Managerial potential: emotional intelligence, empathy and tolerance to uncertainty of agribusiness managers

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Abstract. The article is devoted to the study of the relationship between emotional intelligence, empathy and tolerance to uncertainty and their role in the formation of the managerial potential of managers in agricultural enterprises. The high level of uncertainty and risks that accompany the management process in agro-industrial enterprises places increased demands on the level of managerial competencies development in their managers. The development level of highly professional managers is one of the important factors for agribusiness, because the quality of management depends on the company’s effectiveness. The managerial potential of the manager, along with the personnel policy and management system of the organization, plays a leading role in the formation of the agro-industrial enterprise managerial potential. Managers with high emotional intelligence and tolerance to uncertainty are much easier to survive crises, which contributes to the development of the right management decisions and, as a result, the economic success of the enterprise. There were significant differences in the scales of expression control, tolerance to uncertainty, empathic fantasy, empathic distress, and empathic care for female and male managers.

1. Introduction
The challenges faced by the agro-industrial complex and the entire economy of the country in 2020 have actualized the importance and increased the requirements for the managerial competencies of company managers. This issue is of particular importance for agricultural enterprises, since they are the productive system that is obliged to continuously provide citizens with food and basic necessities, without which it is impossible to live. Balanced sustainable development of the agricultural sector assumes that the results of its activities correspond to the established goals and objectives and is closely related to the efficiency of the system of economic entities management as a whole and the efficiency of the industry individual enterprises management, which is achieved by making the right management decisions. In modern conditions, the continuous and progressive development of the agro-industrial complex directly depends on the professionalism of the people who manage it. The issue of providing the agro-industrial complex with highly qualified managerial personnel is still acute, because the development of market relations and the agricultural sector depends on management effectiveness. Therefore, the problem of formation and development of highly professional managers for the agro-industrial complex is one of the most important issues for agribusiness. The main driving force of self-reproduction of the organization, the basis for the formation of a scientifically-based concept of its sustainable and safe development is the management potential. Within the framework of economic concepts, managerial potential is considered as a resource of socio-economic systems, as the potential of regions, economic sectors, management
systems, institutions and departments, industrial organizations and certain categories of subjects of managerial labor [1].

L. V. Fatkin and D. S. Petrosyan propose to understand the management potential of the socio-economic system as “the ability of the management system to solve current and future tasks of functioning, according to the specified performance criteria. The elements of the management potential in the enterprise include the management personnel potential, the potential of management functions, the institutional environment and the management infrastructure of the enterprise” [2].

The management potential of agricultural enterprises is largely determined by the professional and personal characteristics of top executives and managers, whose competence determines the stable and effective functioning of agricultural organizations. Thus, a number of studies prove that the high proportion of unprofitable agricultural organizations and their significant accounts payable is often due to the insufficient provision of agricultural organizations with managers and specialists [3,4].

Effective decision-making directly depends on the manager’s competence which is closely related to his managerial potential and emotional intelligence. The emotional intelligence of the manager affects not only the building of business and interpersonal relationships, but also increases the efficiency and productivity of the staff, thereby providing the company with an economic effect. According to A.V. Osichka, people with high emotional intelligence “make better decisions, act more effectively in critical situations, when faced with an emotional problem, they translate it into an intellectual task and solve it as a task that does not annoy, but stimulates the search for various solutions to it” [5].

The staff emotional intelligence also plays an important role in ensuring the competitiveness of the organization, which was confirmed by the study of D. Goleman, who found that the analytical abilities of managers contribute to an increase in the company’s profit by 50%, while the development level of social competencies provides profit growth by 390%, provided that the manager has the ability of self-management. This laid the basis for the following statements:

- the developed emotional intelligence contributes to the more effective formulation of goals, the definition of the development strategy of the organization;
- based on the ability to adequately understand the emotions of subordinates, employees develop an awareness of the performed work importance and a responsible approach to solving production problems;
- the ability to regulate the emotional state allows to choose the most effective strategy for overcoming stressful situations;
- high emotional intelligence promotes the use of a non-standard approach to overcoming intra-organizational and interpersonal conflicts, helps in the analysis and reassessment of inadequate personal experiences;
- emotional intelligence affects the processes of managerial decision-making (reduces the rigidity of managerial decisions, increases their originality and creativity, helps to prioritize subordinates, promotes the implementation of decisions) [6].

2. Main part

One may find more than 40 definitions of managerial potential in the Russian scientific literature. Having conducted the comparative analysis, the authors believe that the management potential of an agro-industrial enterprise is determined by the management potential of the organization's personnel, its personnel policy and management system. As part of the management potential of the organization, we give a leading role to the management potential of the manager, as “a systemic quality of the individual, which includes the ability to manage, to self-regulate and design the style of activity, intellectual qualities, goals and motives of professional activity, moral qualities, as well as the necessary knowledge, skills and experience” [7].

Important qualities of a manager that are indispensable in the formation and development of managerial potential are: professional competence, moral qualities, organizational skills, business qualities, and the ability to self-management.
The assessment of the managerial potential of a manager is rather a complex phenomenon and involves the assessment of all its elements, such as managerial experience, managerial motivation, managerial orientation and managerial product. The characteristics of the management potential include: managerial experience and preferred management style; the degree of desire to engage in managerial activities and motivational management profile; the system of managerial knowledge and managerial abilities; the effectiveness of managerial activities and the scale of managerial actions of the manager. Among the components of managerial potential that are included in its assessment are: the speed of thinking; the critical thinking; the motivation for development; the openness of thinking; the motivation for leadership; the social intelligence; the responsibility; the perseverance and ambitions.

The definition of social intelligence is closely related to empathy and emotional intelligence of the individual [8]. Research on emotional intelligence, empathy, and tolerance to uncertainty continues to be relevant for discussion in the scientific community. Many researchers recognize empathy, emotional intelligence, and tolerance to uncertainty as significant characteristics for representatives of managerial work [9, 10]. Moreover, empathy is often included into the concept of emotional intelligence [11], and tolerance to uncertainty is associated with the formation of decision-making competence and risk management [12, 13].

Our research was devoted to the study of the relationship between emotional intelligence, empathy and tolerance to uncertainty in middle and top managers, as well as to the influence of the level of emotional intelligence and managerial experience, as a reserve of managerial potential, on the formation of managerial potential.

The study involved 47 people on a voluntary basis – 18 men and 29 women who held senior positions in companies. The subjects differed in the nature of the position held: most of them were heads of departments and divisions, but there were also directors and deputy managers. Average age in the group: M=39.2 SD=8.3. Average value for management experience: M=8.9 years. The total number of subordinates in the subject, including indirect subordinates, was also taken into account, the average: M=158.4.

The following methods were used in the work:

- the Russian-language version of the Interpersonal Reactivity Index (IRI) questionnaire by M. Davis [14], based on a multifactorial approach to empathy;
- Lucin’s emotional intelligence test [15]. Psychodiagnostic technique based on self-report, designed to measure your own and other people's emotions and their management;
- the Russian-language version of Mayer – Salovey – Caruso emotional intelligence test [16]. This technique is based on one of the most extensive and detailed theoretical structures describing emotional intelligence;
- new uncertainty tolerance questionnaire [17].

Significant differences were found between male and female managers on all empathy scales, except for the decentration scale, with women scoring higher on average:

According to the fantasy scale of the IRI questionnaire: 23.17 for women versus 19.67 for men, with p<0.05.

On the empathic distress scale: 15.69 in women versus 12.44 in men at p<0.01.

On the empathic care scale: 18.09 in women versus 15.22 at p<0.05.

The differences between the groups of female and male managers in terms of all the psychometric methods used are shown in table 1.

Table 1. Differences between the compared groups in terms of methodology indicators (Student’s t-criterion).
Female managers on average scored higher on empathy measures: empathic fantasy, empathic distress, and empathic care (p<0.05). Only in terms of decentration, the compared groups do not have a significant difference. Of the nine scales of the EmIn questionnaire, the difference between female and male managers was revealed on the expression control scale (p<0.05). The average indicator for female managers is higher compared to the group of male managers on the uncertainty tolerance scale (p<0.05).

|                                | Average value, women | Average value, men | Significance of differences in the T-criterion |
|--------------------------------|----------------------|--------------------|-----------------------------------------------|
| Emotions identifying. MSCEIT   | M=0.42 SD=0.067      | M=0.42 SD=0.050    | 0.99                                          |
| Using emotions in problem solving. MSCEIT | M=0.35 SD=0.055      | M=0.36 SD=0.056    | 0.60                                          |
| Emotions understanding and analyzing. MSCEIT | M=0.43 SD=0.060      | M=0.46 SD=0.047    | 0.11                                          |
| Emotions managing. MSCEIT       | M=0.33 SD=0.039      | M=0.34 SD=0.030    | 0.69                                          |
| Total score. MSCEIT             | M=0.38 SD=0.041      | M=0.39 SD=0.034    | 0.38                                          |
| Interpersonal emotional intelligence. EmIn | M=45 SD=7.8         | M=45 SD=9.7        | 0.87                                          |
| Intrapersonal emotional intelligence. EmIn | M=43 SD=8.3         | M=46 SD=8.9        | 0.10                                          |
| Interpersonal understanding of emotions. EmIn | M=31 SD=5.0         | M=31 SD=6.2        | 0.81                                          |
| Interpersonal management of emotions. EmIn | M=20 SD=3.6         | M=21 SD=4.4        | 0.49                                          |
| Intrapersonal understanding of emotions. EmIn | M=15 SD=4.3         | M=17 SD=4.6        | 0.22                                          |
| Intrapersonal management of emotions. EmIn | M=14 SD=3.3         | M=15 SD=3.4        | 0.63                                          |
| Expression control. EmIn        | M=9 SD=3.0          | M=10 SD=2.8        | 0.02*                                         |
| Emotions understanding. EmIn    | M=47 SD=8.2         | M=48 SD=8.9        | 0.62                                          |
| Emotions management. EmIn       | M=43 SD=6.8         | M=47 SD=6.6        | 0.10                                          |
| Tolerance to uncertainty         | M=63 SD=9.9         | M=56 SD=8.1        | 0.02*                                         |
| Intolerance to uncertainty       | M=61 SD=9.8         | M=62 SD=11.4       | 0.86                                          |
| Interpersonal intolerance to uncertainty | M=33 SD=7.6         | M=33 SD=6.8        | 0.95                                          |
| Empathic fantasy                | M=23 SD=4.8         | M=20 SD=5.4        | 0.02*                                         |
| Empathic distress               | M=16 SD=4.1         | M=12 SD=2.5        | 0.01*                                         |
| Empathic care                   | M=18 SD=4.7         | M=15 SD=4.5        | 0.03*                                         |
| Decentration                    | M=20 SD=4.3         | M=19 SD=3.4        | 0.32                                          |
According to the results of the correlation analysis, a weak positive correlation was found between the overall emotional intelligence index and all the EI scales on the MSCEIT test with the age of the subjects, it is most significant for the scale “Using emotions in problem solving” and for the overall emotional intelligence index \((p<0.05)\).

The matrix analysis of inter-correlations of personal characteristics of the subjects taking into account their age and gender, as a covariate for indicators, according to the scales of the MSCEIT test and the IRI Davis questionnaire showed that the scale of empathic fantasy positively correlates with the scales of interpersonal understanding and interpersonal emotion management, which also means a positive correlation of fantasy with the scale of interpersonal emotional intelligence on the EmIn questionnaire \((p<0.01)\).

The scale of empathic distress is negatively correlated with all the scales in the EmIn questionnaire, and its negative relationship with both interpersonal and intrapersonal emotional intelligence was revealed \((p<0.01)\).

A positive correlation was found between the fantasy scale and the scales of understanding emotions, and especially the interpersonal understanding of emotions in the EmIn questionnaire \((p<0.05)\).

The decentration scale also correlates positively with the EmIn scales, but the correlations are not significant.

There was a positive correlation between the fantasy scale and the scale of tolerance to uncertainty \((p<0.01)\) and a positive correlation between the empathic distress scale and the interpersonal uncertainty tolerance scale \((p<0.01)\).

Positive correlations of interpersonal emotional intelligence in the EmIn questionnaire with the scale of tolerance to uncertainty and negative correlation of intrapersonal emotional intelligence in the EmIn questionnaire with the scale of interpersonal tolerance to uncertainty were found.

The emotion identification scale in the MSCEIT test showed a generally negative correlation with all the scales of the EmIn questionnaire, but this relationship is significant only for the interpersonal emotion management scale \((p<0.05)\).

A positive correlation of the scale of solving problems with emotions in the MSCEIT test with the scale of tolerance to uncertainty was identified \((p<0.01)\).

The scale of understanding and analyzing emotions in the MSCEIT test positively correlated with scales that reflect the affective aspect of empathy, namely, with scales of empathic distress \((p<0.05)\) and empathic care \((p=0.09)\).

The scale of emotions management in the MSCEIT test showed a positive correlation with tolerance to uncertainty \((p<0.05)\).

### 3. Research results

There significant differences between men and women on all scales of empathy (except for the scale of decentration), namely, a greater tendency of women to display the affective side of empathy were established. The positive correlation of emotional intelligence measured by the MSCEIT test with the age of the subjects was confirmed.

Since the only relationship that we found between the MSCEIT and EmIn scales is the negative relationship between the MSCEIT emotional identification scale and the EmIn interpersonal emotion management scale, we can talk about the low convergent validity of these methods. These techniques presumably either measure very different aspects of emotional intelligence, or are responsible for completely different constructs. This result is consistent with the result obtained by E. Sergienko and I. Vetrova testing of the Russian-language version of the MSCEIT test, which is explained by fundamentally different theoretical bases underlying these methods [16].

The revealed negative correlation of all the scales of the EmIn questionnaire with the indicator of empathic distress confirms the statement that the developed understanding and the ability to manage one’s own and other people’s emotions contributes to the success of communication and speaks in favor of the hypothesis of our study. We were not able to find similar results in foreign studies, which can be attributed in one case to the use of a different method of measuring emotional intelligence in the Schutte
study [18] and, in addition, to the use of a shortened version of M. Davis’s questionnaire in another study. The positive correlation of empathic distress with the scale of understanding and analysis of emotions of the test may indicate to a greater degree of the subject’s own emotional involvement in the processes behind emotional intelligence in the understanding of MSCEIT by the authors.

The scale of fantasy was positively correlated with the scale of tolerance to uncertainty. This fact allows to assert that people with a high tolerance to uncertainty have a greater tendency to identify themselves with fictional characters. These data correlate with the results obtained by E. Pavlova and T. Kornilova, according to which the acceptance of uncertainty is positively associated with creativity [20, 21]. People with a high score on the fantasy scale are also more likely to engage in helpful behavior and psycho-physiological arousal as a reaction to another person’s experience. Thus, tolerance to uncertainty in a certain sense “liberates” a person, allowing him to fully sympathize with the experience of both fictional and real people.

Unexpectedly, the positive relationship between the tolerance to uncertainty and the scale of the emotions use in problem solving in the MSCEIT test was found. The results suggest that the use of emotions in solving problems is typical for people who strive for maximum clarity. It is worth noting that in the study of E. Pavlova and T. Kornilova, tolerance to uncertainty also turned out to be a predictor of the use of emotional information by future directors, this specialization is not only a creative, but at the same time a management profession. In the above-mentioned study, the correlations of emotional intelligence indicators on the MSCEIT test with the scales of the new uncertainty tolerance questionnaire were somewhat different: positive associations were obtained between the identification of emotions with tolerance to uncertainty and interpersonal tolerance to uncertainty. However, the positive relationship of tolerance to uncertainty with the scale of the use of emotions in solving problems was not significant, which may indicate to a variety of effects of professional development on the use of emotions to achieve clarity in situations of uncertainty [21].

As expected, the scale of empathic distress was positively associated with the scale of interpersonal tolerance to uncertainty. Both characteristics suggest that a person experiences discomfort in a situation of interpersonal interaction. It is possible that people with a high tolerance to uncertainty in interpersonal interaction evaluate such situations negatively, which is for them an analog of a situation of intense interaction, from which people with a high index of empathic distress tend to experience discomfort.

4. Conclusions
The positive connections of fantasy and empathic care with interpersonal emotional intelligence suggest that the ability to understand other people's emotions makes it easier to respond to the emotional states of another person. A developed understanding of emotional states and the ability to manage emotions, represented by high levels of emotional intelligence, reduces the feelings of anxiety and discomfort that arise when observing the experiences of other people, as well as in situations of intense communication. Women on average have higher rates of empathy in addition to decentration, which indicates to a more pronounced affective side of empathy in the female sex.

A positive relationship between empathic distress and interpersonal intolerance to uncertainty was established by the authors, which presumably indicates the similarity of these constructs, since each of them involves experiencing negative emotions in a situation of interpersonal interaction. The assessment of the management potential of the company's personnel is a complex phenomenon. Emotional intelligence and tolerance to uncertainty play a significant role in its formation.

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