Journal of Siberian Federal University. Humanities & Social Sciences 11 (2013 6) 1710-1720
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УДК 332.1

Development Management on a Regional Level

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Received 03.09.2012, received in revised form 05.07.2013, accepted 02.09.2013

The article presents a model of municipal formations of the region on the basis of the author's conceptual approach to assessing the effectiveness of the region, assessing the resource potential, the formation of economic growth and the estimation of economic growth

Keywords: control of the region, municipalities, growth factors, management efficiency, value added.

Introduction

Development management of a region is based on a large variety and different modifications of Spatial Development Perspectives; Theory of Economic Growth, applied to both a regional level on the whole and specific economic agents either doing business or maintaining it in a certain territory.

Among the challenges of development management of a region the following are the most complicated (Vasilyeva et al., 2005; Vasilyeva et al., 2010):

on the one hand, these are problems in economic processes of reproductive structure:

- increase in disproportion in levels of social economic territorial development due to formation of a variety of economic growth factors and different rate of their impact;
- increase in the rate of interregional integration, based on the necessity of technological, innovative, investment, social, economic project realization, being beyond the capabilities of legal and financial authorities of specific regional territories;

on the other hand, these are problems of the management system itself:

- increase in disproportion in management mechanisms (in correspondence of rights and responsibilities) of authorities and businesses for resource employment and management efficiency of the regional territory;
- increase in contradictions in management methods (employment of *reactive methods i.e. solutions of contradictions on the critical stage, when* they do not only slow down development, but create a threat to the system existence itself, against using active, i.e. preventive methods, focused on revealing the contradictions and problems of development on early stages

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when their negative impact is very low or even absent).

The issue of development management of a region is burning on the level of municipal entities, where the stereotypes of management are still existing and prevailing, based on employment of reactive methods and tools like Programmes of social economic development and a set of legal regulations.

On the whole, in order to estimate the level of synchrony (desynchrony) in the development and to define the balance of economic processes: structural, demographic, social economic, financial and investment, necessary to prepare and make management decisions on development of a municipal entity, it is necessary, in our opinion:

- not only defining of the list of development indicators, but disclosing the limits of changes in their existing state; dynamics of their functioning, dynamics of their development;
- not only the availability of resource potential, but the rate of their involvement in the balanced progressive economic development of a municipal entity in general: in potential resources; potential factors and conditions: potential effectiveness and efficiency.

Materials and Methods

Program-module method can be regarded one of the most efficient management methods, in our opinion. It is focused on the main points of economic, investment, innovative growth as modules of well balanced interaction of regional territory resources to support efficiency of development and reproductive processes.

Employing the program-module management method on the level of municipal entities (ME) can be helpful, in our opinion in:

- defining the specific features of territorial behavior, developing the system of indicators, aimed at support and achievement of optimal frames for their functioning dynamics;
- assessment the rate of factors impact on the conjuncture of economic development, quantitative dependences between indexes of social and economic development in order to devise scenarios for industries' development, location and placing of productive forces, infrastructure improvement, raising the level of population's quality of living;
- assessment the rate of involvement of municipal entity's economic potential progressive balanced productive forces development of the region.

As a model of development management for a region we suggest **the conceptual model of territorial development management of a region** based on the following fundamental ideas (Fig.1):

1. ***Changing in the approaches to assessment territorial management of a region*** from estimation the efficiency of financial expenses of social sphere within the limits of ME scope of authority (according to the RF Government method) to the estimation of the ME resource potential employment efficiency and the level of activity of the authorities to achieve the world quality level of living and formation of favorable conditions for entrepreneurship and investment activity;
2. ***Changing in the approaches to assessment the resource potential*** *from the estimation of its availability to the estimation of the involvement and efficiency rate of resource potential for reproductive processes and adding to the factors of economic growth factors*;

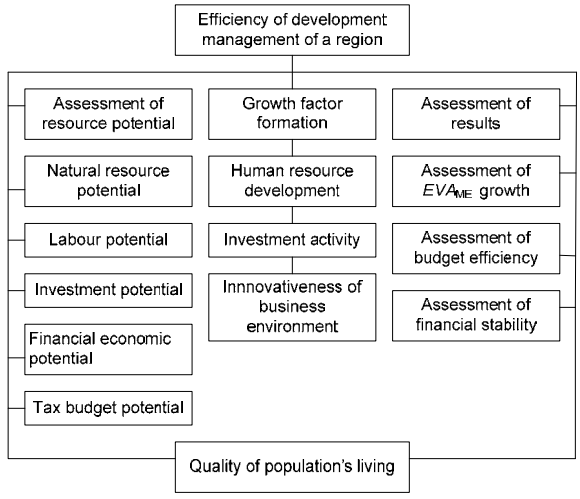

Fig. 1. Conceptual model of development management of a region

3. ***Changing in the approaches to economic growth factor formation*** from ***the approaches of using production factor employment (basic funds, labour resources) to the approaches of using of innovative growth factors*** (human resource potential, build-up of market forces based on investment and innovative activity and development of business infrastructure);
4. ***Changing in the approaches to assessment of economic growth on the level of municipal entity*** from the approaches to make assess against the indicators of social economic development to the ***approaches to assess against the ME economic value added index (EVA*** $_{ME}$ ***index)***

Research of indicators, defining the economic growth on ME level in Russian and foreign practice has led us to the conclusion that all searches are usually limited to defining the list of indicators to analyze specific processes and activities on territorial economy (Vasilenko, 2001; Kretinin; Lazhintsev, 2001).

Though the integral index, making possible to compare, assess and choose MEs in order to define the strategic priorities in their development, assess the efficiency of territorial management of the region, choice of investment directions and types has not been devised yet. It is especially important to do it because the GRP as well as other synthetic indices can not be employed here (per capita, per 1000 inhabitants, per 10 thsd. people, etc.).

In the institute of Business Process Management and Economics the method of employing EVAI $_{ME}$ as an integral index of economic growth has been tested.

In the basis the methodology of EVA calculation on the company level has been laid, with changing the approach to choosing the establishment.

A company's VA is calculated by means of production method on the base of independent cost accounting for production in the limits of the adopted system of accounting and taxation, and products are regarded as establishments (accounting units).

Employment of institutional approach to EVA $_{ME}$ calculation of where a company is used

as an establishment (accounting unit) makes it possible to:

- Examine VA, created by all ME economic agents in the region;
- Define VA against the types of economic activity (EAT) including, total payroll fund, depreciation expenses, company profit and all taxes, assessed against VA for EAT;
- Treat EVA $_{ME}$ as an individual investment potential of a specific company, population budget, which can be used for human resource development, regarded the main economic resource of the ME of the region.

On the base of the suggested concept model the logic model of investigating the processes of development management of a region has been created (Fig. 2), EVA_{ME} being used as an integral index of economic growth:

1. Defining the impact factors on the ME development on the base of assessment of the EVA $_{ME}$ resource potential state and formation of ME typology of the region against EVA_{ME} structural elements;
2. Defining disproportion and problems of economic process development of the ME reproductive structure to decide on the directions of the ME activity financing;
3. Defining of state and dynamics of economic growth factors for EVA_{ME} and formation of typology for the ME of the region against the rate of impact of human potential development (HPD), Investment activity (IA) and business environment innovativeness (BEI);
4. Modeling of growth factor structural elements for creating scenarios for the region's territorial development or variants for scenarios of changes in this or that factor in order to reach the predicted data of the GRP for the given region;
5. Defining the parameters of management effectiveness and efficiency on the base of ME typology against the rate of complexity of territorial management

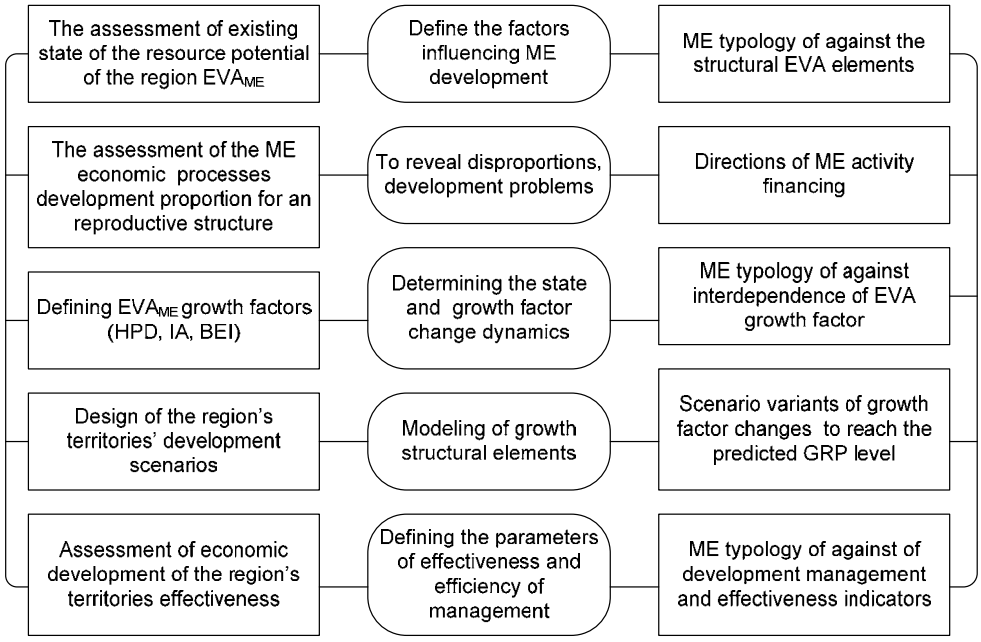

Fig. 2. Logic model of investigating the processes of development management of a region

and effectiveness indicators (Budget effectiveness, financial stability).

Results

On the 1 stage of research ***the assessment of existing state of the resource potential of the region against the economic value added of municipal entities is conducted (***EVA_{ME}), which enables:

- To allocate ME according to EVA share;
- To define the ME with the largest EVA share;
- To define the dynamics of their changes;
- To define economic activity types, most favorable to create the largest share of economic value added;
- Carry out typology of municipal entities against the structural EVA elements for defining their "ideal" proportion.

On the 2 stage of research ***the assessment of the ME economic environment proportion is carried out*** on the base of the reproductive structure analyses, which enables:

- To assess the proportion balance of the ME economic environment; to assess the contingency of development in industries of real economic sector, production, social, and market infrastructure;
- To determine the main directions for investment; problem development areas; synchronous development areas.

The results of investigation of reproductive structure element interrelation make it possible to reveal the following dependences:

- EVA_{ME} size, created by production infrastructure (energy and water generation and distribution; building construction) per 1 rub of raw material and processing types of economic activity;
- EVA_{ME} size, created by market infrastructure (wholesale and retail trade hotels and restaurants, transport and communications, real estate operations, rent and services) per 1 rub of production infrastructure;
- EVA_{ME} size, accumulated by production industries, ME's production and market infrastructure per 1 rub. of EVA_{ME} production infrastructure.
- On the 3 stage of research the system of economic growth factors for EVA_{ME} is under formation, the key being determined as (Fig. 3):

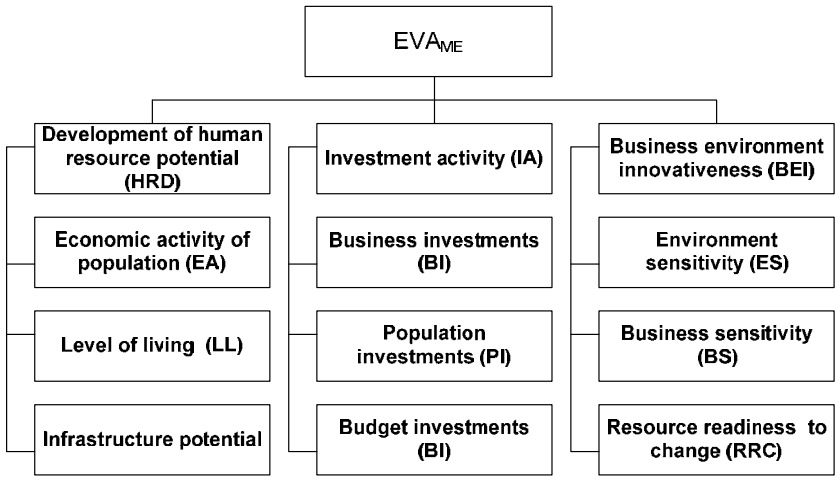

Fig. 3. Formation of growth factors for EVA_{ME}

- Human resource development (HRD);
- Investment (IA);
- Business environment innovativeness (BEI).

The tasks in this stage are ***not only to define the state of a factor resource potential and reveal the dynamics and tempo of the potential change***, enabling us to model scenarios of economic growth**.**

Assessment of resource potential state ***against the factor*** **of economic growth – development of human resource potential** was carried out against groups of structural elements:

- The level of population's living (supply and demand);
- Infrastructure potential (education, social security health care);
- Population's economic activity (way of living, consuming sphere, culture).

The research results have led us to the conclusions about:

- Presence of substantial differentiation between MEs of the region against human resource potential;
- Different tempos of changes in human resource potential;
- Instability of specific values of HRP elements in the considered research time period.

The analyses of integral values of growth factor data enables us to create the positioning maps against the following parameters (integral value / growth dynamics) and define ME clusters (Fig. 4):

- Against the HRP level leading territories, territories with a very high HRP level; c

Indicator of human potential Ki / Tempos of human potential built-up Ti			Classification groups			
			I	II	III	IV
			Leader territories against the level of human resource development [0,70; 0,76]	Territories with a very high level of human resource development [0,67; 0,70]	Territories with a high level of human resource development [0,63; 0,67]	Territories with a middle level of human resource development [0,52; 0,53]
Classification groups		Districts with a rapidly improving level of human resource development [45, 44; 68,01]	Biryulyussky Bogotolsky Bolshemurtynsky Bolsheuluysky yeniseysky Shushensky	Mansky		
	I	Districts with an improving level of human resource development [36,98; 45,44]	Ilansky	Kansky Krasnoturansky Novoselovsky Tyukhtetsky		
	II	Districts with a lowering level of human resource development [24,54; 36,98]	Dzerzhinsky kozulsky Nizhneingashsky Partizansky Uzhursky Uyarsky	Balakhtynsky Beryozovsky Boguchansky Yermakovsky karatuzsky Nazarovsky Severo-Yeniseysky	Abansky Kazachinsky Motyginsky Pyrovsky Sayansky Taseyevsky	
	V	Districts with a rapidly lowering level of human resource development [-0,92; 27,54]		Irbeysky	Yemelyanovsky Kezhemsky Kuraginsky Sukhobuzimsky Minusinsky Sharypovsky	Achinsky Rybinsky Turukchnsky

Fig. 4. map for positioning of production companies against HRP

with a high HRP level and with a middle HRP level);

- Against the dynamics of growth (with the fast improving level, improving level); worsening level, fast worsening), thus enabling to start preparation to making management decisions against the scenarios to build-up resource potential, or increase in efficiency of its employment.

The assessment of resource potential against the economic resource factor – investment activity was carried out against:

- the position to assess the stage of investment potential against total investment as a result of business, state industries and ME population's activity;
- the position to assess the efficiency of investment potential employment against the character of investment activity impact on EVA_{ME} basing on short-middle-long-term multipliers.

The considered approach makes it possible to determine:

- groups of territories against the potential of investment efficiency in short-term, middle-term and long-term periods;
- the basis for making managerial decisions and working out the policy to distribute investment resources according to the efficiency of their employment.

Working-out of the ME investment strategies is based on the employment of dynamic models, enabling to assess the efficiency of the current moment of time under the influence of a number of factors, existing in the past periods.

On the base of the defined ME typologies against the highest effect from investment in short-middle-long-term periods it is possible to determine:

- EVAME build-up due to business, state or population's investment;
- The spheres of economic development in the ME against types of investment.

Thus, in the basis of the mechanism of investment strategy formation the following ideas are laid (Fig. 5):

- Dynamic model multiplier data, characterizing the investment potential efficiency in different terms (short-middle-long);
- Growth tempos of reproductive processes (main, auxiliary, servicing) and contingency between them, characterizing disproportions and territorial development problems;
- Directions of investment employment against their types and terms depending on the sphere of application.

The following table, containing data on ME clusters with different multiplier values can serve an example of:

- Short-term multiplier – Beryozovsky district;
- Middle-term – Abansky district;
- Long-term – Aginsky district.
- Considering the high level of differentiation of EVA_{ME} growth factors (HRD, IA, BEI) on the fourth stage of investigation **ME typology against the combination of growth factor values** was carried out to characterize their interdependence (Fig. 6).

On the basis of the considered typology the following clusters have been determined:

- cluster 3 – the strongest cluster characterized by the highest level of business environment innovativeness, human potential development, high values of efficiency and investment activity;
- cluster 2 – the weakest cluster characterized by the middle level of business environment innovativeness, low level of human potential development,

	Beryozovsky district			Abansky district			Achinsky district		
	Multipliers								
	Short-term	Middle-term	Long-term	Short-term	Middle-term	Long-term	Short-term	Middle-term	Long-term
Characteristic of a district	Has no evident specialization Al types of EA are available Good dynamics of small business and municipal economy growth			Has agricultural specialization nor very rapid but stable economy growth tempos Active development of small business and municipal economy			Leader in small business development Well developed municipal economy		
Contingency of EAT against the industry groups: main, additional: servicing (growth tempo, %)	191,2 : 150,6 : 133,7 Growth tempos of auxiliary industries are behind main industries by 41,2%; servicing industries are behind the main by 57,5%; auxiliary industries -by 16,9%. To balance the MO economic growth it is necessary to develop the service sector (municipal businesses, small business)			117,7 : 119,9 : 148,2 No contingency between main and auxiliary industries. The main industries development is slowed down by not enough rapid tempos of production infrastructure growth			111,8 : 183,9 : 168,2 No contingency between main and auxiliary industries. Production and market infrastructure are created as the base for main economic industries development развития		
Investment efficiency: - business - state budget - population	1,9 36,6 -0,4	2,9 -14,9 -8,3	3,1 51,8 23,4	9,5 -0,08 18,6	12,6 11,3 17,5	22,9 22,3 8,3	-0,3 1,9 -13,3	-0,5 11,9 7,8	14,6 18,0 20,5
Investment strategy	The highest level of short-term budget investment efficiency (1 rub. of budget investment makes a profit of 36,6 thsd rub. EVA). Orientation of budget investment into the development municipal economy (complete repairs of heat – water – gas supply facilities; housing repairs, support of small business, residential building construction)			The territory has a potential growth in long-term investments. Orientation on development of production infrastructure of both main industries, building construction in particular will make it possible to employ the population's investment potential (real estate purchases)			High efficiency of business, budget and population. Orientation on main industries development based on building new and reconstruction of the available ones via budget and business investment		

Fig. 5. the mechanism of investment strategy formation For municipal entity development

Cluster 1		Cluster 2	Cluster 3	
ME with a high HRD level, middle values of investment activity efficiency and low level of environment innovativeness		ME with a middle level of environment innovativeness, low HRD level, low values of investment activity efficiency	ME with a high level of environment innovativeness, high HRD level, high values of investment activity efficiency	
1. Divnogorsk 2. Yeniseysk 3. Zaozerny 4. Lesosibirsk 5. Sharypovo 6. Abansky 7. Balakhtinsky 8. Beryozovsky 9. Biryulyussky 10. Bogotolsky 11. Bolshemurtynsky 12. Ilansky 13. Kazachinsky 14. Kansky 15. Karatuzsky 16. Kezhemsky	17. Kozulsky 18. Minusinsky 19. Nazarovsky 20. Nizhneingashsky 21. Novoselovsky 22. Rybinsky 23. Tyukhtetsky 24. Uzhursky 25. Uyarsky 26. Sharypovsky 27. Shushensky 28. Zelenogorsk (territory with the restricted access) 29. Kedrovy (district with the restricted access) 30. Taymyrsky (Dolgano-Nenetsky) 31. Evenkyisky	1. Borodino 2. Igarka 3. Sosnovoborsk 4. Achinsky 5. Yeniseysky 6. Severo-Yeniseysky 7. Turukhansky	1. Achinsk 2. Bogotol 3. Kansk 4. Krasnoyarsk 5. Minusinsk 6. Nazarovo 7. Norilsk 8. Boguchansky 9. Bol;sheuluisky 10. Dzerzhinsky 11. Yemelyanivsky 12. Yermakovsky	13. Idrinsky 14. Irbeysky 15. Krasnoturansky 16. Kuraginsky 17. Mansky 18. Motyginsky 19. Partizansky 20. Pyrovsky 21. Sayansky 22. Sukhobuzimsky 23. Taseyevsky 24. Zheleznogorsk (territory with the restricted access) 25. Solnechny (territory with the restricted access)

Fig. 6. ME typology against EVA_{ME} growth factors to devise the scenarios of territories' development

low values of efficiency and investment activity;
- cluster 1 – intermittent cluster characterized by the low level of business environment innovativeness, high level of human potential development, middle values of efficiency and investment activity.

On the 5 stage of investigation the choice of scenario for EVA_{ME} economic growth is carried out on the basis of*:*

- modeling against production function, where EVA_{ME} is used as an output volume value; factors influencing EVA (HRD, IA, BEI) are used as resources;
- employing multiplying type of production function (taking the logarithm of EVA values and impact factors).

Production function of economic growth (EVA_{ME}) of the Krasnoyarsk region can be calculated according to the following formula:

$$EVA_{ME} = 17.6\ HRD^{0,35} * IA^{0,36} * BEI^{0,09}$$

On the base of this function we are able to determine the following opportunities of economic growth:

1. Provision of EVA growth by 1 % (on the base of elasticity coefficient) considering the following impact factors:
- HRD growth by 2.86 (e = 0,35);
- IA growth by 2.78 (e = 0,36);
- BEI growth by 11,1 (e = 0,09).

2. Provision of EVA growth by 1 % on the base of structural elements of any of the growth factors;
3. Predicted EVA_{ME} values applied to scenario variants of a region's development (provision of IRP growth during the periods of making predictions).

On the 6 stage of investigation the assessment of ME development effectiveness is carried out on the base of budget effectiveness assessment (a territory's own income /annual average data) and financial economic stability, thus enabling us to carry out ME typology.

On the base of parameter correlation (level of budget effectiveness/speed of change), it is possible to build **a distribution matrix for ME budget effectiveness** and **a positioning map**, allowing to make up a system of managerial decisions for increasing of efficiency, or scenarios of changes in ME position.

Employing the following parameters – *level of financial stability/speed of change* it is possible to build a matrix for ME distribution according to financial stability (using G.B. Polyak's method of defining a budget stability).

Integral analysis of financial stability enables the authorities to receive the information for making decisions on:

- working out and realization пof financial strategy;
- revealing the reserves in raising of funds for budget;
- increase in the efficiency of their employment;
- strengthening in control over their employment.

On the final stage of the investigation employing the author's concept model (Fig. 1) makes it possible to assess the efficiency and quality of a territory's management.

Conclusion

As has been mentioned above, the current assessment method of ME management efficiency is carried out according to the RF Government method, focused on the assessment of budget expenses efficiency of social sphere in the limits of budget authority (Decree of the President.., 2008).

But, this method does not consider the following:

- employment efficiency of a ME resource potential;
- the local authorities active role in creating favorable conditions for entrepreneurial and investment activity in a ME.

The specific feature of the suggested assessment method employment is that it does not only use thee system of qualitative and quantitative indicators (4 groups of indicators): social and economic potential; management potential; additional indicators; managerial quality), but also introduces the category of "*complexity in management*". The need for this category introduction is based on substantial differentiation of ME in the Krasnoyarsk Region against the following criteria:

- the number of administrative entities (number);
- population density (capita/sq. m);
- climate conditions(annual temperature average);
- distance from the centre (km).

On the base of the given criteria ME typology according to group complexity was carried out: low management complexity; moderate; middle; high management complexity.

This method makes it possible to carry out ME typology not only against integral value of management efficiency with determining very high, high, middle, low, very low levels, but this method allows to define the speed in the level change (very high, high, middle, low, very low speed), enabling to build a matrix of ME distribution against management efficiency (*correlation of efficiency level/ speed of change* parameters) and make a positioning map.

The suggested model of a region's management is designed by the author of this paper, and calculation of every stage and method and techniques appraisal were carried in different time periods, thus making it necessary to update the state, situation and management efficiency of ME for a certain time period.

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Управление развитием региона

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В статье рассматривается модель управления муниципальными образованиями региона на основе авторского концептуального подхода к оценке эффективности управления территориями региона, оценке ресурсного потенциала, формированию факторов экономического роста и оценке экономического роста.

Ключевые слова: управление регионом, муниципальные образования, факторы экономического роста, эффективность управления, добавленная стоимость.