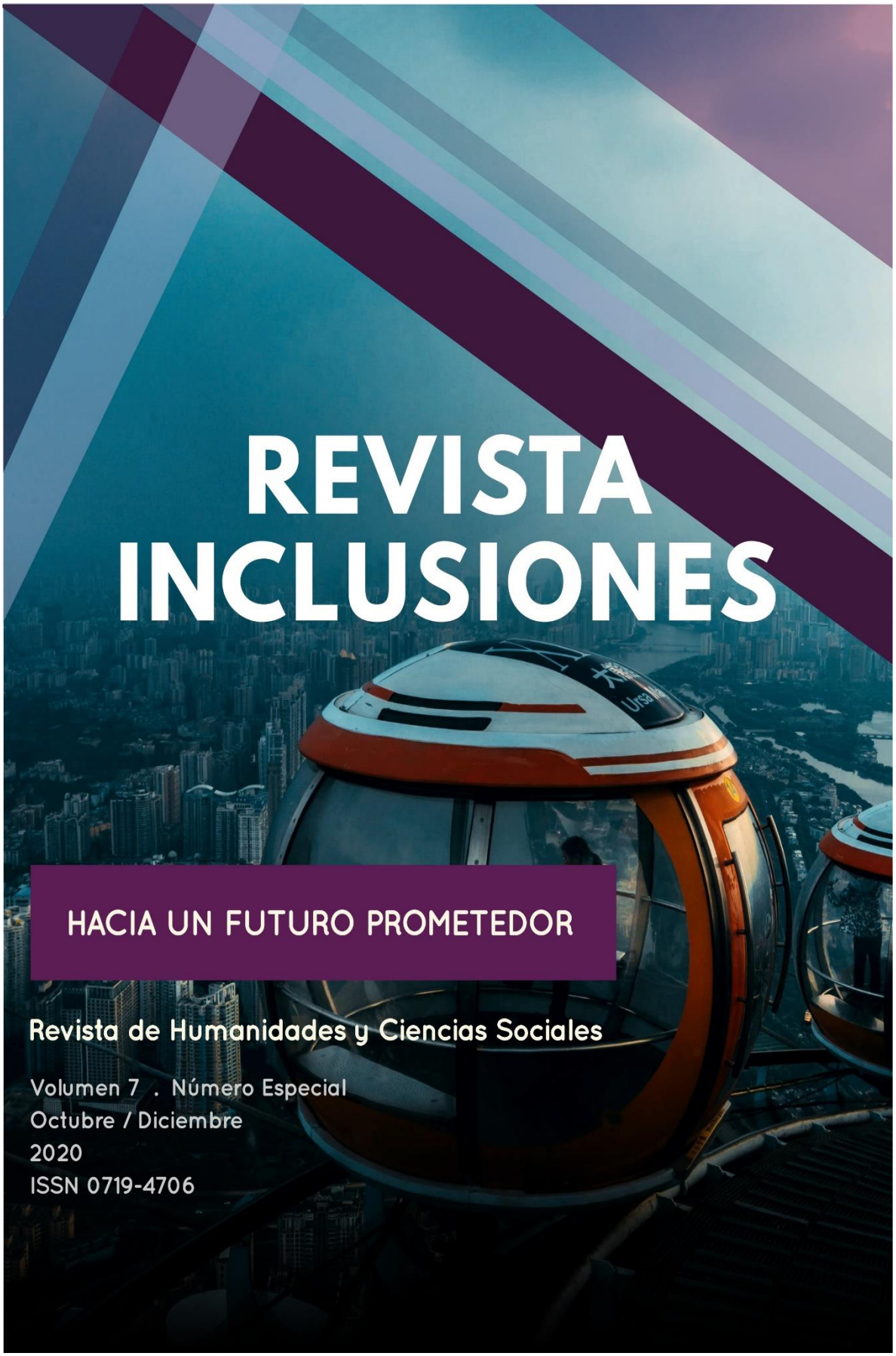

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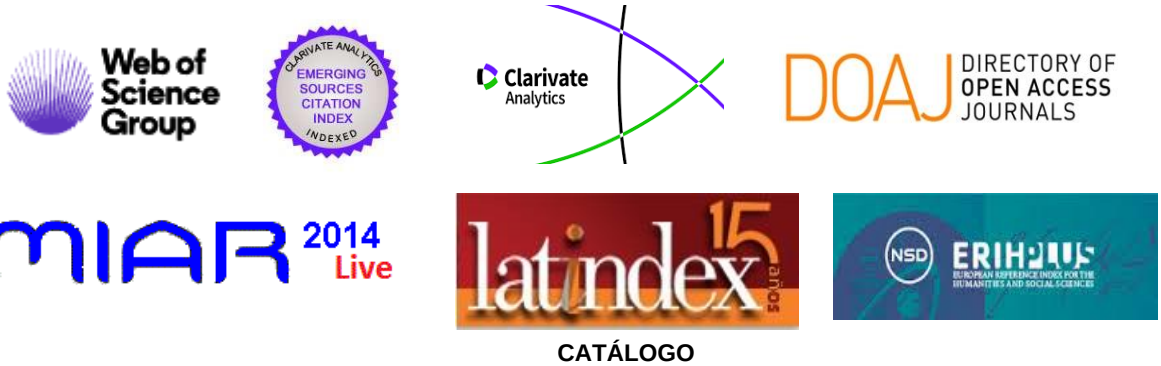

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INSTITUTIONAL FACTORS AS CONDITIONS FOR CREATING VALUE FOR STRATEGIC NETWORK STAKEHOLDERS

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Abstract

The relevance of the study is due to the need to determine the factors of the stakeholder and institutional environment that stimulate the development of industrial production. The study is based on materials from state authorities on the situation and the development of institutional conditions for doing business, as well as materials from companies collected in the SPARK-interfax information and analytical database. A multiple regression model is used as a method for determining the dependence of the formation of stakeholder value due to the factors of the institutional environment. In this model, the performance indicators of network stakeholders are used as the resulting indicator, and the characteristics of the institutional environment are recognized as factor indicators. The results allow us to identify several factors of the institutional environment that affect the stakeholders of the strategic network of the Titanium cluster, such factors include the availability of funding and simplification of administrative procedures.

Keywords

Strategic network – Stakeholders – Institutional environment factors – Stakeholders' value

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Introduction

Network theory has expanded understanding of the importance of interaction forms in the context of entrepreneurial and innovative activities in the management of industrial enterprises. Such organization forms of strategic interaction as clusters, industrial park structures, partnerships, ecosystems, technology platforms have recently become more often viewed from the perspective of a stakeholder approach and institutional theory.

The theoretical design that describes the participants of the strategic network as stakeholders provides additional opportunities for improving the methodology for managing the joint activities of business entities. This makes it possible to enrich the methodology of network theory with a complex of factor models that allow one to choose the configuration of the institutional environment that stimulates the development of industrial production. Such design provides new opportunities for the development of regional industrial complexes, the introduction of innovative technologies and business practices.

The purpose of this study was to determine the factors of the institutional environment affecting the participants of the strategic network in the industry of the Sverdlovsk region, as well as to identify the directions of their impact on the stakeholder value formed in this strategic network.

Methodology

Network theory provides a new methodological toolbox for studying the forms of joint activity of industrial enterprises. The main provisions of network theory are presented in articles[1]. Strategic networks are formed by several participants pursuing certain common goals and having jointly agreed and contracted roles and responsibilities. Network participants share part of their autonomy to achieve goals that go beyond their individual capabilities. The general methodology of network theory includes a description of subjects based on the availability of resources and the possibility of implementing individual business-processes. Strategic networks are a tool for coordinating the actions of industry or cluster participants in the implementation of joint projects, overall innovative development [2].

Methodologically, the network structure is studied as a complex set of mutual influence of institutional factors and the interests of a wide range of network stakeholders, which allows us to formulate the following research hypothesis, presented in Figure 1.

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[1] T. Ritter; I. F. Wilkinson y W. J. Johnston, “Managing in complex business networks”, Industrial marketing management. Vol: 33 num 3 (2004):175-183; E. Holmen y A. C. Pedersen, “Strategizing through analyzing and influencing the network horizon”, Industrial Marketing Management, Vol: 32. num 5 (2003): 409-418; S. Laari-Salmela; T. Mainela y V. Puhakka, “Beyond network pictures: Situational strategizing in network context”, Industrial Marketing Management, num 45 (2015):117-127 y K. Möller y A. Rajala, “Rise of strategic nets – New modes of value creation”, Industrial Marketing Management, Vol: 36 num 7 (2007):895–908.

[2] J. Planko; J. Cramer; M. P. Hekkert y M. M. Chappin, “Combining the technological innovation systems framework with the entrepreneurs’ perspective on innovation. Technology Analysis & Strategic Management. Vol: 29 num 6 (2017): 614-625 y A. I. Afonichkin; E. A. Afonichkina y A. M. Toporkov, “Modeling cluster economic systems in the form of a network structure (business network)”, Bulletin of the Volzhsky University named after VN Tatishchev. Vol: 2 num 1 (2016): 5-11.

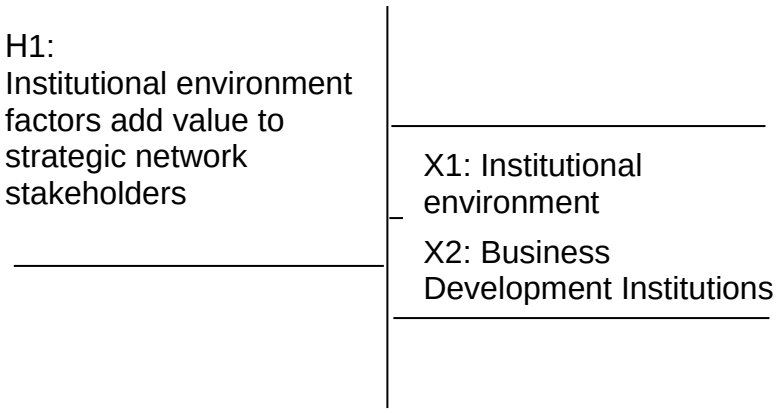

Figure 1
The hypothesis of the study
Compiled by the authors

Hypothesis H1: involves checking the formation of additional value for strategic network stakeholders due to factors of the institutional environment in Russian conditions. Theoretical background and examples in international practice are described in articles[3].

So in the article[4], it was noted that "Integration of the potential of industrial structures implies the expansion of the partnership segment of relations between business entities in a market environment based on the convergence of network, cluster, and integration approaches to managing industrial development".

Based on the analysis of world experience, it was determined that the formation of multichannel partnerships of economic entities in the industrial sphere with a vector for innovation requires the creation of appropriate institutional conditions. Thus, it is assumed that institutions (institutional environment) affect the key interests of stakeholders by changing institutional rules and can create additional value for them.

The study made an assumption about maintaining the stability of the influence of the institutional environment factors on the strategic network stakeholders in the context of the following two groups of factors: institutional environment (administrative procedures: registration, licensing; resource availability; administrative pressure on the business) and business development institutions (the presence of effective development institutions; availability of financing; information support). This division is due to the accumulated data on the assessment of the institutional environment factors, which were collected and studied during the assessment of the investment climate based on the results of a series of research projects with the participation of the authors of the article.

[3] E. García-Sánchez; V. J. García-Morales y R. Martín-Rojas, "Analysis of the influence of the environment, stakeholder integration capability, absorptive capacity, and technological skills on organizational performance through corporate entrepreneurship", International Entrepreneurship and Management Journal. Vol: 14 num 2 (2018): 345-377; S. Steinhauser, "Network-Based Business Models, the Institutional Environment, and the Diffusion of Digital Innovations: Case Studies of Telemedicine Networks in Germany", Schmalenbach Business Review. Vol: 71 num 3 (2019): 343-383 y

[4] A. Yu. Nikitaeva, "The institutional structure of the region in the context of the innovative development of industry", Journal of Institutional Studies Vol: 9 num 1 (2017): 134-149.

In particular, we obtained the experience of such an assessment during the study of a comprehensive assessment of the investment climate in municipalities located in the Sverdlovsk region (Russian Federation), some results of which are given in the article[5]. The impact stability test was carried out based on testing regression models in an accessible retrospective, which is the period from 2015 to 2019.

A multiple regression model was used as a tool to determine the dependence of the formation of stakeholder value on the influence of the institutional environment factors. In this model, the performance indicators of network stakeholders (income and investment activity) were used as the resulting indicator, and the excess of the indicator value over the industry average value is considered positive.

Thus, within the framework of the general methodology of network theory, stakeholder and institutional approaches, a methodological toolkit has been formed that allows us to check the possible influence of the institutional environment factors on the formation of stakeholder value for strategic network participants.

The subjects of the study were selected business entities and bodies of state and municipal authority, united in the framework of the strategic network of the Titanium Industrial Cluster of the Sverdlovsk Region (Russian Federation).

As the subjects of the study were selected business entities and state and municipal authorities, united in the strategic network of the Titanium Industrial Cluster of the Sverdlovsk Region (Russian Federation).

The study described a strategic network of 69 entities, of which 47 are located in the Sverdlovsk Region, 9 in Moscow city and the Moscow Region, and the rest in the regions of the Urals Federal District. At the same time, 51 participants of the network belong to the category of small and medium-sized enterprises, 6 participants are large holdings, 7 – are specialized territory development institutes, 5 participants represent municipal administrations and executive authorities.

Results

The results of a study aimed at testing the H1 hypothesis; are presented in tables 1-3.

	institutional environment factors			business development institutions factors		
	1	2	3	4	5	6
Regression model characteristics	administrative procedures: registration, licensing	resource availability	administrative pressure on the business	the presence of effective development institutions	availability of financing	information support
F	0,037	0,019	0,063	0,038	0,028	0,023

[5] A. Y. Kokovikhin; E. S. Ogorodnikova; D. Williams y A. Y. Plakhin, “Institutional factors in the evaluation by the entrepreneur of municipality investment climate”, Economy of Region, Vol: 13 num 1 (2017): 80-92.

Model validation testing	the model is valid	the model is valid	the model is not valid	the model is valid	the model is valid	the model is valid
P-value X1	0,093	0,093	0,093	0,031	0,03	0,091
Determination of the X1 significance	the factor is not significant	the factor is not significant	the factor is not significant	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct	the factor is not significant
P-value X2	0,091	0,04	0,044	0,085	0,039	0,049
Determination of the X2 significance	the factor is not significant	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct	the factor is not significant	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct
P-value X3	0,95	0,013	0,054	0,018	0,035	0,035
Determination of the X3 significance	the factor is not significant	the factor is significant, the dependence is direct	the factor is not significant	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct
R2	0,13	0,29	0,12	0,21	0,4	0,22
The characteristic relation of the resulting and factor indicators	weak relation	weak relation	weak relation	weak relation	average relation	weak relation

Table 1
Testing results of the regression dependence of the indicator of the excess of industry average revenue due to the institutional factors for strategic network stakeholders

As can be seen from table 1, the influence of the institutional factors on the strategic network stakeholders was confirmed for the second type of model, that is, the factors that belong to the category of the presence of effective institutions formed specifically for the territory business development are significant. The average level of dependence on the excess of industry average revenue is observed for the factor of financing availability. The remaining factors have practically no additional effect on the stakeholder revenue.

	institutional environment factors			business development institutions factors		
	1	2	3	4	5	6
Regression model characteristics	administrative procedures: registration, licensing	resource availability	administrative pressure on the business	presence of effective development institutions	availability of financing	information support
F	0,017	0,08	0,085	0,06	0,065	0,08
Model validation testing	the model is valid	the model is not valid	the model is not valid	the model is not valid	the model is not valid	the model is not valid
P-value X1	0,039	0,087	0,026	0,037	0,058	0,046
Determination of the X1 significance	the factor is significant, the dependenc	the factor is not significant	the factor is significant, the dependenc	the factor is significant, the dependenc	the factor is not significant	the factor is significant, the dependenc

	e is direct		e is direct	e is direct		e is direct
P-value X2	0,043	0,091	0,036	0,051	0,048	0,09
Determination of the X2 significance	the factor is significant, the dependence is direct	the factor is not significant	the factor is significant, the dependence is direct	the factor is not significant	the factor is significant, the dependence is direct	the factor is not significant
P-value X3	0,27	0,028	0,06	0,061	0,051	0,097
Determination of the X3 significance	the factor is not significant	the factor is significant, the dependence is direct	the factor is not significant	the factor is not significant	the factor is not significant	the factor is not significant
R2	0,37	0,25	0,13	0,12	0,11	0,1
The relation characteristic of the resulting and factor indicators	average relation	weak relation	weak relation	weak relation	weak relation	weak relation

Table 2

Testing results of the regression dependence of the indicator of the excess of the industry average investment due to the institutional factors for strategic network stakeholders

As can be seen from table 2, the influence of the institutional factors on the indicator of exceeding the industry average investment of the strategic network stakeholder of the Titanium cluster was confirmed for the first type of model. Some dependence of the resulting indicator on the factor of simplification of administrative procedures is observed. It should be noted that the project for the implementation of the Titanium cluster is one of the priority in the Sverdlovsk region, respectively, the stakeholders of this project are more organized when passing administrative procedures, obtaining various permits, which simplifies certain issues of investment activity.

	institutional environment factors			business development institutions factors		
	1	2	3	4	5	6
Regression model characteristics	administrative procedures: registration, licensing	resource availability	administrative pressure on the business	presence of effective development institutions	availability of financing	information support
F	0,139	0,12	0,122	0,172	0,12	0,91
Model validation testing	the model is not valid	the model is not valid	the model is not valid	the model is not valid	the model is not valid	the model is not valid
P-value X1	0,086	0,062	0,056	0,067	0,041	0,053
Determination of the X1 significance	the factor is not significant	the factor is not significant	the factor is not significant	the factor is not significant	the factor is significant, the dependence is direct	the factor is not significant
P-value X2	0,06	0,046	0,073	0,071	0,019	0,018
Determination of the X2 significance	the factor is not significant	the factor is significant, the dependence is direct	the factor is not significant	the factor is not significant	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct

P-value X3	0,28	0,096	0,018	0,027	0,025	0,024
Determination of the X3 significance	the factor is not significant	the factor is not significant	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct	the factor is significant, the dependence is direct
R2	0,17	0,4	0,18	0,17	0,39	0,37
The relation characteristic of the resulting and factor indicators	weak relation	average relation	weak relation	weak relation	average relation	average relation

Table 3
Testing results of the regression dependence of the indicator of exceeding the industry average level of capital gains due to the institutional factors for strategic network stakeholders

As can be seen from table 3, it was not possible to prove the relation between the indicators of exceeding the industry average level of capital gains for the strategic network stakeholders of the Titanium cluster, in all cases the model is not valid.

Thus, the results obtained make it possible to single out a number of institutional factors that affect the strategic network stakeholders of the Titanium cluster, in particular, such factors include the financing availability and simplification of administrative procedures.

From a methodological point of view, a truly institutional approach allows us to expand the subject field of analysis of the activities and capabilities of managing the strategic network. This conclusion is consistent with the provisions presented by García-Sánchez E., García-Morales VJ, Martín-Rojas R., Steinhauser S., Harrison JS, Bosse DA, Phillips RA Ritter T., Wilkinson IF, Johnston WJ, A.Yu. Nikitaeva. At the same time, it is necessary to note a sufficient share of variability in the influence of the institutional environment factors on the strategic network, depending on the entry of medium-sized and small business entities into it.

In our study, the strategic network includes the largest corporations, which makes it relatively independent of the factors of the institutional environment of the territory. Meanwhile, we can state the fact that, if the strategic network includes small and medium-sized businesses, then all the factors of the institutional environment included in the regression models will be significant, and can be used in the future as the basis for the formation of tools for managing the development of the strategic network and creating values for its stakeholders.

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