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THE CONCEPT OF PROJECT MANAGEMENT AT THE MESO-LEVEL ON THE BASIS OF NETWORK PLANNING OF WORKS WITH THE DEVELOPMENT OF METHODS OF LABOR COSTS OPTIMIZATION

Abstract: *The relevance of the study is due to the lack of a unified approach to implementation of projects at the federal level, article aims at developing a mechanism for managing labor costs of the project. The leading approach to the study of the problem is the development of the matrix "specialization-competence" and a mechanism for optimizing labor costs. Testing was carried out in JSC "Kazan ElectrotechnicalPlant". The regions-leaders of instrument-making are defined. In the project No. 1 there was a decrease in labor costs by 19%, overtime by 3 times, the cost of 1 standard hour by 4%. As a conclusion, the theoretical aspects of an integrated approach to the management of industry projects are put forward. The materials of the article are valuable for the management of the region's economy.*

Keywords: *Industrial policy; Industry project; Labor costs; Optimization; Project management.*

1. Introduction

The organization of project activities in the federal, regional and municipal authorities contributes to achieving the goals defined in the framework of priority and strategic development of the country. In 2018, project activities have been developed in connection with the beginning of national goals and strategic development objectives of the Russian Federation for the period up to 2024 (Priority directions of development of science, technology and engineering in the Russian Federation, Innovative Memorandum of the Republic of Tatarstan for 2011-2013).

To date, project management is carried out at the regional level, while each region develops project management based on its own initiatives, since there is no unified methodology for project management at the federal level (Figure 1).

The study aims at determining the concept of project management at the meso-level on the basis of network planning process with the development of application controls to optimize labor costs in the project.

An objective prerequisite for the formation of the project management system at the national level is the need to optimize terms and resources to improve the quality of execution of sectoral projects. Priorities of development management as a program of projects are objectives of identification of project initiatives and hidden risks and barriers to successful implementation of projects, benefit management and obligatory substantial, calendar and network planning,

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and also monitoring of progress on participation in industrial policy in the supervised branch (Corporate project management system; Yakovlev, 2009; Kossova & Sheluntcova, 2016).

Figure 1. Regional formation of project offices (compiled by the authors)

Participants of the projects and their share in the overall work of the project are of great importance in the project management. And with the available time and financial constraints, the quality of the project becomes the first level.

Theoretically and methodically, the study is based on the concept of project management, the theory of production organization, competitiveness and investment attractiveness (Steffey & Anantatmula, 2011).

The paper uses the scientific works of such famous scientists in the field of innovation and project management, as Schumpeter (2007), Drucker (2012), Glazyev et al. (1992), Medynsky (2009), Brunet (2018), etc. Also the theoretical foundations of the study are the standards of project management, legislative and regulatory documents of the Russian Federation.

2. Materials and Methods

The concept of management of investment projects at the regional level built on optimization of resource provision at the network planning is based on existing project management system prevailing in the Russian Federation and the constituent entities of the Russian Federation. However, the fundamental differences are that today there is no standard methodology of project management, the participants of which are different regions; each region has its own unique project management system. The existing mechanism of federal financing of projects makes the subjects of the Russian Federation competitors for budgetary funds. Each region takes part in the "struggle" for federal funds to develop itsown project, which affects the development of the industry throughout the Russian Federation. Another drawback is the lack of desire to cooperate, to implement common projects, as each of them is interested in "dragging" the entire project to its territory. This fact ultimately does not contribute to the development of the industry as a whole, as a rule, large projects are concentrated in the same regions, which directly affects the differentiation of regions among themselves, reduces the level of cooperation and it does not contribute to the synergetic effect of interaction between regions.

The proposed methodological approach to the project management of the industry is based on the fact that the project management at the meso-level is the interaction of enterprises in different regions. In this case, specialization and competence of the region are taken into account as a criterion for the selection of enterprises to participate in the project, as the main direct factors for the successful implementation of the project. Since the investment project consists of specific stages of work, they can be geographically located at different

enterprises of the industry, depending on which enterprises will better cope with the task within the project.

Based on figure 2, it can be seen that according to the proposed methodological approach, the project at the meso-level can cover participants from different regions, while the choice of these participants is based on specialization of the region, its main advantages and strengthregarding other regions. The project can be sectoral and intersectoral; in this case, a single project management office will contribute to better execution of the project by integrating all functional aspects of the project, represented by various participants in a single whole.

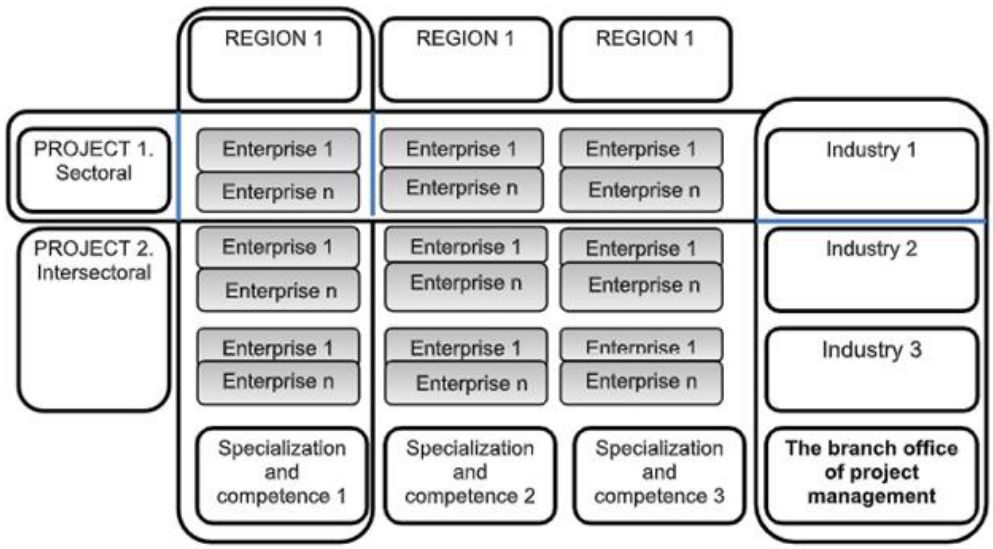

Figure 2. Regional and sectorial project management (compiled by the authors)

As it is known, in the network planning in a majorfederal project, the whole project is divided into main stages; each stage is characterized by monotonous works within one separate subproject. In this case, based on the concept presented above, the project management scheme at the meso-level is as follows, figure 3.

Determination of specialization and competence of the region and the enterprise (located in it) can be carried out by various methods of the enterprise selection for chosen indicators in the context of financial, innovation, production, investment, personnel and export performance, depending on the objectives of the proposed project. The authors propose a general concept for the enterprise selectionin the region to determine the “locomotive” of the industry to include the selected companies in a particular federal project.

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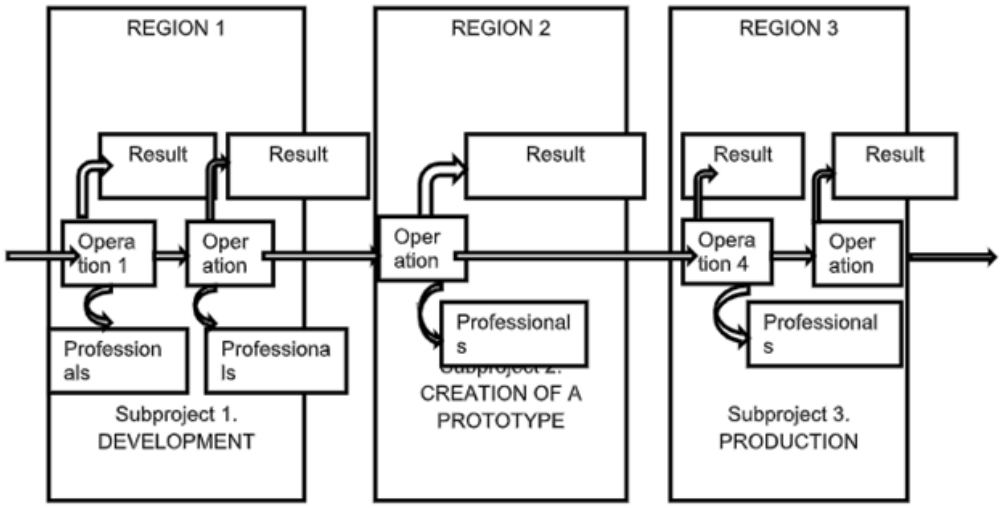

Figure 3. Network scheduling in the region (compiled by the authors)

Economic practice of project management shows that key competencies of enterprises, regions and industries contribute to the growth of welfare, competitiveness; it increases the level of investor confidence, this issue becomes especially important if the investor is the state. If the key competencies of the region are built on the basis of its specialization, its economy will be more stable due to the fact that the region has already accumulated a practical framework in addressing a certain range of issues with regard to a particular industry.

When managing the project on the basis of optimization of resource provision in each region, the enterprise-"locomotive" of the industry is determined, and then these enterprises are evaluated on the level of general competence or on the level of competitiveness and at the same time complementarity with each other, taking into account the current projects of enterprises of the chosen industry. The fact that the company is included in the list of potential project participants depends on the workload of the enterprise at the current or selected time of the project implementation.

The development of the matrix "specialization-competence" for the grouping of regions in order to manage the project is based on the localization coefficient, the calculation of which can be carried out on *the gross marketable product, the main industrial funds and the number of personnel of selected industries*. The coefficient of localization of the industry in the region is the share of this industry in the structure of production to the share of the same industry in the country. The formula is as follows:

$$C_l = \frac{\frac{O_r}{P_r} \text{x } 100}{\frac{O_c}{P_c} \text{x } 100},$$

where O_r – industry of the region; O_c – industry of the country; P_r – industrial production of the region; P_c – industrial production of the country.

If the calculated indicators are greater than or equal to one, then such an industry is a branch of market specialization of the district.

Based on *the coefficient of localization for gross commodity products value*, it is possible to determine the level of specialization of the region in the selected industry, based on the values of *the coefficient of localization for the number of*

staff of the selected industry, it is possible to determine the level of available competencies of the region in this industry. Guided by this logic, the grouping of regions by the level of specialization and competence can be represented in the form of a coordinate system, on the abscissa axis of which the increasing level of specialization in the industry (the coefficient of localization of the industry), and on the ordinate axis – the increasing level of competence of the region in the industry.

In accordance with this, the regions of the Russian Federation can be divided into four groups:

I quadrant – regions with a high level of industry specialization and a high level of competence;

$$C_l \geq 1;$$

$$C_{lp} \geq 1;$$

II quadrant – regions with a high level of industry specialization, but with a low level of competence;

$$C_l \geq 1;$$

$$0 \leq C_{lp} \leq 1;$$

III quadrant – regions with low level of industry specialization and low level of competence;

$$0 \leq C_l \leq 1;$$

$$0 \leq C_{lp} \leq 1;$$

IV quadrant – regions with a low level of industry specialization, but with a high level of competence;

$$0 \leq C_l \leq 1;$$

$$C_{lp} \geq 1;$$

The scheme of enterprise assessment in the industry can be presented in the form of the table "competencies within specialization". Based on what industry is the project, it is possible to consider companies specializing in the research of this project. In other words, the competence of the enterprise is enough to cover the necessary competencies of the project of the selected industry.

In order to determine the key enterprises in the industry of the region to participate at some stage of the project, it is necessary to rely on the average level of profitability of enterprises in the industry of the region, but in order to make the enterprise selection to participate in the project, it is necessary to assess their competence and the way to do it is shown in table 1.

Competencies of enterprises are selected according to the type of investment projects and key skills of the enterprise. Indicators of financial analysis, indicators of material and technical equipment, volume of labor resources, wages, the total number of complaints and executed orders, production volumes, etc. can be taken as competencies. The competence profile of the enterprise-"locomotive" of the industry can be represented graphically in the form of DNA, the key points of which, remaining empty, indicate the absence of this competence in the enterprise, filled – the presence of this competence in the enterprise. With this visualized method, it is possible to assess the enterprises of one industry for ranking by types of their key competencies, which ultimately can be used in project management in network planning.

In the subsequent selection of enterprises-participants in the project in order to cut costs for the project, the authors developed a methodology for the distribution of project tasks between project implementers. This technique is based on the fact that the main goal in the management of large industrial projects in addition to its qualitative performance is to find the minimum possible cost of the project.

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Table 1. Competence profile of enterprises in different regions in comparison with the required competence profile of the project

Competence	Enterprise 1	Enterprise 2	Enterprise 3	Enterprise …	Enterprise N
Competence 1	+	-	-	…	…
Competence 2	-	+	-	…	…
Competence 3	-	+	+	…	…
…	…	…	…	…	…
Competence N	+/-n	+/-n	+/-n	+/-n	+/-n
Competence profile of an enterprise					
Competence profile of a project					
Compliance of the competence profile of an enterprise with the competence profile of a project	43%	58%	71%	29%	86%
Workload	%	%	%	%	%
Choices of project participants					

Table 2. Description of the project of JSC "Kazan Electrotechnical Plant"

		Project No.1 of "Kazan Electrotechnical Plant"
1	Project foundation	Customer agreement
2	Type of projects	implementers
3	Project implementation period, months	36
4	Number of project tasks, pcs.	73
5	The cost of man-hours of the project, rub.	39 504 096
6	The result of the project	prototype
7	Number of reports, pcs.	73
	-by types:	20
8	Number of implementers	39
9	Number of labor rates	24
10	Standard hours in the project	191 616
11	The level of payroll with cash transfers	no more than 45% of the project cost
12	The level of overhead costs	no more than 40% of payroll

Most of the costs in the research projects of instrument-making enterprises are wages, that is, the projects are labor-intensive and material costs are conditions that the region can not affect due to the fact that the Contractor of a large federal project sets prices within the cooperative ties between the various project implementers.Thus, the optimality criterion is formulated as follows (Figure 4):

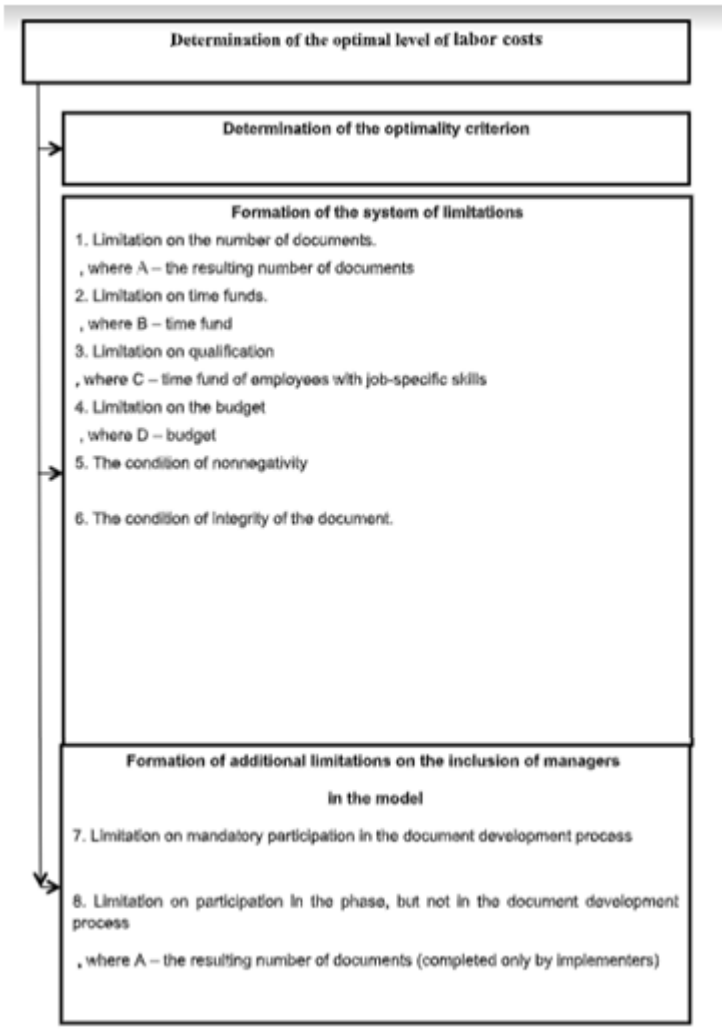

Figure 4. Technique of labor costs optimization in the implementation of the project on the basis of network planning (source: the authors' approach)

Z_{max} – labor costs of the project

Z_{max}–>Z_{min}

$$Zmin = \sum_{i=1}^{I} \quad \sum_{j=1}^{J} \quad \sum_{h=1}^{H} \quad t_{hji} c_{hji} x_{hji} \quad (1),$$

where Z is the value of work done,

i – the position of an employee,

j – employee categories,

h – document types,

x_{ij} – number of documents to be developed by i-position and j-category,

c_{ij} – value of 1 hour of i-position and j-category employee,

t_{ij} – time for development of the document by employees of i-position and j-category.

The developed method of optimizing the cost of man-hours in the project on the basis of network planning is shown in figure 5.

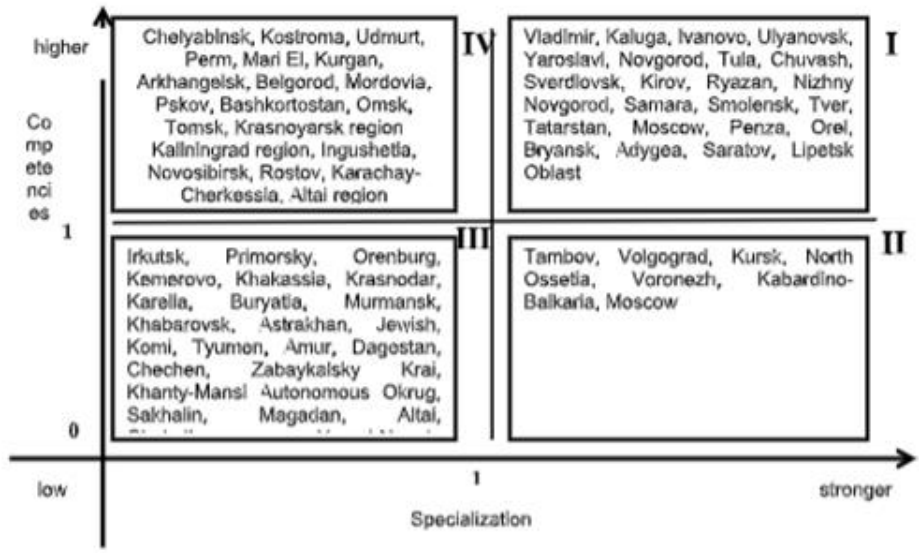

Figure 5. Grouping of regions by the level of "specialization/competence" (compiled by the authors)

The formation of working time fund (Bij) for the model is calculated by the formula:

$$t_{medium} = \frac{PK+40\%}{n},$$

whereB=t_{medium} = working time fund of specialists;

PK – working hours in the daytime according to the production calendar for the whole period or the part of the project;

n – the number of operations in the project or projects in which the specialist is currently involved;

40% is the maximum possible percentage of overtime rate provided by the Labor Code of the Russian Federation (article 94).

The hours to complete the task in the calculated model must be less than or equal to the average time for the operation. In this case, it turns out that there is a limit on the time fund of one specialist; this is done to ensure that the model does not get a situation where all operations are given to specialists of a lower category, since their wages are less.

The project will be perceived conditionally in two types: the first type – with justification of expenses for the laborcosts of implementers, the second type – with justification of expenses for the labor costs of implementers and managers. As a rule, the first type of project has a lower cost, it can be prolonged in time or be one of the elements of a larger project. The second type of project is independent, always limited in time, resources and includes the mandatory presence of a separate project team.

When including managers in the model, we will be guided by the fact that:

- a manager is directly involved in the development of the document, his participation is required; limitation $x_{hji} = 1$;

- a manager does not participate in the development of the document, but his presence is required (signature, communication support, control, etc.); limitation$\sum_{h=1}^{H} * x_{hji} =$ A, where A is the sum of documents of implementers only.

The main basis for methodology application is to determine input works of the project and their cost according to the budget. It is necessary to have a list of possible participants for each input work, who could

cope with this work due to their qualification skills, taking into account required specialists and to register labor intensity in hours and wages per hour for each participant. You also need the result of the task, or what is presented at the end of the task (documentation, model, drawing, etc.).

It should be noted that the loss of productivity in this methodology is included in the level of hours of labor intensity for a particular input work, so the adjustment of the cost of man-hours for the project is made without considering this indicator. The integration of the loss of working time is implemented by the offices of planning and economic development, which forms the basis for the "established"loss of productivity level in the enterprise in the estimated hours of the project.

In summary, the main methods are: comparative method, method of statistical analysis, cost-benefit analysis and expert evaluation. Synergetic and program-target approaches, methods of statistical grouping, expert evaluation, economic-mathematical and optimization models were used to solve the applied aspect.

3. Results

According to the proposed concept of project management on the basis of network planning, the regions are grouped according to the level of "specialization/competence". The analysis is carried out on the basis of the coefficient of localization of instrumentation in a particular territory in two directions: in the context of volume of industrial production of instrumentation and average population involved in the production of this volume of products (Mikhailova, Arsenjeva, & Tregubova, 2017).

The grouping of regions by the level of specialization in instrument engineering allows determining which subjects of the Russian Federation have accumulated a sufficient amount of knowledge, skills and abilities for the execution of a research project in the field of instrument engineering. According to this grouping, the best regions to place an order for development are the regions of the 1st quadrant. The regions of this quadrant have an advantage when placing an order for instrument-making due to the fact that the largest number of specialists of the chosen industry is concentrated in this territory, which ultimately allows you to maneuver with the level of remuneration with the help of categories of specialists. At the same time, the enterprises of these regions show the highest results of their contribution to the economy of the region. However, as for the production tasks, in this case it is necessary to involve the regions of the 2nd quadrants, since at high volumes of production enterprises have fewer personnel, which means that their material and technical equipment of production (The passport of the specialty 08.00.05, VAK).

As for the regions of the 3rd quadrants, their participation in the project is undesirable, since the regions are not specialized and do not have competence in instrument engineering. The regions included in quadrant 4 can be considered for participation in the project in the case when there are many similar research tasks in the project, which specialists with smaller categories will cope with (Tovb, 2010).

Once the regions participating in the project are identified, according to the proposed methodology, it is necessary to select the main players in the instrument-making market of each region on the basis of their greatest contribution to the economy of the region.

Further, according to the proposed concept, it is necessary to build a competence profile of enterprises with a conditional competence profile of the project. After the selection of regions according to the criteria of "specialization/competencies" and selected the main enterprises-"locomotives" of the industry in the regions, a comparison of the competence profiles of the selected enterprises with the competence profile of

the project. Preference is given to those project participants whose competencies best meet the requirements. At the same time, when selecting project participants, it is necessary to set their download at the time of project execution.

The conditional project and its comparison with competencies of selected enterprises is shown in figure 6.

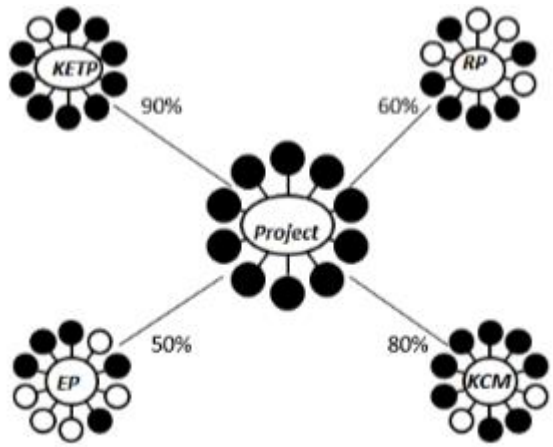

Figure 6. Conditional industrial project with comparison of competence profiles of its potential participants (compiled by the authors

In this case, the necessary competencies of the project and the competencies available to the enterprise of the selected industry are imposed. With the greatest coincidence of competence profiles, the company has the advantage to place an order for instrument-making. Instrument-making enterprises of the Republic of Tatarstan: JSC "Kazan Electrotechnical Plant" (KETP), JSC "Kazan plant "Radiopribor" (RP), JSC "Kazan plant "Electropribor" (EP), JSC "Kazancompressormash" were chosen as an example of coincidence of this industry. Figure 6 shows the conditional coincidence of profiles in the possible selection of project participants.

The project of JSC "Kazan Electrotechnical Plant" (completed in 2018) was chosen for testing the method of optimization of labor costs.

In mathematical form, the approach to optimization on the example of project No. 1 of JSC "Kazan Electrotechnical Plant" can be presented as follows.

The optimality criterion (Kharitonova, 2008) is the following:

$$39\,504\,096 = \sum_{i=1}^{24} \sum_{j=1}^{39} \sum_{h=1}^{20} t_{hji} c_{hji} x_{hji} \rightarrow Z_{min}$$

System limitations in the management of the project №1 of JSC "Kazan Electrotechnical Plant":

$$\begin{cases} \sum_{h=1}^{20} x_{hji} = 73 \\ \sum_{i=1}^{24} \sum_{j=1}^{39} t_{hji} x_{hji} \le 5936 * 39 \\ \sum_{j=1}^{39} t_{hji} x_{hji} \ge C_j \\ \sum_{i=1}^{24} \sum_{j=1}^{39} \sum_{h=1}^{20} t_{hji} c_{hji} x_{hji} \le 39\,504096, \\ x_{hji} \ge 0 \\ x_{hji} = \text{integer}, \end{cases}$$

there are only the main limitations of the proposed methodology, since only implementers are indicated in the contractor's project, and accounting for the salary of managers is included in the amount of overhead costs.

Thus, guided by this logic of calculation, all 73 tasks of the project were recalculated using Microsoft Excel (official site of Microsoft Project) and the add-in "Search for solutions". The result of optimization of labor costs is shown in Figure 7

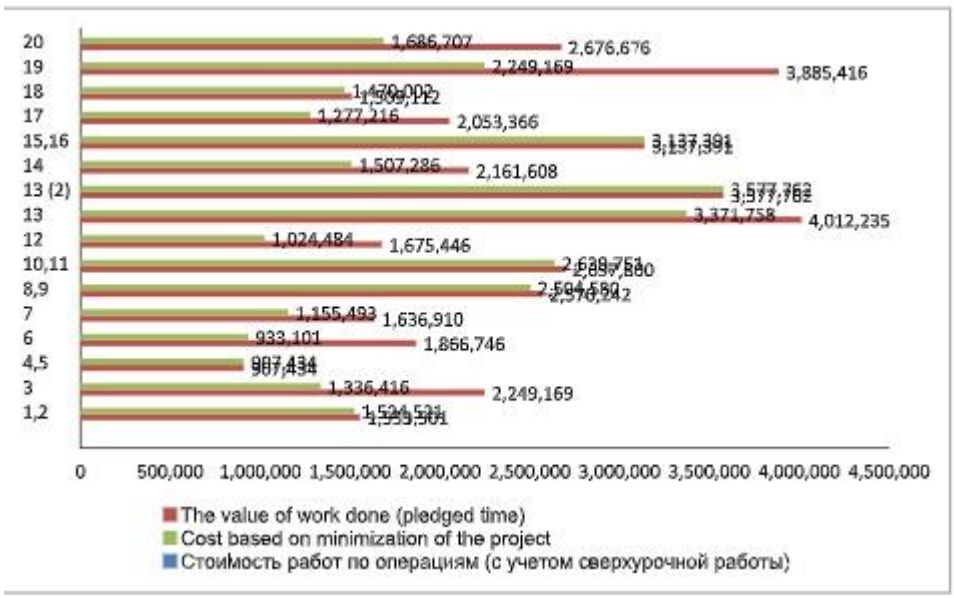

Figure 7. Optimized cost of labor resourses of the project No. 1 (compiled by the authors

Due to the proposed method (the project No.1) there was a decrease in the cost of man-hours by 19% due to the redistribution of functions of its participants, reducing the standard hours of highly paid specialists, and as a result – reducing the minimum wage and twice the amount of overtime paid according to the Labor Code of the Russian Federation. The decrease in overtime hours was by 3 times from 12.630 hours to 3.642 hours, which resulted in the reduction in the cost of man-hours. The employment of highly paid professionals was decreased by 16%, which led to additional savings in financial resources. The average cost of 1 standard hour decreased from 206 rubles to 199 rubles, which is also reflected in the amount of working overtime. The number of specialists involved remained at the same level – 39 people.

4. Discussion

The organization of the project management process in the mesoeconomic system at both sectoral and territorial level is determined by the characteristics and specialization of the region. Accordingly, when choosing the location of a research project, the choice of project implementers should be based on the qualitative and quantitative characteristics of this project implementation in a particular region. This mechanism can become a tool for alternative selection of the project implementer, guided by such quantitative characteristics as the cost of projects. When calculating the same project on the basis of data from different instrument-making enterprises of different regions, you can select an implementer according to the criterion of minimizing labor costs.

Implementation of this mechanism of industrialmanagement contributes to the creation of favorable conditions for economic growth of outsider regions, reducing the level of differentiation of regions and development of their competitiveness at the expense of available human resources and low wages. In other words, regions with lower wages have some advantages in the process of choosing an R&D implementer. But the only condition is the availability of qualified staff to perform the required tasks of the project (Crawford & Helm, 2009).

When managing an investment project at the meso-level, it is possible to create financial reserves for the purpose of project risk management due to distribution of workload by implementers. This approach can be applied both at the level of Contractors and at the level of Implementers. In the case where a Contractor has to determine geographically where the project will be implemented, this technique will help to determine the minimum possible level of financial costs within the project. In terms of the proposed project implementation under the same limitations, but with different levels of remuneration, workload and quality of work of specialists, it is possible to determine the enterprise in the industry that would be able to implement the project in the best way and at lower cost (Crawford & Helm, 2009; Zagidullina, 2013).

The compliance of the results and costs of instrument-making enterprises for the Contractor and Implementer is shown in figure 8.

In other words, on the basis of a performance work statement of the project (approved by the Contractor), the company plans the necessary labor intensity (calculation of the project in terms of purchased materials, components, etc.) to perform the list of input works on the allocated amount of funding for subsequent provision to the Contractor. These data are the starting point for the subsequent determination of project cost and they are specified in the “price adjustment” under the allocated funding. The disadvantage of this cost-effective approach to project management is that types of work are determined without taking into account Contractor’s “knowledge”of possible savings due to the lack of the Contractor’s idea of how much labor force is needed for the project implementation. In this case, labor costs are the criterion of maneuverability of enterprises, when an enterprise can artificially overestimate the labor intensity of individual processes, thereby increasing the price of a project (Sallinen et al., 2011).

However, due to the use of this technique, on the basis of the presented schemes for the complexity of the industry, the Contractor can calculate the minimum possible amount of financial resources at which it is possible to implement the project. In this case, the industry has an element of competition for the order, as the artificial overstatement of labor intensity of processes can lead to a greater amount of project funding at the enterprise, which will lead to the fact that the order will be given to another enterprise in the industry, where the contract price is lower.

Thus, the conducted approbation proved the importance of the proposed method. As a result of labor costsoptimization on the basis of network planning of works, the authors concluded that the use of the proposed approach to the planning of labor costs allows specialists workload in the best way. At the same time, due to the minimization criterion, the method distributes the type of work, starting from specialists of lower categories to specialists of higher categories. In other words, at first there is a maximum workload of specialists of lower category, only then works are distributed between top category specialists. The method of labor costs optimization in the project can be used both at the micro-level (enterprise) and meso-level (within the concept of project management).

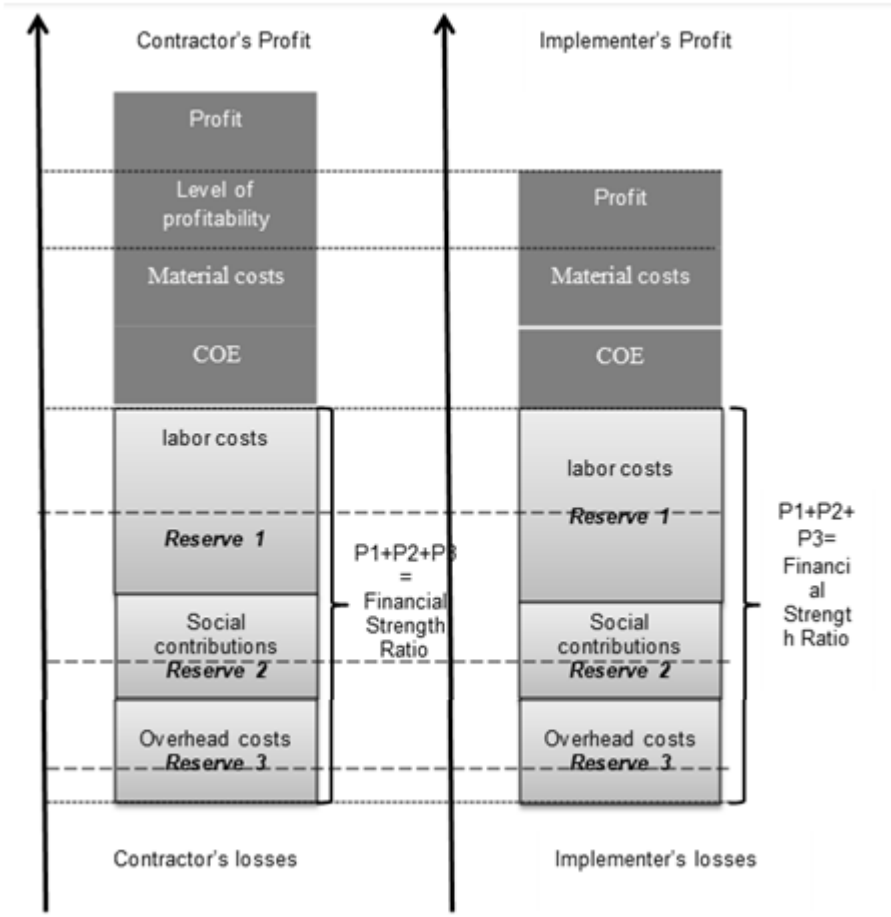

Figure 8. Compliance of results and costs of the project for the Contractor and Implementer, determination of financial strength reserve (compiled by the authors)

The proposed methodological approach for placing the project involves the analysis of instrumentation, the choice of regions based on the criteria of specialization and existing competencies. The largest structural component in the total volume of calculation of the project of instrument-making enterprises is the amount of labor costs. Projects in the field of research and development, the amount of funding of which is determined by the Contractor, the costs of man-hours in the project need to be adequately determined.

According to the general algorithm of the concept:

- the typology of regions by the level of localization of instrument-making, four quadrants in the matrix "specialization/competence", each of which includes the subjects of the Russian Federation are identified;
- recalculated the project of JSC "Kazan Electrotechnical Plant" (based on the methodology);
- the method of labor costsoptimization for the project is formulated, which is based on the

fact that each project involves specialists of different categories who have different speed of fulfillment, a certain order to admission and different levels of remuneration.

Therefore, based on these parameters and introducing limitations on the project associated with the conditions of the Contractor, an economic and mathematical model has been developed that can pick up the numerical variants of specialists of different categories so that the cost of man-hours is minimal. At the same time the technique takes into account the total workload of specialists, keeps records of the amount of overtime. This approach allows determining the cost of work in the project, and creates the amount of financial strength in the management of the project. Among advantages of this method is also an element of competition for the order. Enterprises of one industry in the conditions of receiving the order may overestimate indicators of labor intensity in the project, but in this case, the cost of projects can be reduced to a level that will suit both Contractors and Implementers.

The results of testing the methods of labor costsoptimization are as follows:

- due to redistribution of functions of participants, reducing the workload of highly paid workers and reducing the level of overtime paid twice the amount, there was a decrease in the cost of man-hours in the project by an average of 14%, which led to a decrease in the level of social contributions and a decrease in the level of overhead costs for the same amount.
- the level of financial strength reserve(or reserve for risk management of the project) has been formed, if risk situations do not occur, this reserve becomes the "profit" of the Contractor.

The proposed approach to project management increases the level of investment attractiveness of the territory, serves as the basis for Contractor's confidence in the Implementer, as the quality of the project will remain at minimum project costs. Project management of the high-tech sector is a priority task of the industrial policy of the Russian Federation, and as the Contractor of such projects is, as a rule, the state, first of all, the main factor in the territorial placement of the order will be the criterion of minimizing project costs.

5. Conclusion

The general view of the project management concept at the meso-level in network planning is as follows:

- determining the type of project, its industry and a set of necessary competencies;
- ranking of regions by level of specialization and competence based on the selected indicators;
- selection of enterprises-"locomotives" within each region for compliance with the project competence profile;
- calculation of minimum possible cost of the project on the basis of the proposed method of optimization of the resource support of the project.

The proposed methodological approach addresses the following problems:

- construction of the industry management mechanism on the basis of project management;
- interaction of regions in the implementation of one project, promoting cooperation;
- development of regional intellectual capital;
- project risk management;
- control and supervisory functions of the project;

- allocation of project costs in the contextof resource constraints.

The presented concept of project management based on the optimization of resource provision is one of the possible directions in the field of management of federal and sectoral projects. Taking into account the level of key competencies of regional enterprises, their workload, it is possible to "distribute" the tasks of a large industry project based on the minimization of its cost. At the same time, such a mechanism of industrial policy will not interfere, but it will reveal the potential of the region in the direction of strategic management of its socio-economic development. In general, this mechanism can act as a mechanism for managing the economy of the region in the implementation of large projects in the industry.

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