The Impact of Emotional Intelligence of Managers on State Regulation, Functioning, and Development of State Investment Strategy in Agriculture under Covid-19

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Abstract
The concept of emotional intelligence and its importance for management staff is considered in this paper. The necessity of state regulation and development of investment activity in agriculture is substantiated. A comparative analysis of state regulation and development of investment activity in the world's leading countries is carried out. The institutional and organizational model of state regulation of investment activity and parameters of investment strategy in agriculture for the developing country is developed. The influence of managers' emotional intelligence on state regulation, functioning, and development of investment activity in the difficult conditions of the Covid-19 pandemic has been studied.

Keywords: Covid-19, investment activity, emotional intelligence, investment strategy, model of state regulation

JEL Classification: M12, M19, P24, P32

1. Introduction
In the XXI century, emotional intelligence has become one of the 10 essential skills for the successful work of staff, especially for managers of public administration. The other nine are the ability to solve a problem comprehensively; critical thinking; creativity; high level of management skills; effective interaction with people; quick analysis and making the right decision; customer orientation; flexible thinking; skills of effective negotiations. As IQ increases, the chances of a good job with a decent salary increase. High EI level facilitate career advancement and work efficiency increasing significantly. After all, the managerial activity is inextricably linked with interaction in a group that includes people with different personalities and worldviews. According to researchers, a high level of EI is up to 85% of the required skills of a successful manager in the business. Because in this case, he is much faster to make the right decisions, especially in critical situations. Also, the manager can accurately analyze and predict the behaviour of individuals and groups of staff in general (“Top 10 skills that will be valued by employers in 2020”, 2019; Antoniuk, Piekut & Perkhach, 2021).

The functioning of the state is inextricably linked with the activities of managers from the lowest to the highest levels of government. One of the important areas of their activity is the agro-industrial sector. In 2021, it was 0.7% of GDP in the world's leading and developing
countries. For example, in Germany it was 2%, in France – 2.4%, in the UK – 0.7%, in the US – 1%, in Poland – 2.7%, in Ukraine – 10.8%. At the same time, the percentage contribution to the world GDP of these countries in 2021 was: in Germany – 4.2%, in France – 2.9%, in the UK – 3.1%, in the USA – 22.9%, in Poland – 0.69%, in Ukraine – 0.14% («Projected GDP Ranking», 2021; «Ukraine GDP», 2022). As the pandemic continues to deal devastating blows to the state's economy, mental health, and staff efficiency, it has become extremely important to study the impact of managers' emotional intelligence on the functioning of the state's investment strategy in agriculture in the conditions of Covid-19. The high level of emotional intelligence of managers helps to withstand the negative manifestations and consequences of stress in staff and improve their efficiency.

1.1 Literary review

The topic of this paper is related to the emotional intelligence and investment strategy of the state in agriculture, which is why it is important to inquire into these questions in studies.

The authors of the research (Shpak et al., 2021) pointed out that agriculture is the basis for economic growth in many countries and conducted research based on clustering and parent analysis. Based on this, strategies for the development of the country's regional agricultural sector were formulated and a 3D matrix was built to select an investment strategy. However, the study did not highlight the impact of human resources on the efficiency of the agricultural sector.

The authors of the research (Trofimov et al., 2019) proved that whether the leader is focused only on achieving goals without taking into account the emotional needs of subordinates, then the level of organizational loyalty of subordinates will decrease. If emotional needs are taken into account, then the level of loyalty and satisfaction of employees would be higher. However, the research did not take into account the impact of certain components of the emotional intelligence of the head on the effectiveness of staff. The authors explored this issue (Mohamad, & Jais, 2016). They showed the relationship between the components of emotional intelligence of teachers, the effectiveness of their work, and the overall level of satisfaction with the achieved results. In particular, components such as self-regulation, self-motivation, self-awareness, and social skills were studied and their correlation with work efficiency and satisfaction level was shown. The authors (Mayer et al., 2018) proved the dependence of staff efficiency on perceptions and behavior in the workplace. Top staff showed higher results of emotional intelligence passing the test. However, emotional intelligence on staff efficiency and resilience to stress has not been studied.

Well-known authors of the MSCEIT-v.2.0 test (Mayer, Caruso, & Panter, 2019), which is the most widely used in the world to determine the level of emotional intelligence, examined the relationship between emotional, personal, and social intelligence, which also affect personal performance. In addition, they stressed the necessity for an in-depth study of emotional intelligence as a mental ability.

In the field of agriculture, the authors (Huang et al., 2021) developed a psychological model involving emotional intelligence components to describe the possibilities of leadership to combat psychological burnout in the agricultural sector. However, the impact of emotional intelligence on overall performance was not considered. The influence of the emotional intelligence of staff on the state investment strategy in agriculture was not explored.

The authors (Kravchenko, Bukhvostov, Minakova, & Bukreeva, 2021) concluded that investments in agriculture are characterized by a long payback period, and therefore require
competent management to control the resources involved in the small agribusiness sector. They developed a phased investment management mechanism taking into account the factor characteristics of agricultural production. The strategy of selecting farms for state support based on the cluster analysis method, regional strategic interests, and competitiveness assessment of small agribusiness in the agricultural market, is proposed. However, the emotional intelligence of managers was not taken into account.

Investments are one of the ways to increase the efficiency of agricultural enterprises (Zakharin et al., 2021). Rapid adaptation of the enterprise to changes in the external environment determines its success. This is possible under the condition of the most optimal use of the resource potential of the enterprise. The impact of emotional intelligence on the effectiveness of investment activities of staff also was not considered. The authors (Onegina, & Vitkovskyi, 2020) indicate the main factors that affect the investment process: rising prices for agricultural products, the low disparity in prices for agricultural products and material and technical resources, the export orientation of production, and favorable for exporters dynamics of the national currency, agricultural innovation, profitability of agricultural production. The influence of the human factor is not considered. This is done by the authors (Wołowiec, Szybowski & Bogacki, 2019), who consider the advantages and disadvantages of the impact of the personal characteristics on the effectiveness but do not emphasize the emotional intelligence of the staff.

Therefore, the literature review showed the lack of information on the impact of emotional intelligence on government regulation, functioning, and development of state investment strategy in agriculture. At the same time, the global pandemic Covid-19 affects activities in all areas. In this case, the research of emotional intelligence on the overall efficiency of task performance becomes important. So, this study is acute, relevant, and unquestionable.

2. Data and Methods

To study the impact of emotional intelligence of managers on the functioning of the state investment strategy in agriculture under the conditions of Covid-19 were used:

– general theoretical research methods (analysis, synthesis, concretization, generalization, analogy) to conduct a scientific comparison of data (literature resources and statistics);

– the test of emotional intelligence (the technique of Nicholas Hall) for a sample of 100 managers who are directly involved in the development and operation of the state investment strategy in agriculture;

– GAD-7 test with a sensitivity of 89% for early assessment of generalized anxiety in a pandemic for a sample of 100 managers who are directly involved in the development and operation of the state investment strategy in agriculture;

– factor analysis to identify the main components by the method of chain substitutions for the development of the institutional and organizational model of state regulation of investment activities and parameters of investment strategy in agriculture for the developing country.

Statistical services data and literature review from the last three years were used in this study («Projected GDP Ranking», 2021).
3. Results and Discussion

The analysis of Hall’s test and GAD-7 test were conducted on management staff, which is directly involved in the development and operation of the state investment strategy in agriculture. The high level of emotional intelligence of managers directly proportionally affects their performance and reduces anxiety during world pandemic Covid-19 (Fig. 1).

In the management staff with the degree of task performance from 90 to 100% the integrative level of emotional intelligence ranges from 70 to 88 units (maximum EI scale is 90) with an anxiety level of 0-0.1 units (maximum alarm scale is 1). Such influence of emotional intelligence on work efficiency is quite logical because as a consequence of this managers can:

1. Determine in what ways it is expedient to present information to subordinates so they apprehend it as effectively as possible;
2. Understand how the provided information is conceived by the staff;
3. Facilitate the regulation of work in the process of its implementation.

Managers' work concerning the functioning of the state investment strategy in agriculture becomes extremely difficult without these skills. Because it involves the constant implementation of five managerial functions in continual interaction with staff: planning; organization; motivation; regulation and coordination; control.

![Figure 1: The influence of the level of emotional intelligence on: the effectiveness of management staff (a); anxiety level (b)](source: developed by the authors)

The world policy of state regulation of agricultural investment development is multi-format. First of all, it takes into account the possibility of using various means of financial and non-financial incentives for agricultural producers. The main trends in the development and implementation of investment assistance programs largely depend on the trends of food and agricultural raw materials in the world, as well as the international market of capital, labor, energy, and technology. The results of the literature sources analysis (Djokoto et al., 2022) on the priority of measures of state regulation of investment activities in agriculture around the world are given in table 1.
Table 1: Priority measures of state regulation of investment activity in agriculture of the world

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<th>Category of countries of the world</th>
<th>Priority measures of state regulation of investment activity</th>
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<tr>
<td>Developed countries (Germany, France, USA, UK, Poland)</td>
<td>- formation of institutions that provide advisory support to investors; &lt;br&gt; - establishment of tax benefits; &lt;br&gt; - state programs of financial support for farming; &lt;br&gt; - development of public-private partnership in the investment sphere</td>
</tr>
<tr>
<td>Developing countries Ukraine</td>
<td>- reduced taxation for farms; &lt;br&gt; - lending to small businesses in the agricultural sector; &lt;br&gt; - customs benefits for the export of agricultural raw materials; &lt;br&gt; - implementation of state programs for integrated development of agricultural areas; &lt;br&gt; - government procurement.</td>
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Source: developed by the authors according to the data (World Investment Report / UNCTAD, 2021; Investment activity in Ukraine / Ministry of Economy of Ukraine official website, 2022)

It should be noted that the measures listed in the table most fully reflect the specifics of state regulation of investment policy in developed and developing countries, but they are broader for each country. At the same time, in developed countries, more liberal measures of state regulation are mostly used, thus increasing the importance of private capital.

Developing countries need to choose the right direction for the development of the agricultural economy to avoid a financial and economic crisis in the future. Therefore, an institutional and organizational model of state regulation of investment activities in agriculture was developed, in which the negative impact of factors (in this case – Covid-19) is offset by a high level of emotional intelligence of managers (Fig. 2).

The experience of state regulation of investment activity in agriculture of developed countries (Germany, Great Britain, France, and Poland) was chosen as a basis. In addition, the prospects for the development of investment activity in the developing country soon and factor analysis by the method of chain substitutions were taken into account to identify the main components. In the developed model, the subjects and objects of activation of investment activity are elements of the first order and determine its functional content. Dotted lines indicate the coordination of actions between single blocks. The solid line indicates the cause-and-effect relationships by the type "control element-dependent element". The subject of investment activity is the bodies of state regulation of investment processes, which are represented by managers. Therefore, one of their most important skills should be a high level of emotional intelligence at this stage. The success of the further functionality of the whole model will depend on this. And so, when selecting managers who will coordinate activities in this area, special attention should be paid to determining the level of their emotional intelligence (it is recommended to use the generally accepted Mayer-Salovey-Caruso Emotional Intelligence Test MSCEIT and Hall Test). The objects of the model are the processes of state influence by public authorities on investment activity and the development of entrepreneurial initiatives in agriculture.
It should be noted that the subjects in this model operate based on appropriate regulatory and methodological support. This is what makes it different from the classical approaches to the formation of the mechanism of state investment regulation. Methodological support of state regulation of investment processes in the model is proposed to be implemented according to the standards of project management PMBOK, developed and constantly improved by the international organization Project Management Institute.

To achieve maximum efficiency in the application of the model, special attention should be paid to the need for a high level of emotional intelligence of managers who are engaged in:

– development of normative support for the establishment and functioning of state institutions in the field of investment in agriculture;
– methodological support of state regulation of investment processes according to the standards of project management PMBOK;
– formation of the main concepts of the strategy of investment development of agriculture;
– formulation of the main provisions of the program of state measures to stimulate investment activity in the agricultural sector.

4. Conclusion

The influence of emotional intelligence of managers on state regulation, functioning, and development of the state investment strategy in agriculture in the difficult conditions of the Covid-19 pandemic has been established. In particular, it has been shown that emotional intelligence is extremely important for management staff. After all, it directly affects the effectiveness of the tasks in complicated Covid-19 working conditions, when the level of staff stress is higher than the established average. According to the results of the assessment of emotional intelligence by the Hall scale in the management staff with the degree of performance of tasks from 90 to 100% the integrative level of emotional intelligence varies from 70 to 88 units (maximum EI scale is 90 un.). The level of anxiety is 0-0.1 units (maximum alarm on a scale is 1). Staff with high level of performance of tasks has a high level of emotional awareness, managing of their emotions, empathy, and the ability to recognize the emotions of different people. In addition, it has a high threshold of anxiety, it is more resistant to stress.

Investment activity in agriculture must be regulated at the state level. It is established that in the developing countries the priority measures of state regulation of investment activity in agriculture are: preferential taxation for farms; small business lending in the agricultural sector; customs benefits for the export of agricultural raw materials; implementation of state programs of integrated development of agricultural areas; government procurement. The institutional and organizational model considering the impact of emotional intelligence of management staff on its functioning is developed for state regulation of investment activity in agriculture of the developing country. Factor analysis to identify the main components by the method of chain substitutions was used for this model.

The impact of staff losses during the Covid-19 pandemic will be explored in further study. For this purpose, a method of artificial neural networks (Podolchak et al., 2021) will be used.

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References


