INSTITUTIONAL FACTORS OF THE YOUTH'S INNOVATIVE POTENTIAL DEVELOPMENT

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Abstract

The main drawback of the Russian innovation system is the low quality of the institutional conditions and factors that are a barrier to mass innovation of all subjects of innovative development and, first of all, one of its leading agents – young people. How does the Russian youth assess the innovative opportunities of the educational and industrial environment?

The purpose of the study is to identify the institutional factors of building up the innovative potential of youth in the context of their community-based characteristics. The empirical basis of the study was the results of a survey of young people in six regions of Russia: young workers of industrial enterprises (*N = 1050*, 2019) and students (*N = 1828*, 2020). The research methodology is based on community, institutional and resource approaches.

The results of the study have recorded a high level of the innovative openness of youth. The positive assessment of the innovative characteristics of the educational environment by the students is associated with modern pedagogical technologies and infrastructural forms of support for youth innovations. The achieved innovation potential of young employees of regional enterprises is in contradiction with the significant lag in the environmental characteristics of the innovation potential.

Key words: human resources, youth, innovation potential, institutional environment.

JEL Code: J24, I25, I26

Introduction

The influence of human capital on the economic development of countries and regions has long been proven by economists (Becker, 1975; Mincer, 1958; Shultz, 1971). It is obvious that improving the quality of human capital is an essential condition for the successful modernization and competitiveness of Russian regions (Korchagin, 2012). Young people are the demographic resource that can be effectively used in achieving this goal.

The researchers' interest in the innovative potential of youth (Boronina, 2019; Didkovskaya, 2019; Ivanchenko, 2021; Nevskaya, 2018) is primarily due to the resource characteristics (Mannheim, 1994) of this social community. The younger generation is the part of society that is most receptive to innovations, to the development of its intellectual potential and self-development (Leskina, 2015). Understanding young people as a resource for social development, studying the innovative potential of young people and an adequate assessment of the institutional environment of their innovative activities are necessary prerequisites for successful innovations at all levels of the economic hierarchy (Markov, 2011).

One of the first comprehensive studies of the innovative potential of working youth across the country was undertaken by a group of scientists from the Ural Federal University. In 2019, a survey was conducted of young workers employed at industrial enterprises with a high share of innovative production in six Russian regions (the Republic of Bashkortostan, the Kaluga Region, the Sverdlovsk Region, the Krasnoyarsk Territory, the Perm Region, and the Volgograd Region). The expansion of the sample at the second stage of the study made it possible to carry out a comparative analysis of the innovative potential of working and studying youth in the context of the institutional parameters of the educational and industrial environment, which have a significant impact on the development of innovative abilities and capabilities of the younger generation.

The conceptual design was based on the understanding of the innovative potential of youth as a set of properties, characteristics, abilities that help the young generation to perceive and develop innovations, to feel their need, to be ready to master innovations in technology and management (Didkovskaya, 2018). Innovative qualities and properties of youth, its innovative openness and innovative readiness were considered as elements of the structure of innovative potential.

The community-based approach allowed us to consider the innovative potential of students and working youth in the dialectic of the general and the special. Assessments of the parameters of the external environment (educational and industrial) that affect the formation and development of the innovative potential of young people were identified within the framework of the institutional approach.

The question of the continuity of the innovative potential of students and working youth was considered in the concept of the temporality of social communities (Ambarova, 2016). This made it possible to determine the temporal connections and relations between the

elements of the innovative potential of young people in their transition from primary professional socialization during training to full professional socialization in the framework of work, as well as the dynamics and influence of the institutional environment.

1 Comparative analysis of the innovative potential of students and working youth

1.1 Assessment of innovative qualities and properties of youth

In studies devoted to the research of innovative potential, its personified structure is traditionally considered as a complex of the subject's abilities to perceive new information, increase his professional knowledge, and put forward new competitive ideas (Kuzheleva-Sagan, 2012). Such a simplified approach ignores the essential, immanent innovative properties of young people that distinguish them from other socio-demographic groups. These include creativity, freedom of thought, readiness for new things, lack of fear of mistakes (ibid). In the latent (intentional) state of innovation potential, innovation properties are "indicators of values that the subject is inclined to focus on in his innovation activity" (ibid).

In the structure of life strategies and plans of young people, the attitude towards creative, innovative activity, readiness for it is articulated by every fourth working respondent (Table 1).

Tab. 1: The structure of life strategies and youth plans (in %)

Life strategies and plans	Students	Working youth	Average for the array
Good family, successful children	62	78	70
High economic status, income level	53	51	52
High professional achievements	43	44	44
Own housing	27	28	28
Career, achievement of high official positions	32	29	31
The opportunity to engage in creativity, to implement your ideas	37	25	31
Own business, independence from the employer	26	20	23

Source: Ya. V. Didkovskaya at el., 2018

The proportion of intentions to creativity among students is 1.5 times higher in comparison with working youth.

The priority area of application of their innovative qualities is business, entrepreneurial activity (Table 2).

Tab. 2: Assessment of areas of potential realization (in %)

Criteria	Students	Working youth	Average for the array
In business, entrepreneurship	57	48	53
In science, research and production	33	25	28
In education, culture	23	20	22
In management, administrative sphere	24	*36*	*30*
In the field of production	28	*47*	*38*
In the socio-political sphere	10	10	10

Source: Ya. V. Didkovskaya at el., 2018

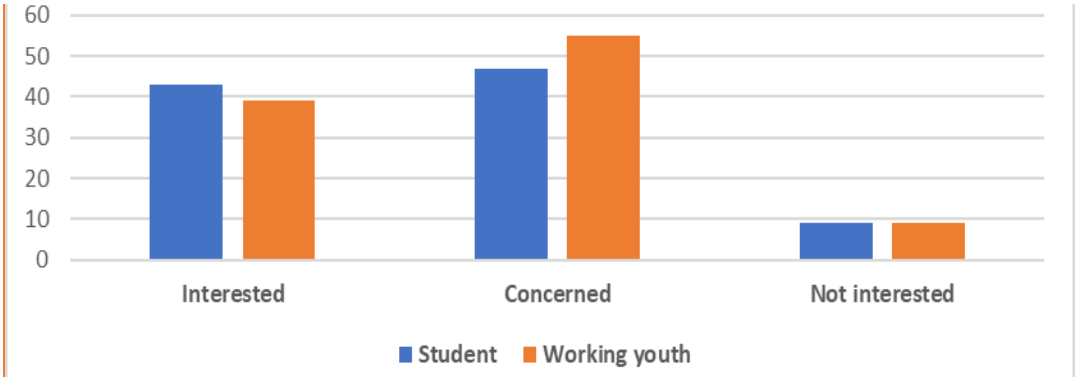
The attitudes to innovative activity in the field of business and entrepreneurship, articulated by our respondents, correspond to the current global trends in the development of small and medium-sized businesses. In the structure of the economy, small business in Europe accounts for 70 to 90% of all enterprises (The World Bank Group, 2020). Russia takes only 40th place in the ranking of countries that have created the most favourable conditions for the development of entrepreneurship (ibid). According to a study by Sberbank of Russia, only 3% of the country's population (4.2 million people) are engaged in entrepreneurial activities. This situation is "a direct consequence of the low propensity of Russians to start their own business" (ibid). The results of our study completely refute this opinion. Additional proof of our conclusion is the respondents' assessments of the necessary personal qualities to achieve success in life. On average, every third respondent articulates creativity and unconventional thinking as necessary qualities; every fifth is ready to take risks to achieve success in life; every tenth hope for their innate talents and abilities. The absence of influence of socio-demographic differences (age of respondents, type of activity-training or professional activity) on the characteristics of innovative properties, as well as regional specifics, confirms the high level of innovative qualities of young people, considered as a hidden resource in the reserve model of their innovative potential.

1.2 Innovative openness of youth

The innovative openness of students and working youth was measured by the level of interest and the ability to perceive and implement new ideas and new information

The level of interest of the two categories of young respondents is approximately equal. Almost 40% of the respondents show an active interest in innovations. Every second respondent (who is concerned, but rarely) can be included in the innovation reserve, which can be mobilized, put into action under appropriate conditions (Fig. 1).

Fig. 1: The level of interest of youepin scientific discoveries and inventions (in %)



Source: Ya. V. Didkovskaya at el., 2018

1.3 Innovative readiness of youth

Innovative readiness was measured by the presence of innovative developments, the sphere of application of creative ideas and forms of innovative activity of young people. The survey results show that more than half of each category of respondents (57% of students and 54% of working youth) have innovative ideas, designs, projects in their portfolio. Quite a high result, taking into account the experimental data of psychologists, according to which the total share of original solutions in adults is only 2%. The industry/sphere range of innovative developments of young people is extremely wide (Table 3).

Tab. 3: Areas of implementation of innovations (in% of the number of respondents)

Criteria	Students	Working youth
Engineering	20	27
Services, trade	18	14
Education	12	8
Medicine, healthcare	6	4
Business	20	13
Management	8	10
Security, law enforcement	4	3
IT-sphere	13	9
Space technologies	4	2
Communication	3	2
Chemistry, biotechnology	5	2

Source: Ya. V. Didkovskaya at el., 2018

Just as in the answers to the question about the spheres of application of creative activity, the sphere of business, industry and the IT sphere are competing in terms of their specific weight.

The analysis of forms of innovative activity of students shows that 50% of all efforts are spent on educational preparation: "I was engaged in self-education", "I participated in academic Olympics, competitions of student works". The second half is involved in innovation activities, but with a clear shift towards the development of innovative ideas and projects (42%), a third of which relates to everyday, household innovations. The experience of authorizing ideas (obtaining patents for inventions) was acquired by 3% of the respondents. 26% participate in the promotion process, 6% - in the justification of innovative projects. Mastering new technologies, new equipment, and innovative methods of work take place away from the students.

A similar situation was recorded in the category of working youth. Half of the activities are related to professional training. The second half is related to the actual innovation activity, but with a clear bias towards the development of innovative ideas and projects (50%). The situation is catastrophic with the authorization of ideas - obtaining patents for inventions (3%). If for students a low percentage of authorization of inventions is associated with primary innovative socialization, then for the working category of young people it is extremely small. Only a third of young people participate in the development of new technologies. Even less - in the process of promotion (20%) and justification of innovative projects (17%).

The fact that professional training after graduation from an educational institution not only ends but also increases, is associated with the discrepancy between the quality of education and the needs of the modern labour market. The consequence is the expansion of the corporate training system. With the transition of society to the digital economy and Industry 4.0, the importance of secondary professional training is increasing. At the same time, the predominance of corporate educational practices in the structure of innovative activity of working youth creates the risk of levelling its innovative potential, the transfer of the implementation mechanisms of the innovative properties of young people from the professional sphere to everyday, household innovative activity.

2 Assessment of institutional environment factors

2.1 Educational environment

Most of the surveyed students (65%) note that the educational environment contributes to the development of innovative skills and thinking, but not to the full extent. (Fig. 2.).

Fig. 2: Assessment of the possibilities of the educational environment

Source: Ya. V. Didkovskaya at el., 2018

Among the most preferred innovative teaching methods and technologies, respondents include internships of students at advanced enterprises and companies (dual training) and the transition to project-based teaching methods. A significant role is given to infrastructural forms of support for student projects - research student laboratories and technology parks created based on educational institutions.

2.2 Production environment

In a survey of working youth, the assessment of the innovative capabilities of the working environment was associated with the identification of the role of innovation in their professional activities. Only 43% of respondents participate in innovation activities regularly due to the nature of their professional activities and the active innovation activities of the enterprise itself. Capacity building largely depends on motivational factors that can be used in the process of stimulating innovation. The most significant motivational factors for working youth are the corporate effects of innovation – financial ("clear and rapid economic benefits from implementation"), economic ("innovation will give the company competitive advantages in the future"; "after the introduction of innovation, the final products of the enterprise will meet higher quality standards"), existential ("innovation will increase production safety"), technological ("innovation has significant advantages - better technical characteristics"). For every fifth respondent, personal incentives are also important: administrative (coercion to innovate in the form of a “direct order from the head about the need for implementation”) and material (“monetary reward”).

The last question of the questionnaire was focused on identifying factors that negatively affect the formation and development of the innovative potential of young people (Table 5).

Tab. 4: Assessment of negative factors of the implementation of the innovative potential of young people (in %)

Criteria	Students	Working youth
Absence /lack of state programs to support youth initiatives	**41**	**35**
Laws and regulations that suppress the initiative of young people	23	14
Economic crisis	31	24
Business disinterest in innovation, the pursuit of short-term profits	**31**	**36**
Lack of incentive system for the development and implementation of innovations	26	22
The low level of professional and managerial training of those who make decisions about the introduction of innovations	23	20
The reluctance, fear, or indifference of the youth themselves	**40**	**39**
Lack of strategic thinking in management	-	9
Nothing gets in the way	8	11

Source: Ya. V. Didkovskaya at el., 2018

According to the unanimous opinion of both students and working youth, three positions received the most unsatisfactory marks:

- weak state support for youth projects and initiatives
- lack initiative among young people themselves;
- disinterest of business, explained by their momentary desire to obtain quick profit.

Conclusion

The translation of quantitative survey data into a qualitative assessment of models of youth innovation potential allows us to form generalized profiles of the innovation potential of students and working youth (Table 6).

Tab. 5: Generalized profiles of the innovative potential of students and working youth

Criteria	Students	Working youth
Innovative qualities	High	High
Innovative openness	High	High
Innovative characteristics of the educational environment/production environment	Middle	Low
Availability of innovative developments	High	High
Participation in the life cycle of the innovation process	Low	Low

Source: Ya. V. Didkovskaya at el., 2018

The comparative analysis of generalized profiles shows that the critical problem area is the institutional capacity for building the innovative potential of young people associated with the limitations of the educational and work environment. The stability of these constraints in the temporal space of "university-enterprise" is in contradiction with the necessary positive temporal dynamics of increasing the innovative readiness of young people.

Lack of mutual consistency and purposefulness of institutional actions in the system of maximally favoured implementation of innovative ideas and projects of young people in a strategic social perspective creates the risk of wasted time, innovative (quantitative and qualitative) losses: if you do not have time, then you can be late...

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