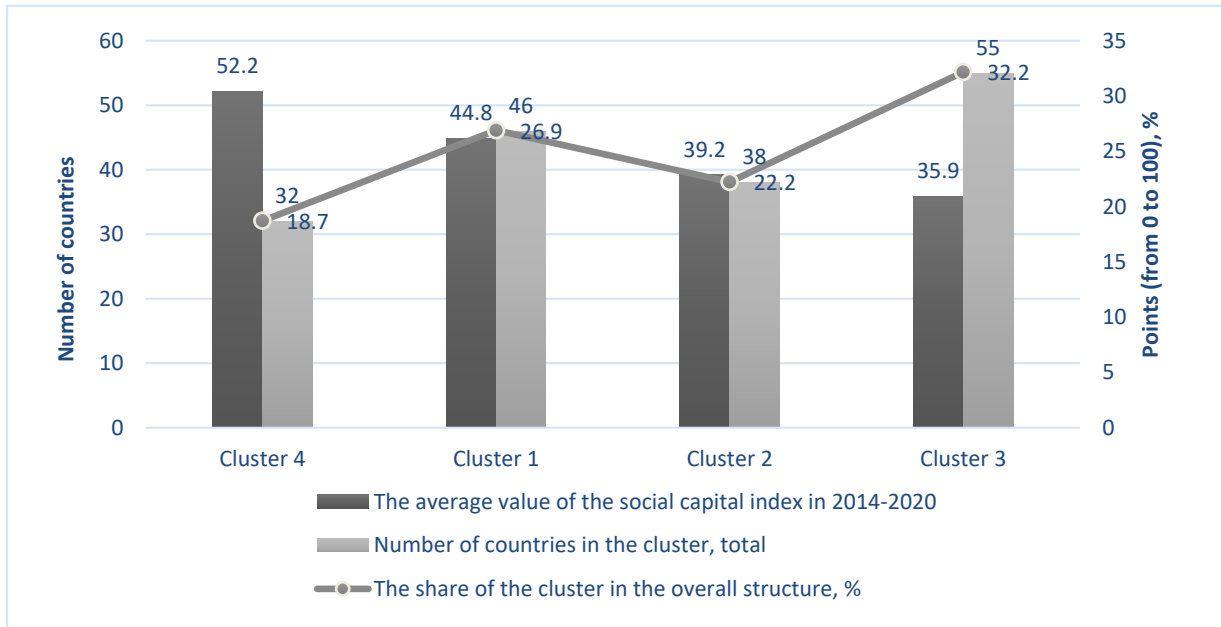


Fig. 2 – Clustering of countries according to SC sub-index, according to GSCI Source: own research based on Solability (2021)

The countries of the four clusters have differences not only in SC development, but as can be seen from the composition of the countries of each cluster (Table 1), these groups of countries are characterized by significant differences in socio-economic development.

Tab. 1 – Distribution of countries by level of SC development

Cluster 4	Cluster 1	Cluster 2	Cluster 3
Australia, Austria, Belarus, Belgium, Cyprus, Denmark, Finland, Germany, Iceland, Israel, Japan, Jordan, Kuwait, Liechtenstein, Lithuania, Luxembourg, Malaysia,	Albania, Algeria, Argentina, Armenia, Azerbaijan, Bhutan, Bosnia and Herzegovina, Brunei, Bulgaria, Canada, China, Costa Rica, Croatia, Czech Republic, Ecuador, Estonia, France, Greece, India, Indonesia, Ireland, Italy, Kazakhstan, Kyrgyzstan, Latvia,	Bangladesh, Benin, Bolivia, Brazil, Cameroon, Chile, Cote d'Ivoire, Cuba, Democratic Republic of Congo, Dominican Republic, Eritrea, Fiji, Gambia, Georgia, Ghana, Honduras, Hungary, Iraq,	Afghanistan, Angola, Bahamas, Bahrain, Belize, Botswana, Burkina Faso, Burma, Burundi, Cambodia, Central African Republic, Chad, Colombia, Comoros, Djibouti, Dominica, Egypt, El Salvador, Equatorial Guinea, Ethiopia, Gabon, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Iran, Kenya, Lesotho, Madagascar, Mexico, Morocco,

Mongolia, Montenegro, Netherlands, New Zealand, Norway, Oman, Poland, Portugal, Qatar, Serbia, Singapore, Slovakia, Slovenia, Sweden, Switzerland	Lebanon, Libya, Macedonia, Maldives, Malta, Moldova, Nepal, Romania, Saudi Arabia, Senegal, South Korea, Spain, Tajikistan, Timor-Leste, Tunisia, Ukraine, United Arab Emirates, United Kingdom, Uruguay, Uzbekistan, Vietnam	Jamaica, Laos, Liberia, Malawi, Mali, Mauritania, Mauritius, Pakistan, Russia, Seychelles, Solomon Islands, Sri Lanka, Swaziland, Syria, Tanzania, Thailand, Togo, Turkey, Uganda, USA	Mozambique, Namibia, Nicaragua, Niger, Nigeria, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Republic of Congo, Rwanda, Sierra Leone, South Africa, Sudan, Suriname, Trinidad and Tobago, Turkmenistan, Venezuela, Yemen, Zambia, Zimbabwe
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Source: own research based on Solability (2021)

The dynamics of the average values of SC in each cluster are shown in Figure 3.

Variable	Cluster Means (Spreadsheet17)			
	Cluster No. 1	Cluster No. 2	Cluster No. 3	Cluster No. 4
2014	46,30435	35,28947	34,87636	53,58125
2015	46,11304	34,84211	34,98545	54,06875
2016	46,11087	35,27105	34,24000	54,48750
2017	46,16087	36,04211	36,36182	51,21875
2018	38,67362	47,25284	36,00356	48,07655
2019	47,11037	36,99889	36,32741	52,11442
2020	43,11045	49,46959	38,56153	52,07683

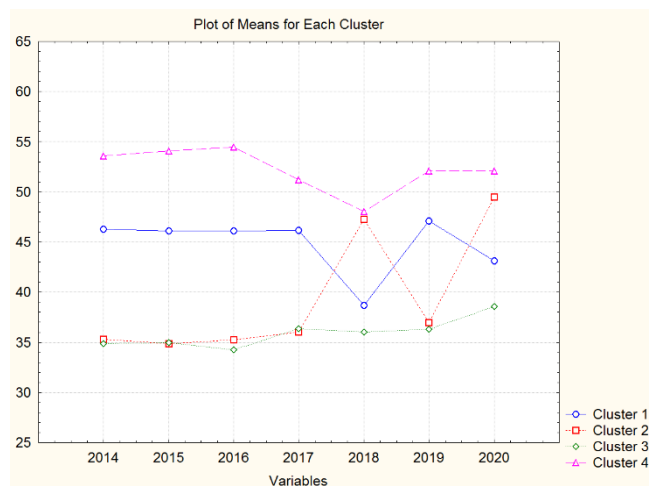


Fig. 3 – Development of SC in clusters of countries. Source: own research based on Solability (2021)

As we can see from the above data, the countries of cluster 4 have obvious differences from other countries: they have the highest level of SC development, and the declining dynamics of 2017-2018 gradually reached the positions close to initial ones in the analysed data series. There is some instability in SC development in the countries of clusters 1 and 2 in 2018-2020. However, if we use the average data for the analysed period (2014 - 2020), the higher average values of SC development are typical of cluster 1. The use of average data for a number of years is considered more appropriate, because the formation of SC belongs to social processes, the result of which is more manifested over time. Therefore, the existing instability and changes in the rating positions of countries in clusters 1-2, characteristic of individual years, cannot significantly affect the understanding of generalized patterns. In this regard, we will conduct further analysis, paying special attention to clusters 4 and 1 - countries where the development of SC is the most stable - and the countries themselves are characterized by the highest values of achieved SC on average during the analysed period. If we compare the distribution of countries according to the level of SC development with the competitiveness and human development indicators we selected (Table 2), the impact of SC is quite noticeable.

Tab. 2 – Characteristics of competitiveness and human development of countries depending on the level of SC development

Characteristics of the level of competitiveness and human development		Clusters of countries by SC development			
		Cluster 4 – of very high development (32 countries)	Cluster 1 – of high development (46 countries)	Cluster 2 – of average development (38 countries)	Cluster 3 – of low development (55 countries)
Competitiveness of countries	above average	29	26	4	5
	below average	3	20	28	50
Human development of countries	above average	32	36	14	23
	below average	0	10	24	32
GDP per capita	above average	28	20	6	4
	below average	4	26	32	51

Source: own research based on the following: (Solability, 2021; UNDP, 2020, WEF, 2020).

As can be seen from the above results, the links between the SC formed in society and the level of human development are the most obvious. As demonstrated, a well-developed SC is indeed a prerequisite for high human development.

The links between SC and competitiveness, as measured by the global WEF index, are also very strong: most successful countries by SC development are in the group of countries with above-average competitiveness.

At the same time, the links with the macroeconomic indicator, which is often perceived as the main sign of economic development and competitiveness, i.e., GDP per capita, were somewhat unexpected. As we can see, the previous patterns of connections were clearly evident only in cluster 4, which includes leaders in both economic and social components of competitiveness. In cluster 1, such patterns were not confirmed.

The main mechanism of SC formation and development is the relationship in the process of economic activity, in particular at the enterprise level. Therefore, we investigated the processes of the impact of SC on the competitiveness of enterprises in order to understand whether SC is really a condition and driver of economic success in Ukraine today. That is, in response to RQ2, we aim to investigate whether SC in Ukrainian society leads to better business results through the formation of relationships and new types of behaviour.

According to the results of our own research in the sample of owners and representatives of management staff, it was found that estimates of SC availability are quite critical, although they exceed the values typical of SC of the whole society, given above. Thus, according to respondents, the average level of SC is 60.3 points out of 100.

The impact of SC components on competitiveness indicators is as shown in Table 3.

Tab. 3 – Correlation coefficients of SC components and indicators of enterprise competitiveness (a significance level of 0.05).

SC components		Competitiveness indicators				
		y1	y2	y3	y4	y5
structural SC	x1	0.615	0.650	0.648	0.709	0.648
	x2	0.725	0.740	0.663	0.690	0.828
	x3	0.526	0.658	0.532	0.576	0.611
	x4	0.569	0.612	0.502	0.584	0.606
	x5	0.567	0.663	0.578	0.608	0.642
relational SC	x6	0.724	0.638	0.536	0.605	0.695
	x7	0.647	0.469	0.451	0.485	0.635
	x8	0.440	0.488	0.364	0.470	0.500
	x9	0.655	0.616	0.518	0.631	0.749
	x10	0.579	0.743	0.668	0.648	0.669
	x11	0.659	0.713	0.673	0.639	0.694
	x12	0.496	0.660	0.474	0.584	0.659
cognitive SC	x13	0.639	0.707	0.606	0.648	0.738
	x14	0.676	0.662	0.455	0.513	0.728
	x15	0.658	0.570	0.570	0.653	0.669
	x16	0.658	0.513	0.404	0.627	0.659
	x17	0.653	0.551	0.483	0.629	0.728
	x18	0.651	0.573	0.460	0.612	0.771
	x19	0.660	0.593	0.411	0.594	0.752

Symbols: bold, italics - significant links; the most important connections are highlighted in grey

Source: own research

Only the highest values of the correlation coefficient (with a value above 0.7) are marked in grey in the table, although there are many more that can be considered significant - at a level higher than 0.6 according to the scale given in Hussin et al. (2014) and Babiarcz et al. (2020, p. 88). At the same time, as we see, the strongest links (with a correlation coefficient of more than 0.7) are observed for all components of SC and the result in the form of satisfaction with the financial success of the enterprise, which means not only their acceptable level but also strategic plans. (This result is obvious from the fact that the answers were received from the owners and top managers of enterprises). As for this dependent feature, virtually all factors except for x8 (satisfaction with management relationships, awareness of the company's strategic plans) were significant enough.

Thus, responding to the research questions, we obtain obvious confirmation of the role of SC in competitiveness growth for both macro- and microeconomic levels. Particularly, in response to RQ1, we found that SC belongs to determinants of competitiveness increase and human development in countries with leading economic positions. Their experience can be assessed as a sample of organization of societal attitudes towards SC development for less developed countries. Checking the links between SC constituents and competitiveness indicators at the enterprise level (within the response to RQ2) leads us to the conclusion about the positive

influence of SC on financial and non-financial results of entrepreneurial activity in all components of SC, however, with different correlations. Thereby, the obtained responses to the research questions allow us to consider them as useful for improving the assessment of SC development in light of its links with ensuring competitiveness.

5 DISCUSSIONS

According to the results of our study, the SC of society has obvious links with ensuring the competitiveness and human development of countries. With regard to human development, it is possible to discuss which of the institutional factors of society's progress was primary – human development stimulates the development of human capital or vice versa. To a large extent, it is quite difficult to find a starting point. It is more logical that human development processes are accompanied by the development of SC and are mutually conditioned processes with stable bilateral ties, as each of them is inseparable from human capital and its quality, which is created in the process of social interaction.

In terms of competitiveness, these connections were somewhat unexpected. Thus, the main economic indicator of competitiveness (GDP per capita) has obvious links with a high level of SC only in the group of leading countries in terms of SC. Instead, the links with the overall competitiveness indicator are quite obvious. Such results may be an indication that SC at the macroeconomic level does not lead to instantaneous changes in economic performance, but has a significant impact on the institutional and infrastructural capacity to create them. Therefore, the support and development of SC in the long run is an important factor both in the overall development of the country's competitiveness potential, and over time to achieve high economic results and increase on this basis the material well-being of the population.

In Ukraine, the processes of SC formation and development occur largely spontaneously, in the process of difficult social transformations. At the same time, the SC level of the society is already quite high, and in the dynamics of the 2019-2021 it shows a trend of steady growth (Solability (2021)). These conclusions are confirmed by the results of another study, which, although carried out by a different method, shows results quite similar to those obtained by Solability experts (used as the information base of our study). For comparison, in assessing the prosperity of the world, experts from the Legatum Institute Foundation found that the value of SC subindex changed from 35.4 points in 2010 to 43.9 points in 2020, which, although low in the world rankings, has made significant progress over the years (change in the position in the ranking by +13) (Legatum Institute Foundation, 2020b).

Rapid but still insufficient development of SC in Ukraine was manifested at all levels up to 2020, but is mostly formed in the processes of socio-economic cooperation, in particular in the processes of employment, doing business, and relations of stakeholders of business processes. In this regard, we conducted our own research, based on the typology of SC components developed by Nahapiet and Ghoshal (1998). The partial characteristics within each component of SC are determined in accordance with the factors of the micro- and meso-environment of the business, as well as the channels of interrelationships of stakeholders of business processes. Our results show that although the SC of enterprises cannot be considered developed at a very high level (about 60% of respondents' self-assessment), it already has a significant impact on the formation of financial and non-financial indicators of competitiveness. Almost all (except for one) of the assessed factors affect the implementation of financial plans of enterprises for the growth of assets, income and profitability; almost all factors we have evaluated have a significant impact on the overall competitiveness of the enterprise, except for some structural and relational factors. The most influential factors are such *relational* components as efforts to

form a positive image of the enterprise; satisfaction with horizontal relations; mutual trust – employees in management and vice versa. Among the *structural* factors of competitiveness growth, the most influential are efforts to maintain the reputation of consumers, as well as the development of strategic partnerships with suppliers; among the *cognitive* – the psychological climate, their own efforts to maintain comfort in working relationships, the level of development and perception of corporate values; corporate culture and own efforts to support and develop it.

The main features of SC, its impact on competitiveness and other financial and non-financial successes of enterprises coincide with the results of other studies: efforts to develop social capital have not only social but also economic significance, as they positively affect competitiveness connections with consumers, employees and local communities, which forms the future prospects of business success in the region.

Thus, our results are consistent with those obtained by Nguyen et al. (2020) and AlKahtani et al. (2021). Similar to their findings, we can prove the essential impact of SC constituents on competitiveness. However, contrary to the approach of Akintimehin et al. (2019), we found that it is more important to divide the SC dimensions by the type of SC (relational, cognitive, structural), not by the constituents of business surrounding (internal and external respectively). As a result, this allowed us to form a better understanding of roots of the problems connected with SC development and its influence on enterprise activity. For instance, if there is insufficient influence of relational components, it can be perceived also as a manifestation of the problem with some cognitive components, like corporate culture and compliance with business rules of conduct that are analysed within factors x_{15} and x_{18} in our research. In this regard, our approach allows us to combine factors, defined in previous studies, aimed at the investigation of partial features of SC in external surroundings, like relations with customers (Khan et al., 2021) and competitors or partners (Kokthi et al., 2021; Matijová et al., 2019), as well as internal surroundings, with special attention to management systems ensuring the performance of firms, which is typical for the studies of Hernández-Carrión et al. (2019), Kaasa (2019), Vo et al. (2020), and Metzker and Zvarikova (2021). Besides, in our research, we believe that it is important to measure the relationship of SC with a performance indicator, based on the approach of Akintimehin et al. (2019) and Dai et al. (2015). However, we also fulfilled our research using subjective estimations of owners and managerial staff regarding the competitiveness indicators. Subjective perception of business successes is no less important for improving the business strategies on competitiveness growth compared with objective indicators.

6 CONCLUSION

Based on the features of SC development analysed above, SC is today an important factor and a sign of high competitiveness and human development. The institutional environment of social interaction at the macroeconomic level is determined by the influence of the environment of SC formation at the lower hierarchical level (households, enterprises, government and civil society), but also has the opposite effect by providing conditions for living and doing business acceptable from the point of view of societal standards of conduct, trust and cooperation within certain norms and rules.

Investigating the links of SC with competitiveness on a macroeconomic level, we confirm the essential heterogeneity of countries as well as the increasing differences in tendencies of SC development starting from 2020. In groups of countries, where SC development is the highest, there are obvious links of SC with global competitiveness indicators and human development.

This result leads us to a conclusion about the important role of SC development in socioeconomic well-being and vice versa.

Assessing the impact of SC components on financial and non-financial indicators of enterprise competitiveness provides grounds for conclusions about significant relationships, primarily due to the impact of components of the relational and cognitive SC of enterprises. The system of factors analysed within the partial components of SC could be changed. It depends on the aims of researchers, dataset and availability of information concerning certain indicators. In our study, we also dealt with some limitations in this regard. They were connected with unavailability of objective financial and non-financial indicators of business activity – many enterprises considered them as a trade secret, which, in turn, became an obstacle at the initial stage of the research. So, we changed the questionnaire considering the business owners' requirements. This allowed us to collect the valuable dataset. However, in our further research in the field, it would be useful to compare the influence of SC on competitiveness indicators confirmed in firms' financial reports. We will try to accomplish this in the future, using a sample of enterprises with more transparent financial information.

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Contact information

Prof. Halyna Mishchuk, ScD.

National University of Water and Environmental Engineering

Department of Labour Resources and Entrepreneurship

11 Soborna st., 33028, Rivne, Ukraine

Pan-European University, European Centre for Business Research

Prague, Czech Republic

Pan-European University, Faculty of Economics and Entrepreneurship

Tomášikova 20, Bratislava, Slovakia

E-mail: h.y.mischuk@nuwm.edu.ua; halyna.mischuk@paneurouni.com

ORCID: 0000-0003-4520-3189

Prof. Dr. hab. Yuriy Bilan, ScD.

Faculty of Social and Economic Relations,
Alexander Dubcek University of Trencin,
Studentska 1639/2, 911-01 Trencin, Slovakia
Sumy State University,
2 Rymaskogo-Korsakova st., 40007, Sumy, Ukraine
E-mail: y.bilan@csr-pub.eu
ORCID: 0000-0003-0268-009X

Prof. Armenia Androniceanu, Ph.D.

Bucharest University of Economic Studies
Faculty of Administration and Public Management
Department of Administration and Public Management
Romania
E-mail: armenia.androniceanu@man.ase.ro
ORCID: 0000-0001-7307-5597

Assistant Lecturer Vita Krol

National University of Water and Environmental Engineering
Department of Labour Resources and Entrepreneurship
11 Soborna st., 33028, Rivne, Ukraine
E-mail: v.v.krol@nuwm.edu.ua
ORCID: 0000-0002-7835-6248