

INTERNATIONAL CONFERENCE  
ST PETERSBURG - KRASNOYARSK, RUSSIA  
MAY 19-21, 2021



# «ECONOMIC AND SOCIAL TRENDS FOR SUSTAINABILITY OF MODERN SOCIETY» ICEST-II-2021

«MANAGEMENT MODEL OF BALANCED SCORECARD  
FOR IMPROVING THE EFFICIENCY OF  
CLUSTER-FORMING ENTERPRISES»

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## 02

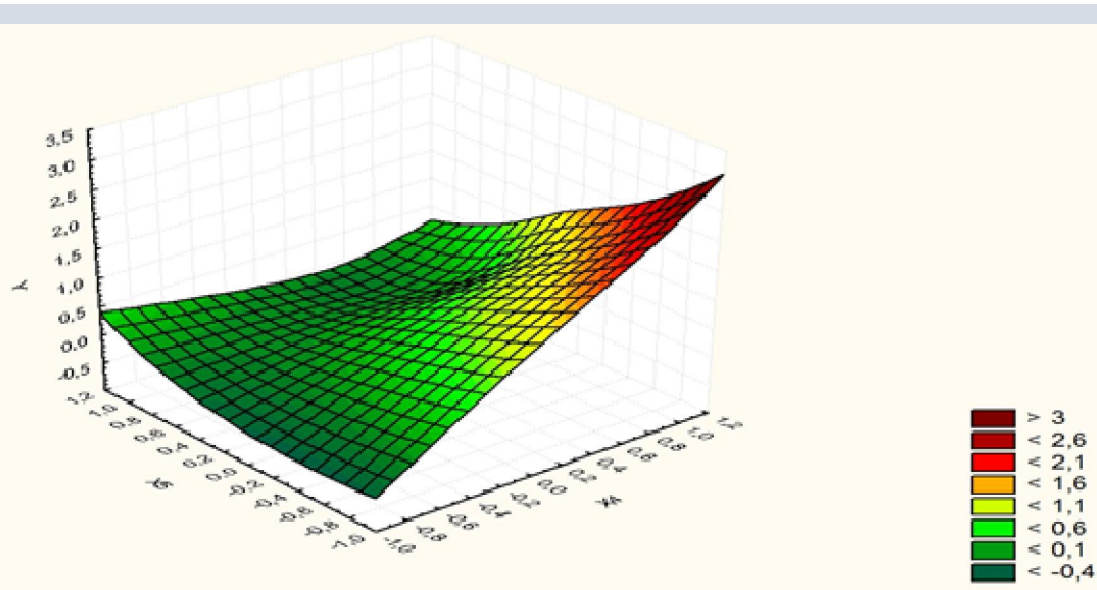
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# Problem statement

- **The problem of the research consists in the identification and systematization of the life cycle parameters of the production cluster when taking into account within the projections of the integration model of the balanced scorecard for evaluation and management of sustainable cluster development.**
- **In the context of the metrological support and improvement of the efficiency of cluster-forming enterprises, it is necessary to form projections of the unified integrated balanced scorecard that generate the cluster life cycle factors, followed by the construction of the efficiency management model.**

# Solution methods

- The fundamental principle of constructing projections of the balanced scorecard for metrological support of the economic potential efficiency of cluster-forming enterprises should be considered the difference in the levels of innovation activity of the economic systems of these organizations with the disclosure of the conditions of competitive advantages;
- The identification of the key leading life cycle factors that have the greatest impact on the cluster potential should be carried out through correlation analysis;
- The internal balance between the production and innovation efficiency of cluster-forming enterprises and the socio-economic stability of the economy as a whole became the criterion (feature) for identifying the cluster life cycle factors within the balanced scorecard projections, which made it possible to identify and divide the parameters into seven analytical factor groups;



**Figure 1.** Function of correlations between the financial stability and the balance of internal processes of the economic potential of the production cluster.

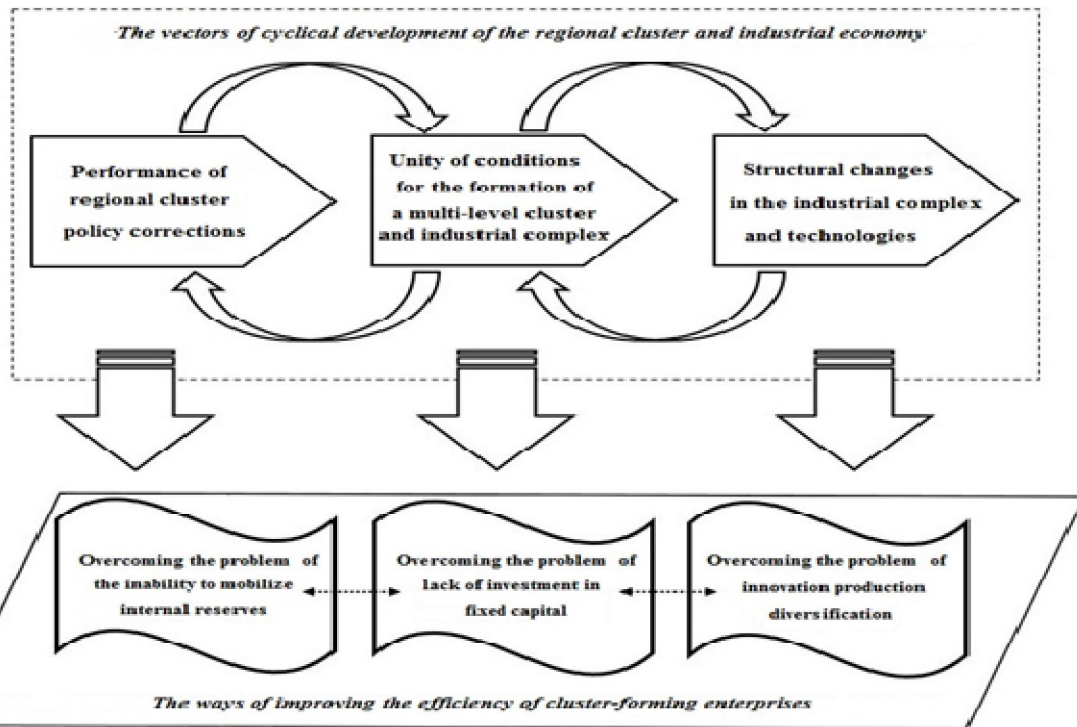
- The correlation analysis of the economic potential of the production cluster (resulting indicator) and the key leading life cycle factors allowed us to determine the most significant parameters that have the greatest impact on cluster development and form the integration model of the balanced scorecard for metrological support of the efficiency of cluster-forming enterprises.



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## Conclusions

Results, implementation



**Figure 2.** Integration model of balanced scorecard parameters for evaluation and management of the economic potential efficiency of cluster-forming enterprises and the production cluster.

The additive model of the financial and economic potential of the production cluster:

$$FEP_{Cl} = 0,8 \times FS + 0,7 \times BIP + 0,6 \times \sum R_i \times CS + 0,5 \times ID$$

- In the elaboration of the integration model of the balanced scorecard parameters for evaluating sustainable development of the production cluster with the goal to manage the efficiency of cluster-forming enterprises it is important to minimize the negative impact on the aggregate economic and financial cluster potential by projection of customer satisfaction and forming group of the life cycle factors, which will reduce the economic risks of cluster and industrial development;
- The presented results of the research will be of practical importance in the processes of the creation of a strategy for “bringing the cluster economy out of the crisis”, the development of plans for the production complex reorganization and the diversification of management tools for stimulating the implementation of production strategies;
- In the context of the need for metrological support of the production cluster reorganization, which involves increasing the viability of less stable organizations and making the transition to an effective multisectoral economy, the proposed integration model reflects the vectors and directions of development that provide a compromise in the interests of cluster-forming enterprises and standalone sectors of the cluster economy.



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