

Market Values in the Structure of Students' Human Capital: Network Diagnostics and Results of Empirical Online-Research (on the Example of the Research of Students of Belgorod State National Research University)

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Abstract—On the basis of the carried out theoretical analysis and the conducted empirical research, conclusions are drawn about the relationship of the human capital of students with market values. An algorithm for the formation of a methodology for diagnostics and construction of value networks, reflecting the characteristics of market values of students and that part of young people who do not study at universities, is shown. A number of relevant conclusions are made about the mutual influence of obtaining scientific knowledge as the basis of students' human capital and the system of market values, the ratio of market values to business values, values of collectivism and human values. In modern conditions, market values and values of collectivism are largely opposed, sometimes even conflicting. In this respect, it is important to study the experience of Western European and Chinese universities, where such oppositions are less pronounced. In general, the world of student values reflects a complex and contradictory social situation in the formation of a market society. The relevance of the use of diagnostic techniques based on digital technologies for studying the values of students in the management of the learning process is emphasized.

Keywords—values, human capital, value networks, universities, students.

I. INTRODUCTION

The relevance of network research of market values in the structure of human capital of students is due to the importance of studying and analyzing changes in economic consciousness, which does not occur automatically with the

beginning of market reforms. As the historical practice of the formation of the market in post-socialist countries shows, the formation of market values is an urgent problem for most of them.

Networked methods are becoming an important tool for digital technologies in socio-economic research of values, and in the context of crises, sanctions and pandemic, such technologies acquire special relevance. The aim of the study is to identify and diagnose the social dynamics of market values in the structure of the human capital of students and its characteristics in comparison with their peers who do not study at universities. Thus, according to the intentions of the study, it is supposed to reveal the influence of higher education as the most important component of human capital on the formation of market values of students and the relationship of these phenomena. Another part of the goal is to discuss the capabilities of network diagnostics, its procedures and technologies. The scientific part of the research problem lies in the need to overcome the contradiction between the meaningful characteristics of the human capital of the individual, which is formed and formed from the entire set of external and internal conditions and factors in which the individual is in reality socialized, and methodological approaches, as well as methodological procedures, which are mainly addressed only on the fixation and analysis of circumstances and indicators external to the inner world of a person and do not affect the basic component of the personality - its values.

II. RESEARCH METHODS / METHODOLOGY

The formation of the methodology for diagnosing of social dynamics of market values in the structure of the human capital of students was lined up in a logical sequence that determined a number of successive elements.

A review of the literature suggests that the most well-established methodological base on the basis of which the market values of students and their social dynamics during the period of study at the university can be studied involves a systematic presentation of these values in integration with other elements of human capital. First of all, this is important from the point of view of the integrity, hierarchy and emergence of human capital as a phenomenon [1]. It should be emphasized that modern domestic and foreign researchers reveal human capital as a phenomenon that is necessarily dependent on a variety of personal properties and characteristics of a person, most of all on his values, orientations, motivation, knowledge, skills, abilities and other important elements of the personal structure [2]. In this understanding, human capital can be considered not only as a special form of private property, but also as a special way of including a person in market relations and the market economy [3].

The actual methodological problem of designing methods for diagnosing human capital in the student environment is the analysis of the relationship between knowledge as a basic element of human capital and values that direct, orient and form the vector of use and application of the knowledge gained, or, as philosophers say, the study of the vector of knowledge bound by an axiological hoop [4]. In modern sociology, knowledge and values are either recognized as coexisting next to each other (positivism), or as phenomena creeping into each other (post-non-classical sociology) [5]. Therefore, it is important to identify how, how values and knowledge are connected, which form one or another direction of the manifestations of human capital. According to Yu.D. Krasovsky, values are moral criteria "living" in a person's consciousness, an "ideological credo" of a person, which become a guide to rational action in endless acts of human interaction with people around him and the practice of activity [6]. Further, a rational choice forms a volitional act - an action. This conclusion was made by T.V. Mikhailov, who showed that values become a regulator of behavior at the volitional level, prompting a person to realize his human capital, constructing and building strategies for action.

Among the methodological positions that are important for conducting empirical research, the central ideas have become the positions of understanding sociology, where values are considered as the attitudes of the individual [7]. In this case, personality attitudes are considered as a set of a wide variety of conscious and unconscious reactions, states and personality predisposition to one or another activity, based on previous experience and regulating the strategy and tactics of personality behavior, the choice of meaningful, important - valuable, that determines the alternative choice, forms the vector of relations and actions. In this case, we rely on the point of view of V.A. Yadov (Yadov V.A., 1975), according to which personality attitudes to the greatest extent express the value orientations of the personality and its values. It is important to emphasize here that from the standpoint of an understanding sociology, any fact that has a certain meaning (importance, significance) for a person or a group and that has

received confirmation, fixation in reality and empirical experience can be considered value [8].

The team of authors proceeds from the hypothetical position that market values in the structure of human capital of modern youth who do not undergo training at universities and students receiving higher education will differ. First of all, this will be expressed in the fact that the market values of students will turn out to be more relevant and significant in the value system than it will be shown among young people who do not study at the university. Market values in value system of students will be linked by stronger ties with other values than will be recorded among young people who do not study at the university. Taken together, consideration of the hypotheses shown will indicate that the market values of students turn out to be more stable and more connected than the market values of young people who do not study at the university. In turn, this fact will indicate that university education as a whole reflects the interests of the market social environment, the market economy.

Further, the empirical research methodology was aimed at identifying the market values of students as internal personal attitudes towards the significant characteristics of oneself and the people around them, to which students are oriented. In a market society, market values, values that are formed by the entire set of socio-economic factors, become stimulators of human capital. First of all, we note that market values are the central mechanism in the acquisition of wealth and self-enrichment of a person, are the grounds for the realization of all other inclinations, interests and needs of the individual [9].

Based on the analysis of scientific literature, classical works on the theory of market society by A. Smith, K. Marx, works by M. Friedman [10], P. Drucker [11], K. R. McConnell K. R. and S.L. Bru [12], V. Mau, A. Buzgalina and A. Kolganova [13], and others, values were formulated market economy, which were subsequently used to construct a methodology for diagnosing student value networks. These values include: 1. Private property, the desire to possess and increase private property; 2. Entrepreneurship, enterprise; 3. Competitiveness; 4. Profit, concern for the profitability of the business; 5. Free market, perception of free market relations as a norm; 6. Striving for success and victory in the market struggle.

The market values of students in the framework of sociological analysis should be studied in the general system of values. Therefore, in the research methodology, not only market values were proposed for evaluation, but also other indicators reflecting the value of business qualities [15], qualities of collectivism [15], the qualities of a good person [16]. Business personality traits were characterized by purposefulness, pragmatism, prosperity, prudence, leadership and authority. The list of these qualities was compiled on the basis of an analysis of the literature on the personal properties and characteristics of managers as a special social group of people [17]. According to G. Hofstede, collectivist qualities play a particularly important role in the corporate culture of market organizations and constitute a certain value of corporate structures. The same position is shared by Sh. Schwartz and M. Rokeich, who, in the well-known procedures for measuring values, include the collectivist qualities of people as significant values of a market society [18]. The liver of qualities that characterize collectivism as a value included altruism, team spirit, benevolence, respect for people, caring for others, and helping other people. Another group of

qualities characterized the personality as a “good person”,

○ the average weight of a group of qualities is shown in numbers in the center of the circle;
 — - positive connection (weak - very strong, indicated by the line width);
 - - - - negative connection;
 The center of the network is a network node with the greatest value potential (product of weight and strength of connections).

“good” in the understanding of G. Spencer, who believed that such should be defined as people who, with their freedom, would not violate the interests and values, the freedom of other people [19]. The qualities of this group included love of freedom, truthfulness, adequacy, tolerance, openness, modesty.

Analysis of the methodological literature has shown that values cannot be identified based only on direct appeals to respondents - answers to the questions: "is it valuable?" for them or "not valuable?" Values are not always realized by the person himself, they can also be unconscious and direct the activity of the individual almost automatically.

In the interests of empirical research, the objects, subject and hypotheses of the research were determined. The object of the research is students of the Belgorod State National Research University. Another part of the respondents was represented by the youth of the Belgorod region, who do not study at the university. The subject of the research is the market values of students in the structure of human capital. According to the research assumptions, a comparison of the market values of students and young people will reveal the differences and peculiarities of the value perception of the market by these groups of respondents. The survey of both students and young people within the same city should have been carried out according to the same criteria and indicators, and then a comparison of the result obtained. The research was carried out in 2020, it covers 277 people of Belgorod State National Research University students and 312 people - respondents, young people aged 18 to 23 years, living in Belgorod, who are not university students. The sample is random.

The respondents were asked to evaluate the qualities of a positive standard, themselves and a negative standard according to the 4 groups of qualities shown above: market, business, collectivist and the qualities of a good person. In total, 24 qualities were proposed for assessment, 6 qualities in each group. Detailed procedural aspects and a more detailed description of the diagnostic technique are presented in the works of the team of authors [20]. The mathematical apparatus and software make it possible to model the relationship between the values of each respondent with each and to identify stable trends and patterns in the formation of value systems. At the same time, a volume of information is formed that allows one to define such an analysis option as working with big data.

III. RESEARCH RESULTS / RESULTS AND DISCUSSION

The generalized result of the study was made up of networks of values in relation to positive and negative standards and self-esteem of respondents

Further, in Figures 1-3 and in Tables 1-3, summarized results of the analysis of value networks will be shown and brief comments to them.

Symbols used in the figures:

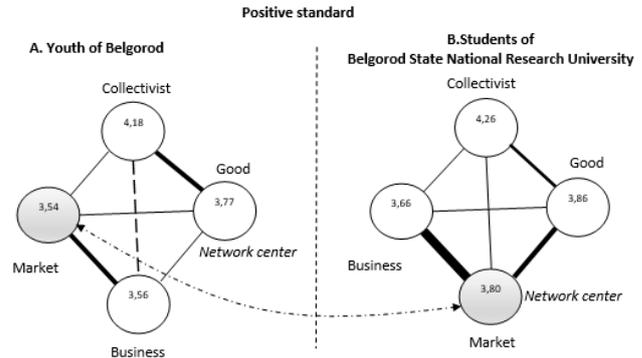


Fig. 1. Groups of the network of values of youth and students in the views of positive standards

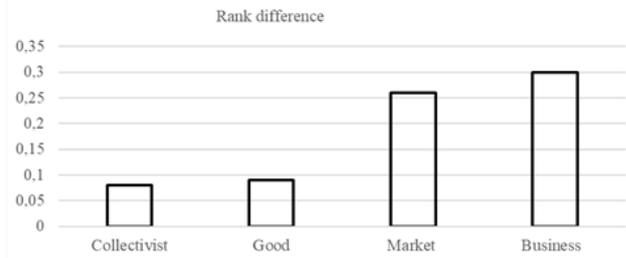


Fig. 2. The difference in rank in the assessment of a positive benchmark between university students and young people not studying at the university

An analysis of the results obtained shows that the value networks of students and the value networks of young people who do not study at the university have varying degrees of coherence and the strength of network connections. As can be seen in Fig. 1, the value networks of students are more significant, there are more strong and very strong ties, there is no conflict of values. As for the positive standard or the standard of imitation, the center of the value network for students is the value potential of the node of market qualities, i.e. a set of ranks characterizing prosperity, competitiveness, concern for the profitability of the business, the perception of the free market, the desire to own private property and entrepreneurship. Market qualities have the greatest network potential and are understood by students as leading values. At the same time, it can be seen that the highest scores were obtained when assessing collectivism, collectivist qualities of a positive standard, however, the connectedness of collectivist qualities with other qualities of a positive standard among students is much lower, i.e. collectivist qualities are understood by students as important and significant, but these qualities are weakly connected with values of other orders, in particular with business and market values. The center of the network of the value system of young people who do not study at the university is the set of qualities of a good person, and the values of the market economy are in this value system in the last places in the hierarchy.

Fig. 2 reveals the degree of differences in understanding of the importance of values between students and young people not studying at the university. Most of the contradictions in the value system of these two groups of respondents arise in the understanding of the importance and

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significance of business and market values. If students and young people assess human and collectivist values approximately the same, then they understand the value of business and market qualities in many ways in many ways, often in conflict.

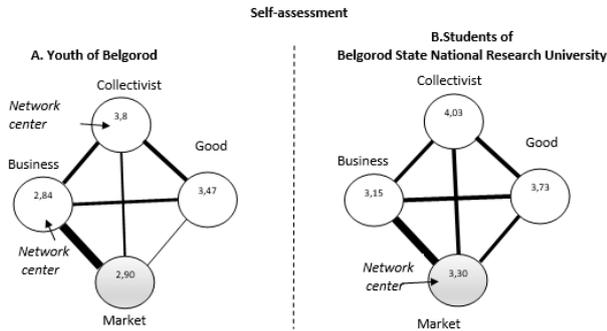


Fig. 3. Networks of values of youth and students in ideas about self-esteem

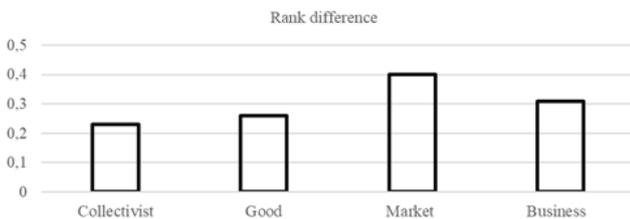


Fig. 4. The difference in self-esteem ranks between students and youth not enrolled in university

Market values of students begin to play an even more important role in evaluating themselves, themselves, as a person included in a market society. Fig. 3 shows that the group of market qualities in students' self-assessments has strong and very strong ties with all other groups of values, including collectivist qualities. As for the self-assessments of young people who do not study at the university, in the value system of this group of respondents, there are two network centers: collectivist values (they have a high weight, but weak network connections) and business values (they have a low weight, but these values are connected with all other values, including very strong ties). Collectivist values as the center of the entire value system are mainly determined by girls. For guys, the center of the value system is more often business values.

The formation of student self-esteem is most different from the self-esteem of young people who do not study at the university in understanding the role and importance of market values. As you can see in Fig. 4, differences in understanding market values are at their maximum. In other words, when assessing their life strategies, their understanding as a person, as a specialist, etc., students will be more focused on market values than is typical for young people not studying at a university.

Market values play the role of a criterion value and, along with business qualities, are the main characteristics with the characteristics of a negative standard, both among students and young people not studying at universities. In Fig. 5, you can see that, in general, students have more clearly formed ideas about who can be defined as the anti-standard for them. An important feature should be emphasized here: if the ideas

about a positive standard and a standard for imitation are not so clearly formed, then the ideas about a negative standard (as it is impossible, what is wrong, etc.) is formed quite clearly.

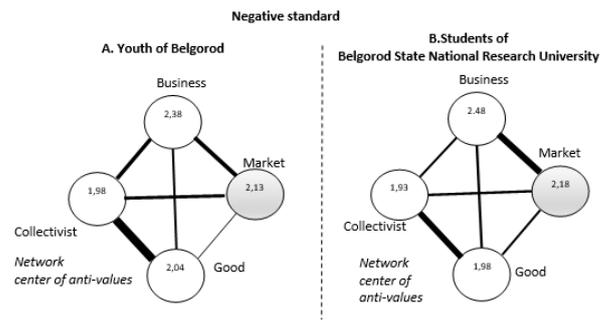


Fig. 5. Networks of values of youth and students in the perception of a negative standard

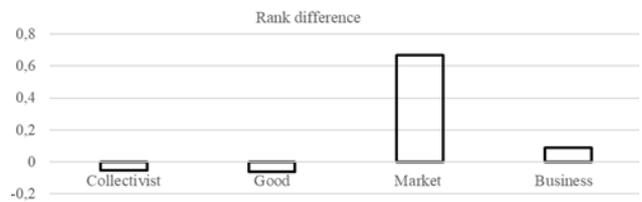


Fig. 6. The difference in ranks when assessing the negative standard between students and young people not studying at the university

Among students, as well as among young people who do not study at the university, the business and market qualities of the negative standard are connected with each other by a strong network connection, which suggests that the respondents of both groups classify active people as negative standards - "business", "market", but moreover, such anti-standards are characterized by the lowest level of collectivist qualities. In a different way, from the point of view of both students and young people, they are selfish people who manifest themselves as active, as businesslike for selfish purposes.

Fig. 6. shows the difference in values in perceptions of a negative benchmark. As you can see, market values in the characteristics of such people for students are significantly more significant than for young people who are not studying at a university. On the contrary, in such anti-standards, young people assess the qualities of a good person and the quality of collectivism much more strictly than is typical for students.

IV. CONCLUSIONS

The conducted research is indicative of social dynamics - the growing recognition of the importance of market values in the structure of human capital as university studies: the value of market qualities increases, which generally proves the influence of the knowledge gained on the formation of market values. According to the research, it becomes obvious that the network of market values is strengthening and expanding, and their role and significance in the entire value system of students increase. Higher education affects the content side of human capital and allows you to more adequately reflect and focus on the values of the market, to successfully socialize in market conditions. Getting higher education - knowledge as the basis of human capital - primarily affects the strengthening of students' self-esteem, where market qualities begin to play an increasingly significant and important role. Among young

people who do not study at the university, these qualities are less significant in the respondents' self-assessments. Thus, the knowledge gained at the university has a significant impact on the formation of a network of values that serve as the basis for self-analysis of the individual in a market society.

The perception of market values as the norm of modern society by university graduates contributes to a better understanding of prospects and conscious goal setting in building a career, realizing their human capital. On the contrary, in the value system of young people who do not study at the university, the market qualities of a positive standard turn out to be the least important and least significant in the value hierarchy. This group of respondents assesses the business qualities of a person as more important in the structure of human capital. Market qualities play a decisive role in assessing negative standards of imitation, i.e. people whose human capital is assessed by students as negative. For young people not studying at the university, market qualities are much less important and less significant when evaluating negative standards; these respondents are more focused on other qualities by which the other person can be recognized by them as negative.

To the least extent, market values are associated with the values of collectivism. The value of the qualities of collectivism in terms of weight characteristics occupies the highest places in the hierarchy of students' values; they turn out to be the most significant in terms of their weight, i.e. by the level of assessment and recognition of them as important standards for imitation. However, according to the strength of connection, interdependence and compatibility with other values among students, they turn out to be the least connected. In particular, collective values are weakly connected with the values of the business order (among young people who do not study at the university, even a negative connection is recorded here - the conflict of collectivist and business values, their opposition). Collectivist values, according to the ideas of students, are criterion grounds for assessing not only positive standards and self-assessment, but also when assessing negative standards - anti-standards, i.e. people whose behavior and life position causes rejection. Collectivist values of negative standards, as we have seen, are evaluated most critically by both students and young people, i.e. the lowest marks - the most demanding. This situation of contradictory internal characteristics of students - values, in fact reflects the objective complexity of the social situation - the contradictory coexistence of the values of a market society and the values of essentially traditional society. The harmony of market values and the values of collectivism in the structure of the human capital of students is extremely difficult. Along with this, it should be emphasized that conducting such studies in universities in European countries and China shows that in the conditions of these societies, market pragmatic values and values of collectivism turn out to be with a greater degree of harmony, which characterizes the higher education system in these countries as more adapted to combine pragmatic (rational) and others, for example, traditional components of education [21].

The growth of the importance and value of students' market qualities occurs slowly, evolutionarily and mainly in senior years, when basic knowledge about the features of the modern market is formed. Such transformations occur more dynamically and intensively among students - residents of small towns, and the most significant increase in the value of

market qualities is noted among girls who came to the city from small settlements. For these respondents, university studies have the most significant impact on the growing importance of market values. This is explained by the circumstances that such students are not very familiar with the peculiarities of market relations; nevertheless, for many of them, market relations become difficult barriers in establishing relationships with the surrounding reality even after graduation. On the contrary, for students who entered the university from large cities and have experience of work, the growth in the value of market values during the m period of study at the university was noted as insignificant. Least of all, the growth in the value of market qualities is characteristic of students - young men from among the inhabitants of large cities and with experience of labor activity. Such students most often know and understand well the importance of orientations towards market values even before entering universities and already have personal experience of life in a market environment in this sense, which undoubtedly affects the characteristics of their human capital: they are more prepared for the market.

It should be especially emphasized the important provisions related to the prospects for the development of network diagnostics of values that are relevant for managing the process of forming the human capital of students in universities. A significant advantage of digital technologies in relation to the diagnosis and management of the pedagogical process based on the study of value networks in universities is the ability to build unique models of values in study groups, courses, faculties, which makes it possible to adjust educational activities based on specific empirical data.

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