

# Mechanism to Form Labour Potential of Innovative Type: Logistic Aspect

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**Abstract:** The role of labor potential in the current economy as the main factor of its development is considered with taking into account the influence of innovative trends in the world economy and the need to develop a competitive domestic economy in the near future. Nowadays, the problem solution to improve the quality parameters of labor potential under current circumstances is possible with taking into consideration the following trends: first, structural changes in the economy of the postindustrial type contribute to an increase in labor potential number in the non-productive sphere. Secondly, destructive changes in the socio-economic system, on the one hand, and the need for further development of the national economy in accordance with the competition laws in the global market, on the other hand, determine the change in the management system of its formation and development. Economic instability of our time especially concerns industrial enterprises that affects the reduction of enterprise competitiveness, and response flexibility of the logistics system of industrial enterprises to environmental changes. Consequently, enterprise management pays more attention to modern methods and ways to conduct activities based on the logistics principles.

**Keywords:** knowledge economy, effective employment forms, innovative development, labor potential, logistics, regional strategy.

## 1 Introduction

The relevance of the paper is not in doubt, because there are significant differences in the development level of productive power and living conditions of the population between the Russian regions, thus, in the qualitative characteristics of the labor potential. The labor potential theory is constantly developing and enriching, and the importance to improve its implementation mechanism under current circumstances is steadily increasing. Modern requirements to labor potential allow to develop a set of tools and methods to improve the mechanism of further development of labor potential, including the regional level.

At present, the problem of studying theoretical and methodological provisions that reflect the peculiarities of formation and use of labor potential in the regional economy is becomes actual under the following circumstances:

- multivariance of human behavior in the labor market that contributes to the expansion of the parameters range in labor potential, based on growth rate of regional development and economic situation,
- permanent necessity to constantly search for new forms and effective methods to form and use labor potential of the regional economy for the purpose to achieve multiplicative effect under the conditions of cyber multipolar development.

In order to achieve the goals, which are strategic in nature, it is necessary to build partnerships with all participants of the logistics system in the industrial enterprise [1, 2]. A well-managed supply chain develops strategic and operational objectives, comparing the participants' acts at each level [3, 4].

It is logistics use in strategic management of the industrial enterprise that leads to the optimization of both quantitative and qualitative parameters of flow processes. Thus, in order to increase competitive position in the market, it is necessary to use logistics to manage flow processes in the supply chain [5, 6]. Therefore, it is necessary to adopt the strategic management concept that is the main activity of leading companies.

## 2 Methods

To identify the enterprise efficiency sources in the supply chain and formation and development of labor potential, the following experimental and theoretical methods were used: system analysis, economic and statistical comparisons and groupings, forecasting and modeling methods, cognitive and normative approaches, as well as methods of demographic research. To determine strategic guidelines in the process of human resources management in the enterprise, a strategic management tool Balanced Scorecard, BSC, developed by R. S. Kaplan and D. P. Norton [7-10] was used. The analysis of the factors of innovative responsiveness is conditioned by the fact that the technological development level is proportional to the innovations scale implemented into production. The mechanism of innovative development of human potential is presented by Becker G.S. [11]. It is evident that the technological achievements of the last decades, responsible for high demands to the labor potential quality, lead to the reason and motivation

transformation in labor activity [12-16]. It can be stated that in the future, there will be a labor activity replacement by a new innovative type of labor activity that is peculiar to the postindustrial civilization and based on the creative labor elements. The acceleration of transition to the innovative development contributes to increase in knowledge, experience, working conditions improvement, wage growth, life quality growth and, accordingly, to the need to form the employee's innovative genotype (figure 1, Appendix A.).

The main idea is that competences formation of the innovative person should be started before school, because the skill foundations for critical perception of information, creativity, ability to work in a team and socialization skills are laid at this stage. The further education should develop and complement these skills (and, if necessary, form them from the beginning level). Thus, the conditions to form employee's innovative genotype and have effects such as possibility to diversify the employment spheres, employment mobility extension and implementation of labor ambitions, are created.

### 3 Results

Current problems of economic environment regionalization, related to the sustainable socio-economic development of subfederal systems and their harmonious incorporating in the convertible meso-economic environment, lead to a new look at the problem of effective formation and development of labor potential on the territory. Labor potential is a multi-level integral category that includes a set of possibilities, evaluation of able-bodied population, as well as social, moral and other characteristics that contribute to their implementation at the achieved level of productive forces and production relations. Labor potential is closely related to the productive forces and objectively determined by both their development level and the development level of production relations in the society. Thus, the level of their development determines the essence, nature and quality of current labor potential. According to the authors, it is advisable to distinguish 3 types of labor potential that are differentiated by a number of characteristic features (table 1).

**Table 1.** Differentiation of labor potential types based on the goals of the multivariate strategy of regional development.

| Item                               | Innovative and progressive   | Stabilizing and inertial   | Depressive and regressive  |
|------------------------------------|--|--|--|
| Basic immanent qualities           | High degree of manageability due to the high level of education and availability of necessary professional competencies. High degree of adaptability to innovations over a long period of time.  | Quite high degree of manageability. At the same time, the further development and use of labor potential do not provide the maintenance of sustainable socio-economic development of the territory in all directions, but stimulate the development of only certain areas characterized by high efficiency in the medium term. | There is not integrity and structure due to the insufficient level of professional and personal qualities. At the same time, there is a low level of labor activity that requires additional external influence.               |
| Influence on territory development | It is innovative technologies donor. The formation and development experience of this type can be extended to other territories without significant changes. Within the existing regional socio-economic system, it is an incubator of innovative ideas and innovations. | It is an example of positive experience in innovation technologies that, however, cannot be extended due to specific features, as well as insufficient power to extrapolate stabilizing functions in the economy of other territorial formations.  | The experience of applied management technologies cannot be extended to other territories due to low efficiency. It is the main consumer of other types experience due to insufficient mechanism of formation and development. |
| Method to manage labor potential   | It is characterized by complexity and system approach that assumes high efficiency of applied methods of management.   | It is inertially extended and characterized by a selective approach to labor potential formation with the aim to level certain parameters in accordance with the economic development strategy.  | It is intrusive and suggests imperative impact from outside.   |
| Educational status                 | High   | Moderate   | Low  |

Source: Authors.

Qualitative characteristics of labor resources formation and development depend on the level of economic and social development in the region. They are determined by the sectoral, professional and qualification structure of those employed in public production, standard of living, development of health and social security systems, education and training. Thus, to a certain extent, polarity and asymmetry as two complementary categories are, ex ante, peculiar to labor potential of any spatially localized system, due to various natural, functional and systemic qualities, uneven use

and development, impact of socio-economic trends and different degrees of state and public institutions efficiency. The presence of permissible asymmetry in the labor potential development has a positive impact on the functioning of regional socio-economic systems, as it affects the spatial distribution of labor application and localization of specialization zones of labor activity.

In Russian regions, there is a real opportunity to develop the labor potential of innovative and progressive type, but some of its elements are presented in varying degrees in different federal districts and regions. The current employment state and the labor market in the regions of the Russian Federation shows quite significant differences in the opportunities to form and develop labor potential of innovative type. The presence of such differences is reflected both in the development speed of labor potential of innovative type and possibility to synchronize the processes of labor potential formation and development in different regions.

Industry and territory determine the specifics of both the reproduction process, as a whole, and labor potential functioning, in particular industries and regions. If the reproduction process is characterized by territorial distinctness, the industry in the spatial sense is very fragmented, and therefore, indirectly affects the process of labor potential formation and use through its enterprises located in the region. The industry is represented by a set of relatively separate enterprises, each located and operates within a specific geographical unit.

Analysis of strategic directions and specific forms to develop the labor potential management system should be correlated with the goals of regional economic policy in the labor resources, taking into account the need to develop basic regional clusters and the preservation of the regional specialization priority. The intensity to develop innovative labor potential depends on the technological development level in the region, adopted consumption patterns, flexibility, entrepreneurial behavior and culture, regional management quality that provides conditions for commercialization of innovative technologies, and effective employment.

Changes in public production affect the nature of human activity. They change not only the type of activity, but also the nature of its values, needs and preferences. Under the current production conditions, labor change is both natural need and a qualitatively new feature of modern management of the multi-structured system of labor potential. It is aimed at providing the necessary scientific and technical progress with employment mobility and changes in labor qualities.

Thus, labor potential in the modern economy reflects the labor opportunities and people's ambitions as read in conjunction with information, economic and social aspects of its use. The initial structural unit of the labor potential analysis is labor potential of innovative type that forms the basis for the formation of labor potential of higher structural levels. Its demonstration is effective innovation and entrepreneurial activity. In other words, the way to realize labor potential is full employment, that is, the maximum use of employee's labor abilities in producing economic benefits. The strengthening of the personal principle in the human needs and values structure, and the dominant of intellectual and social capital among the sources of growth of the material well-being identified the most important methodological postulate of the theory of innovative economy: a person becomes a subject, not a factor of the economic system.

The economic and social backgrounds for the labor potential realization are diverse and change throughout a person's life. Therefore, the mechanism of labor potential management can and should be continuously improved under the influence of innovative development in the regional economy.

Overcoming the economic crisis consequences and further economic growth cannot be achieved without a deep restructuring and innovative economic development, and a positive decision of population problems in the region. Therefore, for the regional economic growth, it is important to determine the place of the regional system, its financial basis for development, sources of funds and mechanisms for their attraction. All this is possible through studies of the regional economy as a whole system with its set of reproduction relationships. Such a mechanism should be based on the theory of the regional reproduction process that is the renewing circular movement of physical, financial and labor resources in regions. At the same time, resources should be directed both to the development of reproduction conditions and functioning of the reproduction process.

The paper reveals that the most important aspect to improve the mechanism of labor potential management is to focus on the effective use, systematic reproduction and continuous improvement of labor force (figure 2, Appendix B). We offer the following principles of the mechanism suggested to manage formation and development of regional labor potential on the basis of the logistic approach:

- the principle of improving the institutional environment quality that provides development and implementation of measures to improve the social infrastructure of the society, corresponding to the intellectual sector of the regional economy,
- the principle of cooperation between regional authorities, education and entrepreneurship that provides development of communication methods to create promising commercial technologies, new products (services), attraction of investment resources for research with the participation of all concerned parties (business, science, government and civil society), and improving the legal and regulatory setting in scientific, technological and innovative development,
- the principle of innovative entrepreneurship and education that prioritizes the education system and problem-oriented educational technologies aimed at teaching the skills, which are necessary for the innovative behavior formation, including analytical, critical and creative thinking, and contributing to the continuous self-learning, readiness for predictable risk and work in a highly competitive entrepreneurial environment,

- the principle of innovative education nature where competencies formation of the innovative person should be started before school, because the basics of skills for critical perception of information, the ability to nonstandard solutions, creativity, ingenuity, communication skills and diligence are laid both at this stage and in primary school,
- the principle of innovative activity motivation that is based on the use of all regional mechanisms (economic, financial, organizational, technological and information), contributing to competitiveness increase of individuals in the labor market.

The institutional basis for the development should be a network of territorial and industrial entities in the form of innovative educational zones and centers for the educational technologies transfer that are specialized in innovations promotion both at the level of particular industrial enterprises and administrative territories.

The cyclical pattern of the process to form labor potential of innovative type that is implemented in the course of employment provides, at each stage, knowledge increment, which is realized through production of new or improved products/services, creating a new technology of the labor process, combination of new factors and improvement of employees' intellectual and innovative potential.

Further evolution of the local society and regional economy involves strengthening of competitive advantages, based on the use of knowledge as a labor potential resource that are used for effective market conduct of all market participants (companies, organizations, sectors, fields of activity).

## 4 Discussion

The main purpose of the paper was to develop theoretical, methodological and methodical approaches to quality management of labor potential for effective human activity on the basis of modern production and educational environment formation, and the corresponding innovative development of information and socio-economic infrastructure in the regional society.

According to the scientists, innovation as a qualitative characteristic of labor potential reflects the basis of employees' adaptability to the requirements of the modern economy. It is aimed at changing the employees' behavior on the basis of new models development of labor behavior and motivated by the need to obtain a competitive advantage of the enterprise.

According to the analysts, the problem of labor potential innovation should be segmented into several levels. The first level should include the ability to generate new knowledge that implies a high degree of fundamental science development. The second level involves the fundamental knowledge transformation into innovative and applied researches and workings. The third level generates demand from the state and business for new technologies and developments through creation of institutional conditions that would stimulate and facilitate the know-how commercialization.

In the course of the research, it was revealed that labor potential, under the circumstances of economy of innovative type, is a difficult, dynamic and multifunctional category that characterizes professional, qualification, psychophysiological and personal characteristics of employees, defines a new quality of work (dynamic, information and creative intensive), turns into product, technological, managerial, organizational and social innovations at all levels of the economic system, and generates a synergy of social and economic effect at the individual, personal and social levels. Thus, it is established that the main law of labor potential development of innovative type is the emergence of innovative labor elements that provide improved adaptation of the labor force to the requirements of the economy of knowledge, and have both probabilistic and deterministic nature.

## 5 Conclusion

The condition for realization of actual labor potential is the interest in creativity and constant participation in innovative search. There are some distinctive features of a current-day employee. They are not only aspiration to increase knowledge, abilities, skills and personal development, but also urgent need to have all this. Creativity is a kind of conscious human activity. It corresponds to a highly organized type of workers, i.e. human capital.

The transformation of labor into creativity will be a fundamental factor that will ensure not only the human person's progress, but also sustainable economic growth. The indicated trend leads to the structuring of a new employment type according to the following areas: redistribution of social services and labor from the industrial sector to the professional one, improving the educational structure of employment, growth in the proportion of women in the employment structure, intellectualization of the job structure, creative community increase, dilution of the traditional sectoral structure of employment (influenced by the processes of diversification, integration and conglomeration), development of the cyber employment structure, blurring of lines between formal and informal employment of creative workers, emergence of many transitional forms of labor distribution (table 2).

**Table 2.** Classificational qualities of innovative employment forms.

| Innovative employment forms  | Qualities of innovative employment forms   | Structuring of innovative type of employment   | Trends in development of innovative type of employment   | Result/ Institutional regulation entity  |
|--|--|--|--|--|
| New technologies to search for a job /employee                     | Economic qualities (continuous updating of the structure and forms of employment, new labor quality, demand for new forms and types of employment and their effectiveness) | Redistribution of labor from the industrial sector to the professional and social services sector                            | Individualization  | Increment of knowledge/ Intermediary institutions in the labor market                            |
| Innovative labor contracts   | Organizational qualities (new labor and employment management, variety of integration and cooperation forms of innovative labor)   | Development of the educational structure of employed people  | Increase in creative staff shortage  | Manufacture of new or improved product and services/ flexible labor laws                         |
| Freelancing, cyber employment, employment in virtual organizations | Institutional qualities (emergence of fundamentally new or improved employment institutions, etc.)   | Development of the cyber employment structure, blurring the lines between formal and informal employment of creative workers | Virtualization   | Development of a new technology of the labor process/ New educational standards and technologies |
| Directly innovative labor in organizations                         | Technical and technological qualities (intellectualization and computerization of workplaces, etc.)  | Intellectualization of the professional structure and creative community growth  | The emergence of innovative labor elements that provide adaptation improvement of employment to the requirements of economy of knowledge | Combination of new factors of the process/Institute of licensing                                 |
| Polyvectorial and intensive labor mobility                         | Social and psychological qualities (employee's innovative genotype, motivation to innovative work, etc.)   | Increase in the share of women in the employment structure   | Reduction of the gender gap in total employment  | Improvement of employee's intellectual and innovative potential/Institute of social partnership  |

Source: Authors.

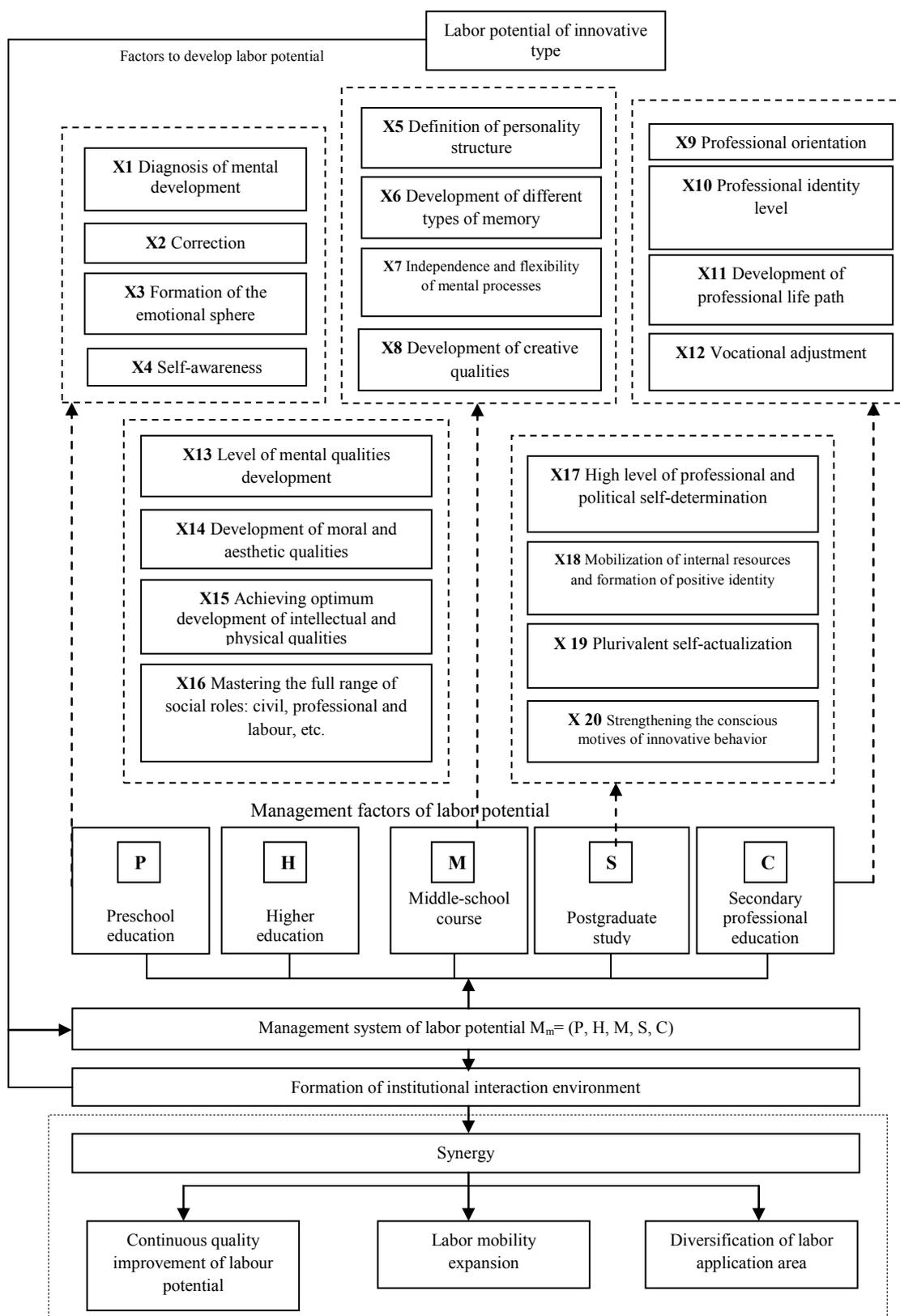
As a result, we have two multidirectional trends: the first is labor socialization that covers workers of creative labor and the second is labor desocialization that covers workers of formulaic labor. Polarization of social status provokes discrimination of routine workers, which means that the innovative solution of this conflict is possible only on the basis of new quality development of labor potential, taking into account the information and socio-economic components of labor under the circumstances of innovative economic development.

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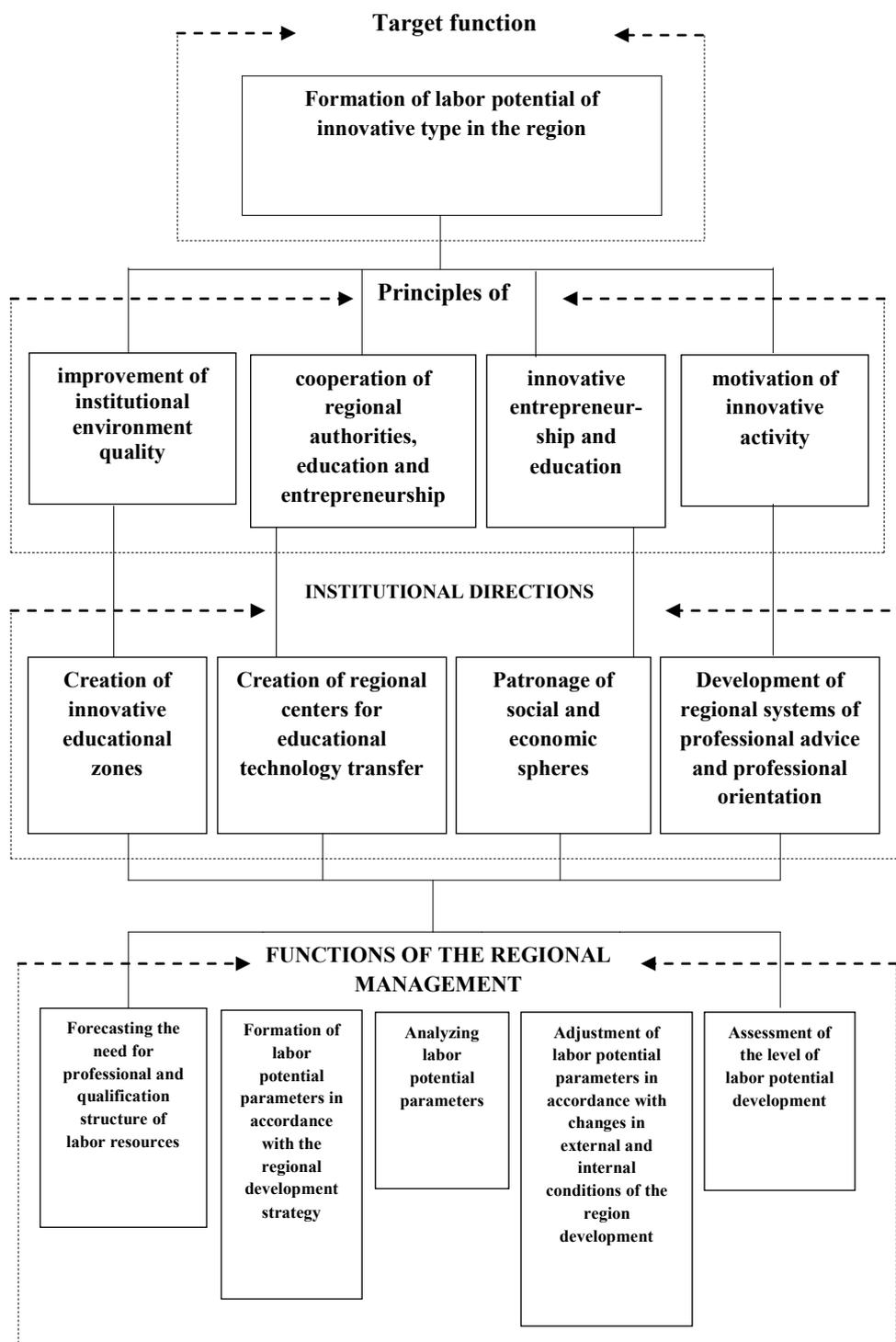
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Appendix A



**Fig. 1.** Stages of the process to form the innovative type of labor potential  
 Source: Authors.

Appendix B



**Fig. 2.** Organizational and economic conditions to form and develop labor potential of innovative type in the region  
 Source: Authors.