A Methodological Approach to the Development of a Strategy for Efficient Staff Management in Oil Company

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Abstract. The goal of the research is to create a methodological approach to the development of a strategy for efficient staff management in an oil company. The objectives of the research: to analyse the approaches to the evaluation of staff potential of a company; to find those aspects and qualities that affect the staff management in an oil company; to offer a methodological approach to the strategy for efficient staff management in an oil company; to test the proposed approach in a real oil company. The object of the research is the staff management strategy in a company. The subject of the research concerns indicators and factors of strategic management of staff potential of an oil company. The methodology of the research includes methods of logical analysis, grouping and comparison, generalization, systemic approach. An integral indicator of the staff potential evaluation in a company was proposed as part of the factorial analysis method. The main results and conclusions of the research. The article offers the algorithm for developing an efficient strategy with a view to efficiently manage the staff in an oil company with a number of successive steps: from the evaluation of the level of the staff potential and factors that affect the efficient staff management strategy in an oil company to the recommendations on the selection of an efficient employment strategy. This algorithm offers a complex system of indicators for the assessment of staff system in an oil company and an integral indicator for the staff potential assessment; it also proposes a methodology for the selection of a strategy to manage human resources on the basis of the integral level of staff potential and the level of external environment factors' influence. The proposed methodology can also form the foundation for the development of projects on the identification of priority development areas in human resource management in businesses and their introduction and of measures for improving the efficiency of staff management in companies.
1. Introduction
Strategic personnel management offers a number of benefits for companies that operate in various areas of the life of the modern society. These benefits concern the sustainable management of limited resources, mainly the staff. Moreover, the strategic management makes the staff and management more self-assured, promotes continuous development and implementation of managerial decisions, and moves towards the sustainable market development. Staff management strategy should be comprehensive as it makes the staff more oriented towards achieving the goals of a company's long-term development. In this case, staff management planning becomes part of business planning, and a staff management strategy is therefore viewed as a priority business process.

2. Literature review
Issues of strategic management are covered in the works of the following foreign experts: D.Campbell, J.Stonehouse and B.Huston, H.Mintzberg, Ahlstrand B., Lampel J., Mitchell and Oxley, Norton and Caplan, etc. Some Russian experts who have studied strategic management include I.ansoff, V.Akulov and M.Rudakov, O.Vikansky and A.Naumov, V.Efremov, A.Kozlov, S.Popov, L.Sokolov, Y.Ryuli, S.Schmidt, etc. These publications concern various aspects of strategic management of a company, efficient technologies for strategy management are proposed; the connection between development strategies and sectional strategies is studied; however, the methodological basis for the process management conditions has not been fully developed.

One of the first scientists to study the issues of strategic staff management were P.Bamberger and I.Meshulam. Also among foreign researchers there were M.Armstrong, H. O'Donovan, L.Holbech, E.Delery, P.Boxall, G.Perel, G. Salaman, etc.

In Russia the issues of strategic staff management in a company is considered in the works by T. Bazarov, T. Balueva, O. Gromova, L. Evenko, A. Egorshin, B.Eremin, L.Ivanovskaya, D.Ivantsevich, A.Kibanov, M. Kurbatova, A.Lobanov, M.Magura, E.Maslov, S.Samgyin, S.Shekshni, etc. These publications offer various methods and models for the selection of a staff strategy, but they mainly show the connection to marketing organizational strategies or life cycle of a company.

Methods and technologies for planning and implementation of staff measures and the assessment of the efficiency are presented in the publications by O.Baturina, Y.Vasileva, V.Vesnin, M.Devyatkin, V.Zavarzina, M.Zavyalova, R.Ilyasov, V.Kozlov, M.Shamolin, S.Papenko, E.Morgunov, O.Chulanova, M. Vinichenko, N.Borisenko, etc. However, they all lack a comprehensive approach to staff management strategic planning without considering the connection between the selection of staff-related measures and companies' strategies.

The issues of the assessment and staff management are also explored by M.Albert, R.Grant, G.Ivantsevich, R.Marr, M.Mescon, F.Khedouri, H.Schmidt, E.Tony, S.Gerhardt, F.Johann. E.Evtushenko, M.Gaifullin, V.Dolgov, D.Kotov. A.Mosckalenko, L.Shukina, etc. are among those Russian researchers who study the pertinent issues associated with human resource management in oil and gas sector.

The variety of approaches and opinions on the development of an efficient staff management strategy demonstrates the lack of a unified concept of efficiency and the methodology for its measurement. The analysis of the relevant research indicated differences in the approaches and directions of efficiency analysis of staff management, in the identification of key efficiency assessment criteria, and in the selection of an effective staff management strategy.

3. Methods
In order to manage its human resources effectively, a company should make a number of logical, reasonably required steps that ensure the evidence-based and methodological sequence of measures and solutions. The known methods for the development of an efficient staff management strategy do not sufficiently take into account sectoral aspects of staff management in oil industry. The majority of the popular methods do not account for the complex influence of internal and external factors on the efficiency of human resource management and strategic development of a company. We developed a me-
thod for the creation of an efficient staff management strategy in an oil company based on the integral level of staff potential and the level of the external factors’ influence. Our selection algorithm for an efficient staff management strategy includes 6 steps.

Step 1. Establishing the goal for the strategic staff management in an oil company. The main goal of strategic staff management in an oil company is coordinated and relevant internal and external environment and staff management for the long-term.

Step 2. Calculation of individual indicators for staff potential in a company. When the indicators to be included were selected, the publications by the following authors were studied and organized: Byrenina I. [1], Camoes R. [1], Chulanova O. [3], Edwards T. [4], Gaifullina M.M., Nizamova G.Z. [6], Haghhighi M. [7], Horak S. [8], Keegan A. [9], Klimova I. [10], Lenz S. [11], Mammadova M. [12], Pragale R. [13], Rosness R. [14], Simarova I. [15], Sungatullina L. [16], Zaim H. [17]. The detailed list of individual indicators that we believe should be included into the assessment of staff potential in an oil company is shown in Table 1.

Table 1. Calculation of individual indicators for staff potential in a company.

| Staff potential pillar | Assessment indicator |
|-----------------------|----------------------|
| Qualification pillar in the staff potential assessment | Higher education coefficient \( (K_1) \) |
| | Skill development coefficient \( (K_2) \) |
| | Coefficient of the educational level \( (K_3) \) |
| | Average number of hours of professional training for one student \( (K_4) \) |
| | Average cost of training for 1 employee per year \( (K_5) \) |
| | Number of solutions and innovations per 1000 employees \( (K_6) \) |
| Physical pillar in the staff potential assessment | The share of young employees (younger than 30 years) \( (K_7) \) |
| | Health condition coefficient \( (K_8) \) |
| | Coefficient of physical working capacity \( (K_9) \) |
| | Labour safety coefficient \( (K_{10}) \) |
| | Average costs of healthcare center services per one employee \( (K_{11}) \) |
| | Share of men in the total number of employees, % \( (K_{12}) \) |
| Organization pillar in the staff potential assessment | Staff consistency coefficient \( (K_{13}) \) |
| | Staff replacement coefficient \( (K_{14}) \) |
| | Average employment duration in a company \( (K_{15}) \) |
| | Number of workers per one manager, expert or an employee \( (K_{16}) \) |
| | Career growth coefficient \( (K_{17}) \) |
| Resource and cost pillar of the staff potential assessment | Capital-labor ratio for labour \( (K_{18}) \) |
| | Capital-labor ratio for works \( (K_{19}) \) |
| | Share of costs on personnel in the cost of manufactured products \( (K_{20}) \) |
| | Rate of return on personnel expenditures \( (K_{21}) \) |
| | Production on 1 ruble of personnel expenditures \( (K_{22}) \) |

Step 3. Development of a correlation regressive model of staff potential in an oil company.

At this stage, the most important staff potential indicators are selected that affect the efficiency of human resource management in a company, which is assessed using labour productivity [5]. The correlation coefficient is calculated with the help of statistics functions that are provided as part of Data analysis package in Excel. To calculate the correlation coefficient, you need to:
1 Select the line Correlation in the list of analysis tools that are included in the Data analysis package of MS Excel.

2 Indicate the input interval in the dialogue box, e.g. insert the relevant cell reference.

3 Indicate the output interval, or the reference to the call that will be the first to show the results of the analysis. The size of the output range is determined automatically, and the screen shows a warning, if the output range overlaps the input data.

Then a regressive equation is developed, and its structure is analysed. In order to use the Regression tool, you have to:

1 Select the line Correlation in the list of analysis tools that are included in the Data analysis package of MS Excel.

2 Fill in the dialogue box with data and output parameters:
   - Input interval Y - range that includes the result property data;
   - Input interval X - range that includes the factor property data;
   - Markers - flags that show whether the first line has the names of columns or no;
   - Invariable - zero - flag that indicates whether there is an intercept term in the equation;
   - Output interval - you can simply indicate the left upper cell of the future range;

Then the results of the correlation and regressive analysis produce a system of individual indicators of the staff pillar in an oil company.

**Step 4. Calculation of the integral indicator of staff potential in a company.**

To select indicators for the calculation of the integral indicator of the assessment of staff potential, the results of the correlation and regressive model of staff potential in an oil company were used.

As the indicators of staff potential assessment have different measuring units, we should standardize the units by introducing the unified unit. We believe that a reference value must be found. For example, it can be: 1) best performance in the past few years; 2) average performance in the industry; 3) target performance.

We used best performance in the past 5 years as the reference value:

- maximum - if the staff potential grows with the performance in the analysed period:
  \[ Z_i = \text{MAX} (K_{i1} + K_{i2} + K_{i3} + K_{i4} + K_{i5}) , \]  
  \[ \text{where } 5 \text{ is the number of successive years in the analysed period.} \]
  \[ \text{Ki1...Ki5 - the value of Ki-th indicator for staff potential in an oil company in 1...5 years (where "5" is the number of the current year).} \]

- minimum - if the staff potential grows while the performance deteriorates in the analysed period:
  \[ Z_i = \text{MIN} (K_{i1} + K_{i2} + K_{i3} + K_{i4} + K_{i5}) , \]  
  \[ \text{Calculation of average staff potential indicators in an oil company in 5 years. Then we standardize} \]
  \[ \text{the indicators for staff potential in an oil company by comparing the real numbers (Ki) and the reference value (Ri):} \]
  \[ \Delta K_i \text{ } = \frac{K_i}{Z_i} , \]  
  \[ \text{Then we calculate the deviations of the staff potential indicators in an oil company from the reference values:} \]
  \[ \Delta K_i \text{ } = \text{(1–ΔK̅)} * 100 , \]  
  \[ \text{Then we calculate the score for the deviations in the staff potential indicators in an oil company from the reference values (Table 2).} \]
Table 2. Score for the indicators of staff potential in an oil company.

| Indicator deviation interval | Score given to the indicator (KPi), number of points |
|------------------------------|-------------------------------------------------------|
| from 0 to 10%                | 5                                                     |
| from 11 to 20%               | 4                                                     |
| from 21 to 30%               | 3                                                     |
| from 31 to 40%               | 2                                                     |
| more than 41%                | 1                                                     |

Further we calculate the integral indicator of the staff potential assessment in an oil company as an average score for the deviations of all indicators that produce the maximum score:

\[ I_{kp} = \frac{\sum_{i=1}^{n} KPI}{n*5}, \]  

where KPI is the score for the i-th indicator for staff potential in an oil company; n is the number of indicators in the calculation of the integral level of staff potential in an oil company; 5 is the maximum score of the indicator.

Based on the integral indicator, let us calculate the level of staff potential of a company (Table 3).

Table 3. Rate scale of the level of staff potential of a company.

| \( I_{kp} \)       | Level characteristics |
|--------------------|------------------------|
| \( I_{kp} < 0.35 \) | low                    |
| \( 0.35 \leq I_{kp} < 0.7 \) | medium               |
| \( I_{kp} \geq 0.7 \) | high                  |

Step 5. Analysis and assessment of the environmental factors of a company's operation. At this stage we analyse the environmental factors of a company's operation. External environment of a company is divided into the macro-environment and micro-environment. To analyse the external environment factors, let us consider the factors in Table 4.

Table 4. External environment factors.

| Factors by groups | Factors |
|-------------------|---------|
| 1. Micro-environment factors | 1.1 Suppliers |
|                    | 1.2 Consumers |
|                    | 1.3 Competitors |
| 2. Economic factors of the macro-environment | 2.1 General description of the economic situation (growth, stabilization, recession) |
|                    | 2.2 National currency exchange rate and refinance rate. |
|                    | 2.3 Inflation level and fluctuations. |
|                    | 2.4 Unemployment level and fluctuations. |
|                    | 2.5 Aggregate income distribution. |
|                    | 2.6 GDP fluctuations |
|                    | 2.7 Tax policy |
|                    | 2.8 Energy resource prices |
| 3. Political and legal factors of the macro-environment | 3.1 Stable government. |
|                    | 3.2 Amendments to the legislation. |
|                    | 3.3 Influence of state in the industry, including the share of state property. |
|                    | 3.4 State competition regulation in the industry. |
4. Social and demographic factors of the macro-environment

4.1 Demographic changes.
4.2 Changing revenue structure.
4.3 Labour productivity in the economy
4.4 Social mobility and public involvement

5. Scientific, technical and technological factors of the micro-environment

5.1 State technical policy.
5.2 Meaningful trends in R&D, new products (how fast new technologies are updated and introduced).
5.3 Innovation activity level in companies
5.4 New patents

The level of influence of the external factors on the development of an efficient staff management strategy in an oil company should also be assessed using a 5-score scale: 5 - strong influence, serious danger; 1 - no influence, no threat.

The integral level of the factors' influence is calculated in the following way:

$$I_a = \frac{\sum_{j=1}^{m} EV_j}{m \times 5},$$

(6)

where $EV_j$ is the level of influence of $j$-th factor on a 5-score scale; $m$ is the number of factors; 5 is the maximum influence of factors.

In order to assess the influence of factors, use the scale shown in Table 5.

**Table 5. External environment influence scale.**

| $I_a$          | Influence description |
|---------------|-----------------------|
| $I_a < 0,6$   | weak                  |
| $0,6 \leq I_a < 0,8$ | medium               |
| $I_a \geq 0,8$ | strong               |

**Step 6. Selection of a staff management strategy in a company.**
The sixth step considers the selection of a staff management strategy in a company.

Michael Armstrong distinguishes three strategies for managing human resources:
- resource-oriented strategy;
- strategy oriented towards better development;
- strategy for the development of brain potential, oriented towards active participation and commitment.

Table shows the selection matrix for the human resource management in an oil company in accordance with the strategy system of Michael Armstrong.

**Table 6. Matrix “Staff potential in a company” - level of influence of external environment factors” and the recommended staff management strategy.**

| $I_{kp}$ | $I_a$          | Influence description |
|---------|---------------|-----------------------|
| $I_{kp} \geq 0,7$ | $I_a < 0,6$ | brain potential development strategy |
|         | $0,6 \leq I_a < 0,8$ | brain potential development strategy |
|         | $I_a \geq 0,8$ | strategy, oriented towards better development |
| $0,35 \leq I_{kp} < 0,7$ | | |
|         | | strategy, oriented towards better development |
| $I_{kp} < 0,35$ | | strategy, oriented towards resources |

| $I_{kp}$ | $I_a$          | Influence description |
|---------|---------------|-----------------------|
| $I_{kp} \geq 0,7$ | $I_a < 0,6$ | brain potential development strategy |
|         | $0,6 \leq I_a < 0,8$ | brain potential development strategy |
|         | $I_a \geq 0,8$ | strategy, oriented towards better development |
| $0,35 \leq I_{kp} < 0,7$ | | |
|         | | strategy, oriented towards better development |
| $I_{kp} < 0,35$ | | strategy, oriented towards resources |
The resource-oriented strategy is recommended for companies that are strongly influenced by the external environment and high level of staff potential development. The goal of this strategy is to reach a strategic balance between resources and favourable conditions for receiving added value due to efficient use of the staff potential of the company. This strategy envisages more expenditures on social and personal competencies of the staff (discipline, responsibility, diligence) and support for the necessary professional skills (education, training).

Strategy oriented towards better development indicators envisages more funding for programmes aimed at a broader range of human resources’ competencies (professional, organizational, social and personal ones, etc.).

Brain development strategy oriented towards more involvement and commitment promotes better engagement of professionals in the development, introduction and distribution of innovations (in-depth knowledge in the area, creative thinking, teamwork and individual work skills, continuous education, capacity building, innovations and creative solutions). Here the prerequisite is better commitment of the professionals of the company due to mutual trust and partnership with the employer.

4. Results

The proposed methodological approach was tested using the case of the oil company Gazprom Neft, PJSC.

Values of individual indicators for staff potential in the oil company Gazprom Neft, PJSC are shown in Table 7.

| Designation | Exponent | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  |
|-------------|----------|-------|-------|-------|-------|-------|-------|-------|
| C1          | Coefficient of the higher education, % | 38    | 39    | 41.5  | 39.7  | 40.4  | 41.4  | 43    |
| C2          | Coefficient of skill development, % | 34.09 | 30.99 | 75.20 | 88.57 | 81.46 | 83.47 | 87.47 |
| C3          | Coefficient of the educational level, points | 3.98  | 3.98  | 4.06  | 3.97  | 3.99  | 4.03  | 4.08  |
| C4          | Average number of hours of professional training for one student, hour/person | 13.4  | 12.5  | 29.5  | 35.7  | 35.7  | 36.3  | 45.9  |
| C5          | Average cost of training for 1 employee per year, rubles | 2523  | 4547  | 9558  | 10933 | 7621  | 11226 | 16433 |
| C6          | Number of solutions and innovations per 1000 employees, psc | 0.170 | 0.182 | 0.232 | 0.278 | 0.453 | 0.635 | 0.845 |
| C7          | The share of young employees (younger than 30 years), % | 23    | 29.3  | 23.0  | 24.0  | 24.0  | 23.0  | 22.0  |
| C8          | Coefficient of health, decimal quantity | 0.984 | 0.986 | 0.988 | 0.988 | 0.990 | 0.990 | 0.992 |
| C9          | Coefficient of physical working capacity | 58    | 48    | 58    | 57    | 57    | 61    | 63    |
| Designation | Exponent | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|-------------|----------|------|------|------|------|------|------|------|
| C10 | Labour safety coefficient, accidents per 1000 people | 57.9 | 65.0 | 58.9 | 50.0 | 40.6 | 37.9 | 34.2 |
| C11 | Average costs of healthcare center services per one employee, rubles per person | 1726.9 | 2001.9 | 2067.1 | 2895.3 | 1956.6 | 2917.8 | 3542.4 |
| C12 | Share of men in the total number of employees, % | 64 | 65 | 62 | 60 | 61 | 61 | 59 |
| C13 | Staff consistency coefficient, decimal quantity | 0.842 | 0.846 | 0.811 | 0.843 | 0.838 | 0.848 | 0.849 |
| C14 | Staff replacement coefficient, decimal quantity | 1.000 | 1.020 | 0.985 | 1.154 | 1.061 | 1.035 | 1.068 |
| C15 | Average employment duration in a company, years | 11 | 11.846 | 12.657 | 13.5 | 14.338 | 15.186 | 16.035 |
| C16 | Number of workers per one manager, expert or an employee, people | 1.632 | 1.564 | 1.452 | 1.297 | 1.211 | 1.059 | 0.996 |
| C17 | Career growth coefficient | 8.6 | 9 | 8.4 | 11.90 | 12.00 | 13.21 | 12.1 |
| C18 | Capital-labor ratio for labour, billion rubles/people | 11.29 | 13.83 | 16.00 | 22.50 | 25.66 | 27.40 | 32.12 |
| C19 | Capital-labor ratio for works, billion rubles/people | 18.2 | 22.7 | 27.0 | 39.8 | 46.9 | 53.3 | 64.4 |
| C20 | Share of costs on personnel in the cost of manufactured products, % | 5.51 | 4.19 | 4.64 | 5.11 | 6.17 | 6.32 | 5.77 |
| C21 | Rate of return on personnel expenditures, % | 0.37 | 0.44 | 0.39 | 0.21 | 0.15 | 0.25 | 0.30 |
| C22 | Production on 1 ruble of personnel expenditures, rubles*/rubles | 22.74 | 29.17 | 26.28 | 23.24 | 19.11 | 18.72 | 20.69 |
| Y | Labour productivity, thousand rubles/person | 17482.4 | 22481.7 | 22646.3 | 24484.7 | 23729.3 | 24534.2 | 29077.0 |
Further, the correlation and regressive analysis showed the meaningful individual indicators for staff potential in the oil company Gazprom Neft, PJSC, based on their influence on labour productivity; their reference and standardized values were established; the scores were given. As a result, the integral assessment indicator for staff potential was calculated (Table 8).

**Table 8. Calculation of individual indicators for staff potential in the oil company Gazprom Neft, PJSC.**

| Exponent                                      | 2015 | 2016 | 2017 |
|-----------------------------------------------|------|------|------|
| Aggregate score for individual indicators     | 95   | 98   | 103  |
| Maximum possible score                        | 110  | 110  | 110  |
| Integral indicator of staff potential assessment | **0.86** | **0.89** | **0.94** |

**Description of the staff potential level**

|               | 2015 | 2016 | 2017 |
|----------------|------|------|------|
| high           | high | high |      |

As a whole, in 2015-2017 the integral indicator for staff potential in the oil company Gazprom Neft, PJSC grew. The level of staff potential in the oil company can be described as high during the accounting period.

In 2016 the staff potential decreased due to the fall in the share of young employees and in the number of workers per one manager, expert or employee. However, due to better labour safety and more expenditures on the healthcare centers’ services per one employee, the total integral value of staff potential increased.

Staff potential growth in the company in 2017 was influenced by the positive rate of return on personnel and increased production output per 1 ruble of the personnel expenditures.

The calculation of the integral level of influence of external factors that influence the development of an efficient staff management strategy in the oil company Gazprom Neft, PJSC is shown in Table 1.

**Table 9. Calculation of the integral level of influence of external factors.**

| Factors by groups                                      | 2015 Influence level | Influence description | 2016 Influence level | Influence description | 2017 Influence level | Influence description |
|--------------------------------------------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|
| 1. Micro-environment factors                            | 0.53                 | weak                  | 0.60                 | medium                | 0.40                 | weak                  |
| 2. Economic factors of the macro-environment            | 0.78                 | medium                | 0.75                 | medium                | 0.63                 | medium                |
| 3. Political and legal factors of the macro-environment | 0.50                 | weak                  | 0.60                 | medium                | 0.60                 | medium                |
| 4. Social and demographical factors of the macro-environment | 0.55                | weak                  | 0.55                 | weak                  | 0.50                 | weak                  |
| 5. Scientific, technical and technological factors of the micro-environment | 0.55                | weak                  | 0.65                 | medium                | 0.70                 | medium                |
| The integral level of the factors' influence (Iф)       | **0.62**             | medium                | **0.65**             | medium                | **0.58**             | weak                  |

As a whole, in 2017 the factors exert weak influence on the development of an efficient staff management strategy in the oil company Gazprom Neft, PJSC.

The calculation of the staff potential and influence of external factors determined the recommended staff management strategy in the oil company Gazprom Neft, PJSC (Table 2).
Table 10. Selection matrix for the recommended staff management strategy in Gazprom Neft, PJSC.

| $I_{kn}$ | $I_{ф}$ | $I_{ф} < 0.6$ | $0.6 \leq I_{ф} < 0.8$ | $I_{ф} \geq 0.8$ |
|---------|---------|--------------|----------------|--------------|
| $I_{kn} \geq 0.7$ | 2017 | brain potential development strategy | brain potential development strategy | |
| $0.35 \leq I_{kn} < 0.7$ | 2015, 2016 | | | |
| $I_{kn} < 0.35$ | | | | |

The recommended strategy for the brain potential development envisages the following:
- more engagement of professionals in the development, introduction and distribution of innovations;
- continuous education and capacity building;
- development of professional skills;
- promotion of loyalty and commitment of the employees towards the company.

5. Discussion
The integral indicator for staff potential in the oil company Gazprom Neft, PJSC shows that as a whole in 2015-2017 the integral indicator for staff potential in an oil company grew throughout the accounting period. The level of staff potential in the oil company can be described as high during the accounting period.

The assessment of factors that influence the formulation of an efficient staff management strategy in the oil company Gazprom Neft, PJSC established that the following factors were the most influential: scientific, technical and technological factors; economic factors of the macro-environment and political and legal factors of the macro-environment.

The calculations to establish the staff potential and identify the factors that influence labour productivity, in order to develop the brain potential in the oil company Gazprom Neft, PJSC, we recommend the following:
1) enhance the engagement of employees in the working process, improve their motivation, reduce the staff turnover.
2) improve capacity building to develop the staff's competences.

Then with the help of regressive analysis, we developed a regression equation that showed the correlation between labour productivity ($Y$) and individual staff potential indicators ($K_i$):

$$Y = 56073.77K_3 + 33539.87K_{14} + 401.75K_{17},$$

where $K_3$ is the coefficient of educational level, score;
$K_{14}$ - Staff replacement coefficient, decimal quantity;
$K_{17}$ is the career growth coefficient, %.

The equation is correct as:
- the determination coefficient R-square equals 0.85, which means that the function with the necessary degree of approximation describes the relevant phenomenon;
- the estimated value of the F-test 14.80 falls within the critical interval $(9.28; +\infty)$, which means that the determination coefficient of the established regression connection is meaningful;
t-statistics is higher than p-values for the coefficient, therefore the factor is meaningful.

6. Conclusion
The developed method for assessing staff potential in an oil company is based on the calculation of the integral indicator for staff potential in a company that incorporates a number of elements of staff...
potential: qualification pillar, physical pillar, organizational pillar and resource and cost pillar of the assessment of staff potential.

2 The proposed methodological approach to the assessment of factors that influence the development of an efficient staff management strategy in an oil company includes scores for the factors and an assessment matrix for the influence of the external environment.

3 The developed algorithm for the selection of a staff management strategy in a company includes the indicator system for staff potential, calculation of the integral indicator for staff potential in a company and selection of a staff management strategy in a company taking into account the influence of the external environment where the company operates.

4 The results of calculating the integral indicator for staff potential and the level of influence of factors that determine the efficient staff management strategy in the oil company Gazprom Neft, PJSC allowed to recommend the brain potential development strategy that envisages the following: more engagement of professionals in the development, introduction and distribution of innovations; continuous education and capacity building; development of professional skills; promotion of loyalty and commitment of the employees towards the company.

5. On the basis of the regressive analysis of how the factors influence labour productivity in order to implement the brain capacity development strategy in Gazprom Neft, PJSC, we recommend: 1) enhance the engagement of employees in the working process, improve their motivation, reduce the staff turnover; 2) improve capacity building to develop the staff’s competences.

References

[1] Burenina I, Evtushenko E, Kotov D, Battalova A, Gaifullina M, Gamilova D 2017 Integral Assessment of the Development of Russia’s Chemical Industry Journal of Environmental Management and Tourism vol 8 5 pp 1075-1085

[2] Camoes Rabello, Rafaela Costa, Nairn Karen, Anderson Vivienne 2019 Working within/against institutional expectations: Exploring recommendations for social investment in the Oil and Gas sector Extractive industries and society-an international journal vol 6 Issue 1 103-109

[3] Chulanova O L, Vinichenko M V; Borisenko N S 2018 Perfection Of Personnel Estimation In The Course Of Selection To Improve The Loyalty Of New Employees in the Organizations Of The Oil And Gas Complex And The Chemical Industry Of The Khanty-Mansiysk Autonomous District-Ugra Modern journal of language teaching methods vol 8 Release 10 519-530

[4] Edwards T, Schnyder G, Fortwengel J 2019 Mapping the impact of home- and host-country institutions on human resourcemanagement in emerging market multinational companies: a conceptual framework Hunderbird international business review vol 61 Issue 3 531-544

[5] Gaifullina M M, Nizamova G Z, Makov M M 2018 Forming a strategy for effective management of human resources of an oil company Oil industry 4 8-11

[6] Gaifullina M M, Nizamova G Z, Musina D R, Alexandrova O A 2017 Formation of strategy of effective management of fixed production assets of oil company Advances in Economics, Business and Management Research volume 38 pp 185-190

[7] Haghighi M, Taghdisi M, Hossein, Nadrian H 2017 Safety Culture Promotion Intervention Program (SCPIP) in an oil refinery factory: An integrated application of Geller and Health Belief Models Safety science vol 93 76-85

[8] Horak S, Farndale E, Brannen Mary Yoko 2019 International human resource management in an era of political nationalism Thunderbird international business review vol 61 Issue 3 471-480

[9] Keegan A, Brandl J, Aust I 2019 Handling tensions in human resource management: Insights from paradox theory German journal of human resource management-zeitschrift fur personalforschung vol 33 Issue 2 79-95

[10] Klimova I V 2017 Instructional maps of safe working methods and practices for separate types of operations conducted in the oil mine Journal of mining institute vol 225 354-359

[11] Lenz S, Pinhanez M, Urtubey de Cesaris, Luis Enrique 2016 Open innovation and the
challenges of human resource management International journal of innovation management vol 20 Issue 7

[12] Mammadova M H, Jabrayilova Z G 2018 Decision-making support in human resource management based on multi-objective optimization Twms journal of pure and applied mathematics vol 9 Issue 1 52-72

[13] Pragale R, Patel A, Bresden R 2016 Arc flash KPI compliance at a large oil & gas company The conference: Petroleum and Chemical Industry Technical Conference (PCIC): Philadelphia 19-22

[14] Rosness R, Haavik T K, Steiro T 2016 Cultural values and career goal of gen-x and gen-y employees: evidence from selected malaysian Companies organizations and markets in emerging economies vol 7 Issue 2 43-64

[15] Simarova I S, Ilyina D A, Rudneva L N 2015 Methodological Approach to Quality Rating of HR-Processes’ Effectiveness in Organizations Upravlenets-the manager Release 3 34-40

[16] Sungatullina L B, Neizvestnaya D V 2017 Perspective assessment of personnel compensation level. Ad alta-journal of interdisciplinary research vol 7 Special Issue 2 76-80

[17] Zaim H 2016 Analysing the effects of knowledge management processes on human resource management practices: a case study on an oil company in the Gulf region Middle east journal of management vol 3 Issue 3 230-243