

## THE ROLE OF SOCIAL RESOURCES IN FORMATION OF WEALTH IN THE DECENTRALIZATION AND INDUSTRY 4.0 PROCESSES

Problems of economic development of Ukraine can't be explained purely macro-economic and geo-economic position and based on the volumes of available human and natural resources. One of the factors effective functioning of the economic system is the social resources that represent a human resources, social relations and social institutions.

The economic crisis of the early 90s was largely due to inability to quickly adapt social resources to new market conditions. During the 1991-1997 GDP decreased twice, while production capacities have not suffered significantly moral and physical deterioration and the quality of human potential remained on good level. So we can assume that the key point was purely organizational and communication problem that is still relevant.

Moreover, much of the domestic economy is in the shade. According to calculations of the Ministry of Economic Development and Trade of Ukraine in the first half of 2016 the level of shadow economy amounted to 38% of official GDP [1]. Accordingly, much of the communications is implemented beyond the legal rules and regulations that are subject to public control.

The quality and quantity of social resources in Ukraine don't allow capitalization of other resources according to modern opportunities. They can't minimize transaction costs in the interaction between the elements of human, industrial, financial and natural capital. As a result, there are difficulties with multiplying of economic wealth at national and regional levels.

Of particular importance is this issue in the context of decentralization when there is redistribution of administrative and fiscal powers. Appear the problem of the creating new social resources and conditions for their capitalization at the national and regional level, which determines the relevance of this study.

### Social resources and social capital as a factor of economic wealth

Economic well-being at the national level is generally measured using Gross Domestic Product (GDP). But this indicator is experiencing increasing criticism from leading scientists and economists of our time, because it doesn't reflect the level of well-being households and quality of life [2]. This led to renewed interest in classical economic category "wealth», which was used in the days of classical economic theory in the works of Adam Smith. For example, "a low-income household with above-average wealth is not necessarily worse-off than a medium-income household with no wealth" [2, p.14] and "A low-income household with

above-average wealth is better off than a low-income household without wealth" [2, p.29].

Now the amount of wealth is constantly calculated by the Credit Suisse Research Institute. According to recent calculations in 2016 Ukraine is among the poorest countries with a total national wealth \$ 44 billion or \$ 1,254 per 1 adult. This is 20 times less than in neighboring Poland. Moreover, it is even less than the GDP per 1 adult, which is \$ 6796 [3, p.21-22].

Category wealth consisting of human, financial, physical, intangible and natural capitals have been investigating to find ways increase it. In this context, arise the problem to include components wealth of social capital and social capital as a source of its formation. So the number of studies of social resources [4] and social capital [5; 6; 7] are increasing during last decades.

One of the first researchers who began actively use the term "social capital" was Bourdieu. He understood this concept as social relationships, which can be a resource for benefits. [8] A similar view is shared by other scientists emphasize that "the structural basis objectified social capital" [9, p.3] ... "form the networks of social relations that are used to broadcast information, resource savings, mutual learning the rules of conduct, forming reputation. Based on social networks ... formed institutional basis for social capital" [10, p.27].

It should be emphasized that the object of study of institutional economics are social resources. Summary of theoretical and practical achievements in this area makes the conclusion that in Ukraine there is institutional inertia, which manifests itself in low quality of social resources and their weak using.

Ukrainian scientists are mixing definition of social and human capital. They understand "social capital" as "value of social and individual opportunities (demographic, educational, professional, social, infrastructure, employment, etc.) involved in the economic activities of the people" [11, p.74]. But individuals are carrier of human capital, while just society is the bearer of social capital and social resources. Therefore, a more monosemantic definition is contained in the studies of experts Institute of Industrial Economics of NAS of Ukraine, according to which "social capital is social-institutional resources" [12, p.31]. Deepening this thesis allow one to distinguish between "social resources" and "social capital" and avoid the intersection with the concept of "human capital".

*Social resources* – a set of relationships between subjects and objects of social-economic system. These links are distributed to specific existing between certain objects and subjects and general which are personified

in institutions, rules, norms, traditions and more. Objects and subjects are defined as elements of human, physical, intangible, natural and financial capital.

*Social capital* – social resources used in the production of goods and services. It takes direct part in the creation of added products corresponding added value and accumulation of economic wealth. Social capital is limited to a space (including the territory of the state, region, city, etc.).

*Number* of social resources is the number of relationships between individuals and their institutionalized associations that exist in the form of businesses, governments, institutions, organizations and more.

The cost of social resources depends on the qualitative and quantitative characteristics of the connections that specify the "rules" of their formation and technological conditions and possibilities for implementing communications. In this context it is critical to take into account in strategic planning the global development trends that affect the structure, quality, quantity and value of social resources. Now one of these trends is the formation of a new technology platform within the logic of Industry 4.0.

So the *purpose* of the article is to show the influence of modern trend on the formation and capitalization of social resources.

#### **Social capital in the context of the Industry 4.0**

Changing the paradigm of production is among the key issues on the agenda of industrialized countries under the title industry 4.0 or the Fourth industrial revolution [13]. If industry 4.0 successfully implement process of formation and use of social resources will change.

Main features of Industry 4.0, which will affect the formation of social resources and their capitalization:

1. Decentralization of production and also much more flexible management of its scale to reduce costs.
2. The total things have artificial intelligence. Converting every thing in consumer and source of information. Active participation of "smart" things in own design, build and repair.
3. The rapid reduction of human intervention in the interactions between things.
4. Development of alternative networks similar Internet, and their integration into the infrastructure augmented reality [14].

According to architecture Industries 4.0 robotic machines will be able to mass communicate with each other on the Internet Protocol, creating the so-called "Internet of Things". This will lead to further exclusion of the human from chain of goods and services as a mediator (link) between the elements of financial, physical, intangible and natural capital. So we will see changing the structure of social capital.

Decentralized production will expand economic conditions for deepening administrative and political decentralization, which will be a prerequisite for the empowerment of the accumulation of social capital at the regional level.

The development of alternative networks will create new opportunities to form social links or other words will provide multiplication of social resources and opportunities for their capitalization at all levels from the individual to the global.

Accordingly, there is a transformation of the current state when the human role in the functioning of machines rather significant despite the active automation over the last half century to a model where human involvement in communication with things minimized. And tools forming social relationships realized through physical and virtual social networks (fig. 1).

The need for communications of human capital elements with physical capital (artificially created), natural and financial capital to create new products and services will decrease. The role of the coordinator of the interaction between the capital will increasingly move to the side of intangible capital.

"Smart" things will become buyers and communication between the elements of financial and industrial capital could take place without human intervention. Everything will be able to promote themselves through communication with other smartphones and communicators.

Separately, it should be noted that the social capital also includes relationships between elements of human capital and other capital items. Elements of human capital consume information from other sorts of capitals during this interaction. Elements of human capital are individuals and any group of individuals, including within the combined organization.

The less will be links between human capital and other types of capital, the more will be direct communication between the elements of human capital. That will be changing the architecture of social resources and provide their augmentation. Added value will move into the sphere of creative collaboration.

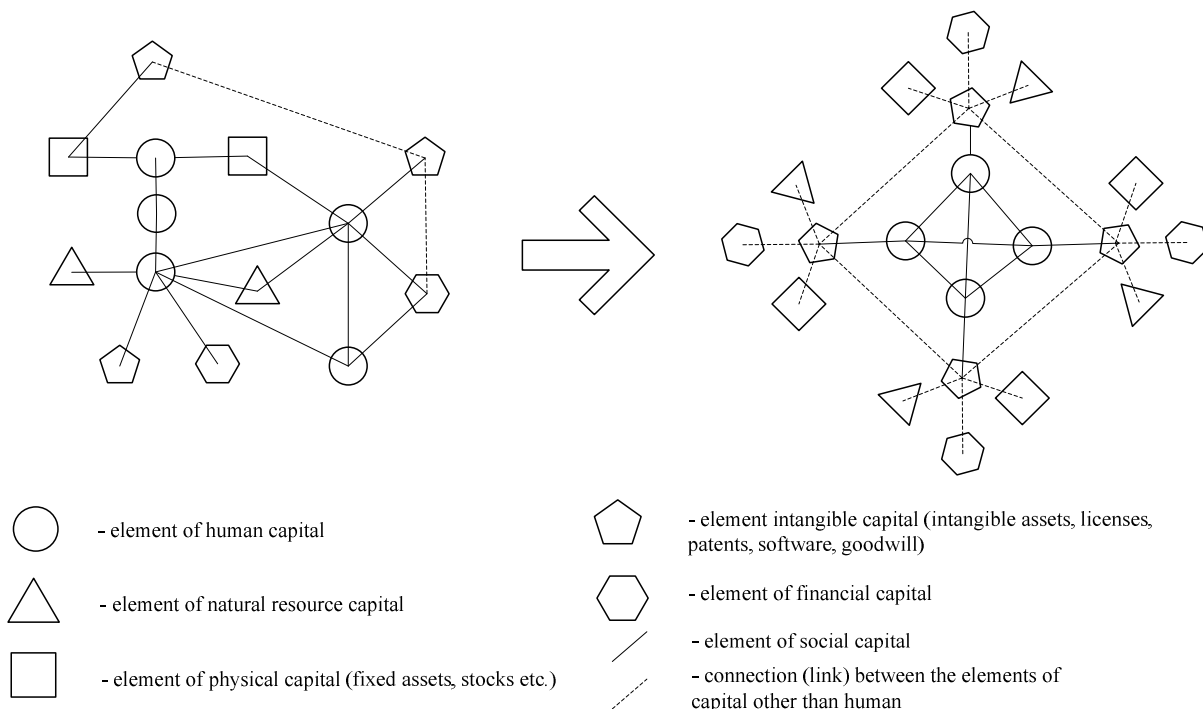
Full implementation of the Industry 4.0 is expected no earlier than in 2025-2030 years in developed countries, but all technologies already exist, in fact, we have problem how their effective use. According to research Boston Consulting Group (BCG), major technological shift that began in the industry today, will complete in 2025, radically changing the appearance of companies, products, partnerships [15, p.35]. It is therefore necessary for developing countries have at least capacity to adapt and use results of Industry 4.0 in the near future. According to the World Bank now in Ukraine can be computerized approximately 40% of jobs [16, p.23].

Based on these trends can be determined that the intended objective to create as many as possible social networks are (1) elimination of existing barriers and (2) creating the conditions for establishing new social links. For this to: (1) ensure maximum freedom of movement and choice for individuals in order to create new social relationships and (2) ensure the conditions for cooperation between individuals, their creative collaboration.

You should also note that take place addition virtual and physical links. From the one hand the primary

real (physical) links converted to virtual, where it is supported through social networks. On the other hand, the initial virtual connections become the real links. Thus,

we can see the problem of simultaneous support and development the physical and the virtual infrastructure for communications.



**Fig. 1. Conceptual diagram transformation of social resources in context of implementation the Industry 4.0**

**The impact of decentralization on the formation of social capital**

Decentralized governance in Ukraine is among of priority reforms. This reform will be having impact on the formation and capitalization of social resources. Scientists are already studying this [17; 18].

Policy of decentralization agrees with the theoretical propositions classical liberalism. M. Friedman notes that “broad principle is that government power must be dispersed”. It is proved by principle of freedom of choice: “if I do not like what my local community does, be it in sewage disposal, or zoning, or schools, I can move to another local community, and though few may take this step, the mere possibility acts as a check. If I do not like what my state does, I can move to another. If I do not like what Washington imposes, I have few alternatives in this world of jealous nations” [19, p.11]. Thus the logic of decentralization is responsible maximize opportunities for movement elements of human capital (individuals) to create new and more effective relations with the authorities and other types of capital or other words multiplying of social resources.

In Ukraine, there are significant restrictions on the free movement of citizens caused by administrative and physical factors.

For example, road infrastructure, which according to the Minister of Infrastructure of Ukraine V. Omelian

the "destroyed on 90%" [20] not conducive to the development and maintenance of social links. This position supports by academician E. Libanova, who notes that "off-road causes to death of villages, small monofunctional towns. And so is everywhere. Man goes to where there is work, school. If there are no roads hospitals will be closed. The same for schools. Not normal when children need to spend 5-6 hours to get to school. So other option than building roads I see. If there are roads, they will not die. They will be fine" [21]. In these circumstances, the State Regional Development Fund in 2015 for objects of a road infrastructure has been allocated only 327.5 million UAH [22, p.7]. That is 11.3% of the total fund. So in the terms of a potential increase in the State Regional Development Fund in the State Budget of Ukraine for 2017 to 3.5 bln. UAH<sup>1</sup>, it's necessary to provide for a progressive increase in expenditures for road transport infrastructure.

However, even with these problems, the use of modern networking capabilities to provide transport services in the form of decentralization transportation (for instance «Bla Bla Car»<sup>2</sup>), creates new opportunities for travel within the country and the formation of social capital.

Certain administrative restrictions, that do not meet the requirements of time, are arising from the Law of Ukraine "On freedom of movement and choice of residence in Ukraine" [23]. Despite the fact that this Law

<sup>1</sup> Whereas, that from 3.5 bln. UAH. 2.5 accounted for by a special fund, actual financing may be less than originally established.

<sup>2</sup> <https://www.blablacar.com.ua/>.

Ukraine guaranteed "freedom of movement and choice of residence", both assigned to compulsory registration procedure, which is analogous to "residence" of Soviet times, and in fact the modern descendant of serfdom. So according to this law (Art. 6) "official correspondence uses only the registered residence place of the person". Thus we can see connection with the place, not the person. At the same time, the vast majority of residents of Ukraine already have a mobile device, which allow identify their location and provide communications.<sup>1</sup>

In the process of implementation new form of plastic cards (ID) problem entering the relevant information about registration for contactless electronic medium in rural areas where there may be no subdivisions of the State Migration Service, or its representatives with the necessary software.

One more question is connection to the place of registration of the implementation of political rights (participation in elections), and receipt of the state educational and health services.

Thus, we can conclude that in the context of decentralization advisable to reduce administrative limiting to move people will have a positive effect on the formation of social capital.

#### **The role of social capital in the State Strategy for Regional Development until 2020 and the Strategy for Sustainable Development "Ukraine - 2020"**

Current trends changing production and transformation of the role of social resources not reflected in the basic strategies of the country: the Strategy for Sustainable Development "Ukraine – 2020" (hereinafter – SSDU 2020 [24], National Strategy for Regional Development until 2020 (hereinafter - NSRD 2020) [25]. Social resources and social capital, industry 4.0 (or fourth industrial revolution) is not even mentioned.

Strategic implementation indicators SSRU 2020 only include a reference that "the proportion according to World Bank amount to 25 subscribers per 100 people." Determining the vector to increase high-speed Internet users are certainly useful, but not sufficient. Actually they are making emphasis on consumption, not production. Aim of decentralization in SSDU 2020 "departure from the centralized model of governance in the country, ensuring the capacity of local government, the principle of subsidiarity, universality and financial sustainability of local government". NSRD 2020 contains thesis about decentralization of authority by their transfer to the local level with simultaneous transfer of appropriate financial resources

Social resources move to other countries because of the absence of sufficient opportunities be capitalized in Ukraine. So it's necessary create regulatory standards perspective on for the actual and administrative freedom of movement of people and empower them for communication in the new technological realities.

At the same time the strategy papers don't have common indicator of economic development for the consolidation of all targets in the economic sphere. The role of the index can perform category wealth and be an important complement to the GDP / GRP, which is now widely used.

#### **Conclusions**

1. Given the trends of transition to Industry 4.0, it can be argued that the role of capitalized social resources will increasingly grow in the create of wealth at the level of the state and the regional level.

2. For the development and enhancement of social relations under decentralization need to maximize freedom of movement of people through the development of transport infrastructure and easing administrative barriers to movement.

3. Ability capitalization of social capital depends on communication technologies. At the national level should be a priority of the requirements of the formation of networks and standards. At the regional - ensuring the implementation of specific projects which including ensuring adherence to established networks at national level. Decentralization should be combined with a concentration of social resources at regional level.

4. Improve communication will be possible through the implementation of modern technologies. The less a person (individual) involved in the communication between "things", the better the socio-economic system.

5. Existing strategic documents do not define the needs and the effective use of social resources and the need for targeted capitalization. Also, these strategies do not take into account the gradual change of logic output.

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<sup>1</sup> On October 1, 2016 in Ukraine there were 57,46 mln. mobile subscribers according to State Statistics Committee of Ukraine.



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#### **Вишневський О.С. Роль соціальних ресурсів в формуванні багатства в процесах децентралізації та Індустрії 4.0**

У роботі проаналізовано роль соціальних ресурсів у формуванні багатства держави та регіонів, а також доведено необхідність зняття фізичних та адміністративних бар'єрів для капіталізації соціальних ресурсів з урахуванням процесів децентралізації та індустрії 4.0.

*Ключові слова:* багатство, індустрія 4.0, четверта промислова революція, децентралізація, Україна.

#### **Вишневский А.С. Роль социальных ресурсов в формировании богатства в процессах децентрализации и Индустрии 4.0**

В работе проанализирована роль социальных ресурсов в формировании богатства государства и регионов, а также доказана необходимость устранения физических и административных барьеров для капитализации социальных ресурсов с учетом процессов децентрализации и индустрии 4.0.

*Ключевые слова:* богатство, индустрия 4.0, четвертая промышленная революция, децентрализация, Украина.

#### **Vishnevsky O. The role of social resources in formation of wealth in the decentralization and industry 4.0 processes**

The paper analyzes the role of social resources in the formation wealth of the state and regions. The need to remove the physical and administrative barriers to the capitalization of social resources taking into account the decentralization process and the industry 4.0.

*Keywords:* wealth, industry 4.0, the fourth industrial revolution, decentralization, Ukraine.

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