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MEASURES OF MOTIVATION IN FINANCIAL SECTOR BUSINESS LEADERS

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This article presents the results of research conducted on a sample of a financial organization business leaders to identify the key scales of the motivational space that determine labour activity. The research used a motivational task procedure (Strizhova, Gusev, 2013), which evaluates a person’s field of motivational objects and reconstructs their motivational space. The conditions for the solution of a motivational task are realized in Motivation Map method. The diagnostic procedure places a list of motivation objects in a 2-dimensional graph space of evaluation scales. As a result of multidimensional scaling of the data obtained, empirical scales of labour activity motivational space were obtained: Personal Priority, Social Importance, Personal Potential.

JEL Classification: Z.

Keywords: labour motivation, motivation factors, talent pool, business leaders, talent management, motivational task, motivational map, Russia.

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Introduction

The development of leaders is a priority for an organization’s HR management. Leaders are the participants of focused development programs, their achievements and competencies are regularly evaluated to decide whether a leader is ready for an appointment. In this regard, motivation is important, since working effectively in the current position and the necessary competencies are necessary, but not sufficient to predict the success in a new position.

Workplace motivation is a key point of talent management. Whether it is positive or negative for each motivational factor can influence a leader’s commitment and career progress. In order to prevent talented business-leaders from leaving, HR-managers or psychologists should have a straightforward system for assessing key motivation factors for the group and for the individuals.

Bernard, Mills, Swenson and Walsh (2005) describe motivation as “purposeful behaviour that is ultimately directed toward a fundamental goal” (pp.129). They propose that due to the randomness of behaviours and interests, an individual’s differences may be guided by motives. Based on this, this study investigates which guiding factors or motives are the main ones in business leaders’ motivational space.

This article presents the results of research conducted in the financial sector to identify the key scales of the motivational space which determine the labour activity of business leaders. The study is also exploratory for the new measurement tool - Motivational task procedure (Strizhova, Gusev 2013).

Motivation: studying problems

The motivational sphere of the personality is the core link in its psychological organization, making it possible to study the activity, semantic and emotional spheres, and giving a better understanding of human behaviour. This problem has been considered by researchers from various fields such as psychology, sociology, management, economics.

Modern motivation psychology combines both theories and experience. Researchers create models focused on quantitative methods and actively use mathematical tools to create structural models. Quantitative methods have become more popular than qualitative ones, and researchers have shifted their emphasis from studying the relationships between structures to the structures themselves (Creswell, 2014; Catania, Randall, 2013; Ahmed et. all, 2010).

In order to study motivation it is necessary to be able to accurately and correctly evaluate it. In this context, psychodiagnostics and psychometrics consider a number of problems that require more in-depth study (Dar, 2014; Dysvik, Kuvaas, 2013; Park, Rainey, 2012).
The forces which influence human behaviour lie in the internal-external dichotomy. Motivation is understood as an impulse originating within the body, representing an instinctive need, the subject of a certain need, and an internal activity determinant. On the other hand, the notions of “valence”, the force possessed by the objects of the external world capable of "attracting" and "repelling" the individual, and of stimulation were developed.

Motivational phenomena were considered as a meaningful class of activity purposes, existing in the form of stable value dispositions of a higher order that are not congenital, but dependent on social norms or acquired as a result of learning. At the same time, a number of authors distinguish the class of innate needs. Analysing various approaches to the consideration of motivational phenomena, Viliunas notes two possible accents: on the subject or on the energy characteristics. He considers the nature of motivation which consists of the dynamic interconnection of external and internal phenomena, a process within which a person selects their behaviour based on the expected consequences occurring in the interaction of the individual and the situation (Nutter, Hekhausen) and the concept of motive as an object meeting a need (Leontiev, 1978) or a motivational object (Nutter, 1985).

**Motivational objects in Nutten’s motivation theory**

Nutter’s motivation theory unites different traditions of motivation study: behaviourist, psychodynamic, humanistic and cognitive (Nutter, 1985; Pratarelli, 2012). According to the author’s conception, the one-sidedness of previous approaches is largely overcome.

The starting point of Nutten's motivation model is the system of human-world interaction. Motivation is defined in terms of a preferred relationship between the human and its environment which emphasizes dynamic and purposeful behaviour. Since the way behaviour is understood largely determines the understanding of motivation, the author suggests a model of behaviour. In his concept, Nutten uses such concepts as motivation, need, motivational object and behaviour.

Behaviour means the aggregate of all mental functioning, whereas the behavioural process itself is the relation or interaction with the object or the impact on it. Therefore, the personality, according to Nutten, cannot exist without a link with the behavioural world.

According to the attitudinal motivation model, need is defined not as deficit state, but as an innate functional self-development dynamism. Objectness, non-adaptability and hierarchy are the main characteristics of needs in this case. Need objectness is the relationship between the individual and the world, and the needs themselves depend on the environment. The non-adaptability of the need brings the “relative” model closer to the views of Allport (DATE?) and
representatives of humanistic psychology: a person not only adapts to the world, but also adapts the world to his needs, goals and objectives (Nuttin, 1985). The principle of heterarchy reflects that although there are qualitatively different needs relating to different levels of relations with the world, some kinds of needs cannot be derived from others. The term need is used to refer to a fundamental component of living beings functioning. In Nutten’s motivation theory need is a basic behavioural motivation concept. Motive in contrast refers to a particular need’s manifestation. Motives are related to the dynamic and guiding aspects of a particular action. In the attitudinal model, the term motive denotes a particular object or goal which induces a subject’s behaviour. In this case, the term motivation is understood as an equivalent to motive. Motivation refers to the dynamic, guiding aspect of behaviour, and determines the direction of a particular behaviour to one category of objects.

Nuttin identifies two trends in human motivation. The first is self-determination and the second is the need for contact (Nuttin, 1985). These needs can be seen as more fundamental directions of behaviour, closely related to each other, and present in a specific motivational structure.

The attitudinal model unifies cognitive, motivational and motive functions in a single behavioural process. Nutten develops the original concept of a temporal perspective, considering its influence on behaviour, primarily as the function of cognition. The temporal perspective is mainly the perception, at some given time, of events which are objectively represented as a sequence. The temporal perspective does not exist in the perception space, but can only be represented cognitively. Along with objects and phenomena that are actually perceived by the person "here and now", our mind is also full of various objects which the individual thinks about from time to time, and which stimulate his activity no less than the ones directly perceived.

These objects-targets or, in the terminology of Nutten, "motivational objects", are signs or time indices. The temporal perspective assumes that events with their time signs are in a temporal perspective, just as objects existing in space are seen from a visual perspective. Temporal perspective is understood as temporal change in the behavioural world.

**Motivation diagnosis specificity**

The diagnosis of motivation (including work motivation) has reportable and unreportable components, and dispositional and situational formations. Despite a large number of tools, the problem of diagnosis is still relevant. Most tools are applied either to reportable or to unreportable aspects of motivation. A few work at the junction of direct and indirect approaches such as Nutten’s motivational induction method. This is built on the principle of unfinished
sentences, but processing the results of such (semiprojective) methods requires a diagnostician and is difficult to automate.

There are very few diagnostic tools to evaluate motivation at work, but many for assessing general motivation, including the Individual motivation test developed by Shmelev (www.ht.ru); Kokurina’s labour motivation study method; Kupriyanov’s labour motivation questionnaire; Osin, Ivanova, Gordeeva’s professional motivation questionnaire (PMQ), Hogan (MVPI). Methods to evaluate an individual’s general motives are often used, such as power, achievement, avoidance, leadership, affiliation (Shpakin’s power, motivation, achievements and affiliations questionnaire, Mehrabian’s achievement motivation questionnaire, Hekhausen’s achievement motivation questionnaire, Nigard and Giesme’s questionnaire for measuring success motivation and failure avoidance). Motivation diagnosis involves mainly the use of questionnaires and test methods: psychosemantic, projective and semiprojective tools (TAT, Solomin’s "psychosemantic technique for the diagnosis of hidden motivation", Shmelev and Babina’s "test of humorous phrases", Nutten’s “method of motivational induction”) constitute a small share of the total number of methods (Strizhova, Gusev, 2014).

In order to take into account the specifics of motivation, it is necessary to ensure a movement toward a "synthetic" procedure that would include its conscious and unconscious components under experimental conditions. Some existing techniques create a number of special conditions for testing by immersing the subject in a situation of choice and comparison. For example, Kokurin considers motivation in three situations (money, collective and labour), while the procedure contains a mechanism for comparing the proposed statements with the forced choice of one of them; Richi and Martin require the distribution of 11 points among 4 statements-answers to questions weighing alternatives (Richi, Martin, 2009).

Taking into account this tendency in the development of methodological tools for motivation diagnosis, and the urgency of creating specialized tools for evaluating the motivation for work, a methodical tool for evaluating motivation for labour activity was developed, which presupposes the decision of a specially designed motivational problem for the subject under conditions of forced comparison of motivational objects for a number of evaluative dimensions (Naile, Selesho, 2014).

Motivational task as a method for diagnosing motivation

Motivational task as an approach to motivation diagnosis (Strizhova 2012; Strizhova, Gusev, 2013) is based on the transition from “pure motives” to the motivation measurement principle within the framework of a solution to a "motivational problem”. The working concept
of “motivational problem” is based on Leontiev’s definition of a problem as a goal given under certain conditions (1978). In this regard, the motivational problem is understood as a tool for consistent human reflection on the actual field of motivational objects and the subsequent reconstruction of their individual motivational space on this basis.

Motivational objects (Nutten, 1985) are different but functionally identical objects, which are the manifestations of general needs that underlie a wide variety of motivations.

The term “subjective motivational space” was used with multidimensional scaling (Gusev, Utochkin, 2011).

The operationalization of the motivational problem relies on Lewin’s (2008) idea of psychological fields. Field theory assigns the key role to the dynamic aspect of need, whereas objectification puts the main emphasis on valence or each object’s properties. The analysis within the concept of the psychological field should be focused on the content of needs and the presence of the valence of motivational objects. It is useful to talk about the motivational field as a field of motivational objects interacting with a subject.

**General description of the algorithm for the motivational task resolution**

1. **Conditions of the motivational task**

   In order to establish a diagnostic procedure based on the resolution of a motivational task, we developed its conditions, an algorithm for its resolution, and a selection of motivational objects. For this purpose an empirical survey was conducted using 15 motivational objects (see fig.1) relevant to the respondent’s work, and the evaluation scales.

2. **Ordering the motivational objects**

   The first condition of the motivational task is based on the hierarchy of motives and determines the need for the respondent to order the motivational objects according to their subjective prioritizing (Leontiev, 1978). The researcher collects information about the hierarchy of the motivational preferences of the respondent.

3. **Location of the subjective centre of a motivational space**

   This condition is justified by the concept of a psychological field by Lewin and the concepts of figure and background developed in the gestalt psychology (Lewin, 2008). According to him, the psychological field is the structure where the behaviour of an individual takes place. It comprises the motivational orientations of an individual and their objectives. This condition defines the subjective centre of the coordinate system, which builds part of the background for motivational objects of subordinate priority. A motivational sphere with one or
more centres is developed in the set coordinate system with the most important motivational objects serving as the centres.

The respondent, along with comparing motivational objects while placing them within the frame of two evaluation scales, shapes the next condition of the task setting. By these means a reconstruction of the respondent’s motivational field and its graphical representation are made possible.

4. Multiple comparative appraisal of motivational objects.

This condition of the motivational task employs the classical principle of indirect scaling developed by Terstown, acquiring scale variables through multiple comparative appraisals conducted by the examinee. Multiple comparative appraisals strengthens the reliability of the conclusions. First, it is known that the comparison of the objects against a specified quality has advantages over direct estimation. The comparative appraisals made enable the registration of conscious and unconscious motivational components. Second, this procedure minimizes the impact of social expectations present in most popular questionnaires.

This procedure can be expressed graphically ensuing the reconstruction of a multidimensional subjective motivational space. The fourth condition is determined comparing the motivational objects with the previous ones. It encourages the examinee to conduct comparative appraisals of the motivational objects and then place these objects against each other in a graphical coordinate system with subjective centres determined by the priority of the objects.

We assume that the subjective centres have a leading role in developing the respondent’s internal coordinate system during the comparative appraisal of the motivational objects. Through repeated reflection the respondent reconstructs a motivation field graphically defining the subjective relations between its objects and so communicates important psychodiagnostic information about the field.

While placing the second and sequential objects the axes of the graphical space become tentative, their function reducing to determining the location of the new objects against the ones already introduced. Every new object adds to the tentative character of the axes, as the respondent has already selected the subjective measure when placing the first and second most important motivational objects.

This assessment procedure ensures there is a proper balance between the direct and indirect measurement of motivation, which increases the reliability of the motivation assessment conclusions.

5. Sequential refinement of the motivational objects appraisals
This condition is consistent with the third and gives the most accurate and reliable appraisal possible. This condition is based on the feasibility of correcting the previously introduced objects as a result of the sequential inclusion of new objects into the graphical space. This encourages the examinee to review their attitude to the objects already in the field and to the spaces between these objects; such a review is triggered by every new object. As the priority of every new object is lower than that of the previous one, the increased cognitive complexity associated with the review and reassessment of the personal attitude to the motivational objects is compensated for by the decrease in the cognitive complexity associated with the evaluation of the less important objects. This fifth condition provides an opportunity to specify the subjective idea of relations between the motives and enhances the accuracy and reliability of the comparative appraisals.

The final condition of the task placing money (which was not suggested to the respondent for primary ordering) within the graphical space after the respondent had placed all the previously suggested motivational objects. Money may serve a purpose of work motivation assessment due to the fact that it reflects the material interest-based motivation and provides an opportunity for assessing the influence of material incentives on the immaterial motives of the examinee. The sixth condition encourages the examinee to reassess the whole system of their assessments of the motivational objects. The inclusion of this condition allows us to acquire information about competing motives, which is important for any employer when developing material and immaterial incentive programs.

**Registered parameters of the motivational task**

In the course of the task the following parameters of diagnostic interest are acquired: the time required to resolve the task; the order of the motivational objects; the absolute estimations of the motivational objects; the relative estimations of the motivational objects perceived as the Euclidean distances between the objects; the absolute estimations of the motivational objects after money had been introduced; the relative estimations of the motivational objects perceived as Euclidean distances between the objects when placed within the frame of assessment criteria after the object of money had been introduced.

**Empirically testing the methodology**

The methodology of the Motivational Map was empirically tested on 206 Russian speaking respondents employed in the finance sector (Strizhova, 2014). The construct validity of the methodology was assessed using regression analysis. The scales used in the standard
Methodologies of work motivation assessment served as the independent variables, while the parameters registered by the developed methodology served as the dependent variables. In the course of the validity analysis 32 highly important regression models were established; their explanatory dispersion ranging between 50% and 70%.

The retesting reliability was assessed through a comparison of the factor structures deduced from the parameters registered by the methodology. Correlation coefficients ranging between 0.61 and 0.84 were established.

The representational force of the methodology was established through the assessment of the normality of distribution of the registered parameters: for 87% of the parameters a normal distribution was confirmed (Strizhova, 2014).

Method

Sample

The research involved 420 people aged 22 to 55 years, of whom 210 (50%) were women; all of respondents have higher education; 310 people (73%) were line managers in financial organizations, 110 people (27%) were middle managers working in the financial sector.

Stimulant material

The "Motivation Map" technique (Strizhova, Gusev, 2013) was used, programmed for the demonstration of data about the respondent on the computer monitor (see Fig.1.):

- a set of instructions which implement an algorithm for solving the motivational task;
- a standardized list of motivational objects for financial sector employees (such as "career growth", "status", "pleasure", “inspiration from work”) (Strizhova, Gusev, 2013)
- a scale for the evaluation of motivational objects, grouped in pairs within the same coordinate system and presented to respondents graphically in electronic form:
  - 1) “Importance”–“Success probability”,
  - 2) “Progress”–“Difficulty”,
  - 3) “Effort”–“Cause” (Strizhova, Gusev, 2013).
Fig. 1. The electronic form “Motivation Map”

Text in Russian on Fig 1.

Instructions for the respondent. Importance: the importance extent of each of the above stated purposes

List of motivational objects:
1. Stability. Confidence in the future
2. Career development
3. Status
4. Realization of personal potential at the workplace
5. Usefulness and pertinence to others
6. Work results
7. Dismissal
8. Avoidance of conflict situations
9. Work organization and optimization
10. Family welfare
11. Vacation
12. Merits recognition
13. Pleasure and inspiration from work
14. Professional and personal development
15. Respect of colleagues

Scales: Importance, Success probability.
Procedure

The research was timed. Each respondent participated in the research individually working on a computer. The procedure included a standard set of steps.

Step 1. General briefing.

Step 2: Familiarization with the wordings of motivational objects.

Step 3: Familiarization with the coordinate system of form No. 1 ("importance" and “success probability”).

Step 4. Selection of the most important motivational object and charting the object on the coordinate system (dragging the number of the motivational object with the cursor).

Step 5. Selection of the next most important motivational object and charting it on the coordinate system in relation to the first one.

Step 6. Charting of the subsequent motivational objects in descending priority order with the possibility of adjusting the position of any of them.

Step 7: Familiarization with form №2 and repetition of steps 4,5,6.

Step 8. Familiarization with form №3 and repetition of steps 4,5,6.

Step 9: Next, the respondent is presented three electronic forms, one after another. Each form contains motivational objects already placed by him on the coordinate system. In addition, the chart shows a new motivational object, "Money", and the respondent is given instructions to place it in the coordinate system. In this case, the respondent may change the position of any motivational object charted on the form.

During the test the following indicators were defined by the computer program:

- questionnaire parameter: the time taken by the respondent;
- motivational object selection order;
- the absolute evaluation of the 15 motivational objects in the space of all rating scales pairs (i.e. projection of motivational objects for each rating scale) up to "Money";
- 16 motivational objects absolute evaluation in rating scales space (i.e. projection of motivational objects for each rating scale) after "Money".
Results

Raw data

A 420x180 array was formed: 180 parameters were combined for each of 420 respondents in a single array.

Among these parameters are the following primary (“raw”) and secondary (calculated) data.

- 15*6=90 parameters: 15 motivational object coordinates according to each of the 6 author’s scales;
- 15*6=90 parameters: 15 motivational object coordinates in 6 evaluation scales space after charting “Money”.

Measuring representativeness study

The financial sector representativeness analysis resulted in raw data distribution normalcy evaluation and comparison of the topology of multidimensional motivational spaces, obtained in two sub-samples of the main sample and divided in half at random in order to test the possibility of disseminating the findings of the research.

The normalcy of the raw data distribution and the distribution of the motivational object coordinates according to the evaluative scale score were evaluated using Kolmogorov-Smirnov’s test coefficient. This procedure was carried out since a normal curve suggests the representativeness of test standards (Shmelev, 1996). In Table 1 criteria values reflecting data normalcy are in bold.

The normalcy results argue for representativeness: a normal distribution of raw scores on the majority of the estimated parameters was obtained. However normalcy is not necessary for representativeness. It can be achieved in the absence of normal distribution (Shmelev, 2004). Therefore, the metrics of motivational multidimensional spaces obtained for two subgroups of respondents formed by bisecting the sample randomly were compared in order to study their representativeness. For that a multidimensional scaling procedure (ALSCAL) was performed.

An analysis of the two-dimensional space models (see Figure 2, Figure 3) built as a result of the multi-dimensional scaling, shows the motivational spaces are topologically identical.

Given this and the majority of the data parameters with a normal distribution, it is possible to talk about the representativeness of the findings in the sample of financial experts.
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<td>0.46</td>
<td>0.41</td>
<td>0.33</td>
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<td>Success probability (K; S; p)</td>
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<tr>
<td>Progress (K; S; p)</td>
<td>0.99</td>
<td>1.01</td>
<td>0.69</td>
<td>0.97</td>
<td>1.01</td>
<td>1.50</td>
<td>2.90</td>
<td>0.80</td>
<td>0.94</td>
<td>0.14</td>
<td>0.86</td>
<td>0.69</td>
<td>1.12</td>
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<td>0.33</td>
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<td>0.16</td>
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<td>Difficulty (K; S; p)</td>
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<td>0.81</td>
<td>0.58</td>
<td>0.88</td>
<td>1.06</td>
<td>0.53</td>
<td>2.18</td>
<td>1.23</td>
<td>0.81</td>
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<td>0.33</td>
<td>0.69</td>
<td>0.32</td>
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<tr>
<td>Effort (K; S; p)</td>
<td>1.15</td>
<td>1.21</td>
<td>1.12</td>
<td>0.99</td>
<td>0.98</td>
<td>1.91</td>
<td>1.98</td>
<td>1.75</td>
<td>0.88</td>
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<td>0.13</td>
<td>0.29</td>
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<td>0.55</td>
<td>0.94</td>
<td>0.35</td>
<td>0.25</td>
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<tr>
<td>Cause: external-internal (K; S; p)</td>
<td>0.68</td>
<td>0.81</td>
<td>0.84</td>
<td>0.87</td>
<td>0.75</td>
<td>0.50</td>
<td>1.22</td>
<td>0.75</td>
<td>0.51</td>
<td>0.69</td>
<td>0.80</td>
<td>0.86</td>
<td>0.81</td>
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<td>0.80</td>
<td>0.50</td>
<td>0.44</td>
<td>0.35</td>
<td>0.55</td>
<td>0.94</td>
<td>0.21</td>
<td>0.56</td>
<td>0.90</td>
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<td>0.69</td>
<td>0.38</td>
<td>0.43</td>
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* The parameters characterizing the normalcy of the data distribution according to a parameter are in bold.

**Motivational objects:**
- **M1** - Stability, confidence in the future;
- **M2** - Career growth;
- **M3** - Status;
- **M4** - Interesting job allowing for maximum personal potential realization;
- **M5** - Helpfulness to others;
- **M6** - Work results;
- **M7** - Dismissal;
- **M8** - Conflict situations avoidance;
- **M9** - Work organization and optimization;
- **M10** - Family welfare;
- **M11** - Vacation;
- **M12** - Merits recognition;
- **M13** - Pleasure and inspiration from work;
- **M14** - Professional and personal development;
- **M15** - Respect for colleagues.
Motivational space factors
A multidimensional scaling procedure (ALSCAL) was conducted to obtain the empirical scales of the motivational space. The procedure used the data obtained for the entire sample (420 respondents). The model was built on the fifth iteration, the explained dispersion was 96%, the analysis resulted in the 3-dimensional space formation shown in Fig. 4.
Fig. 4. Multidimensional motivational space (weighted Euclidean model of individual differences)

Legend:
M1 - Stability, confidence in the future;
M2 - Career growth;
M3 - Status;
M4 - Interesting job allowing for maximum personal potential realization;
M5 - Helpfulness to others;
M6 - Work results;
M7 - Dismissal;
M8 - Conflict situations avoidance;
M9 - Work organization and optimization;
M10 - Family welfare;
M11 - Vacation;
M12 - Merits recognition;
M13 - Pleasure and inspiration from work;
M14 - Professional and personal development;
M15 - Respect for colleagues.

Discussion

The motivational objects having the greatest weight were the interpreted motivational space scales: personal priority, social significance, personal potential.

Social significance reflects the way the respondents manifest socially acceptable aspirations at work, reproduce this motivation and, perhaps, try to match it. Social significance induces respondents to pay less attention to their personal needs and to achieve socially encouraged and accepted goals. Personal priority characterizes the aspects important in terms of personality, regardless of professional characteristics. In this context, such factors as family
welfare and vacation become more important, and fear of being dismissed is felt more acutely. Personal potential can be interpreted as the possibility of achieving the goals at work. Personal potential makes a correction in the other two scales, making allowances for realizable features. Personal priority, social significance, and personal potential as scales of motivational space are the factors of career development and the categorizing of projects, business tasks and future goals by business leaders.

**Conclusion**

The research analysed a sample of 420 business leaders from financial organizations. The analysis confirmed the representativeness of the sample. Multidimensional scaling yielded the motivational space scales: personal priority, social importance and personal potential.

**References**

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