# Institutional Regulation of Social Territorial Attractiveness[1]

Prof. E.V. Popov, Member-Correspondent of RAS, Doctor of Economics,
Dr. I.S. Katz, PhD in Economics,
J.K. Omonov

A number of institutional conditions contribute the social attractiveness of a territory, be it a particular populated area or a country. These conditions determine the comfort level of this territory for the population to reside. Undoubtedly, their number is rather large, including both the objective and subjective terms. Nevertheless, it seems feasible to single out the following condition groups (Tab.1), with the most important characteristics in terms of further management being the level of variability and endogeneity of these parameters. The variability determines the extent of the parameter reaction to an impact, whereas the endogeneity shows the parameter independence for the territory given on the parameters of other territories.

Table 1. Institutional conditions of social territorial attractiveness

| Parameter | Variability | Endogeneity |
|---|---|---|
| The level of territorial infrastructure development | +++ | ++ |
| Overall economic territorial development | ++ | + |
| Human and cultural capital of the territory | + | ++ |
| Nature and climatic conditions | - | +++ |

The institutional regularities forming social territorial attractiveness are a complex set of the mechanisms approved, which function on the territory given and determine the parameters of social attractiveness. They include the economic and political mechanisms, public opinion, and traditions. Fig. 1 describes how these mechanisms affect the institutional conditions of social territorial attractiveness.
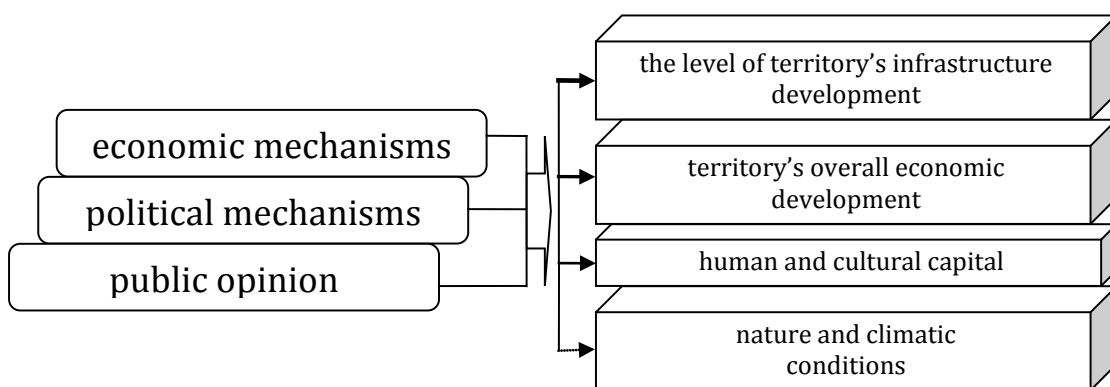
Fig.1 Institutional regularities of social territorial attractiveness

The regulating potential of these mechanisms is not the same both towards different institutional conditions, and the various mechanisms' effect on each condition. Here, the economic conditions, which regulate the conditions of social attractiveness softly and naturally, possess the biggest impact potential. Being the most variable, however, the potential of the territory's infrastructure development is also the most controllable.

To understand the regulating effect of these mechanisms, we turn to consider the institutional structure of such regulation in terms of the population needs (Tab.2).

Table 2. Institutions of territorial infrastructure development

| Need | Institution | Indicator |
|---|---|---|
| Security | Maintenance of a public order institution | Expenses on military security and public order maintenance |
| Health | Health care institution | The number of hospitals, hospital beds, medical staff |
| Conditions of life | Basic infrastructure services institution | Production and distribution of power, gas and water |
| Knowledge | Education institution | The number of pupils and students in primary, secondary, vocational, higher and post-graduate education institutions |
| Information | Informational support | The number and funds |

| | | of libraries, the number of media |
|---|---|---|
| Travel | Transport institution | The number of journeys depending on the kind of transport for a million of citizens |
| Spiritual and leisure needs | Leisure institution | The number and repertoire of theaters and cinemas; the number of museums, parks, restaurants, cafés |

We take the indices of birth rate (b) and migration (m) as the indicators of social territorial attractiveness, most brightly demonstrating the population's inclination to live on the territory given, as well as the factor of GRP, showing the population's business activity. Besides, we have developed two integral indicators:

$$P=b+m, \qquad (1),$$

describing the general gross influx of people, as well as

$$A=P*GRP, \qquad (2),$$

necessary for the analysis of the total effect of institutional factors on the economic and migration–fertility indices.

In order to analyze the potential of institutional regulation of social territorial attractiveness, we carried out a correlation-regression analysis of the Sverdlovsk region data in 2000-2011[2]. The analysis undertaken brought about the following regularities.

*Maintenance of public order institution.* The correlation and regression analysis failed to reveal any steady correlation between the indicators, which characterize social attractiveness, and the ones, which describe this institution. The maximum significant indicator – the correlation index between GRP and MS (military security expenses) – was 0.59. Hence, the institution given showed no potential of affecting the social attractiveness on the regional level. This is likely to be caused by the fairly low endogeneity and

---

[2]The data were taken fromhttp://sverdl.gks.ru, http://www.gks.ru, , the Statictics Collection "Regions of Russia". Social-economic indicators 2011/Stat. Coll./Rosstat. – Moscow, 2011. – 990p.

regional variability of this institution. It seems more active as a tool on the federal level.

*Health care institution.* The study of a number of indicators characterizing the level of health care system found that the indicator HS (gross expenses on health care) affects GRP on a largest scale, while the indicators HB (the number of hospital beds) and HH (the number of hospitals) are most active towards the indicator P. The corresponding regressions are presented by the equations (3) and (4):

$$GRP = 13.5*HS + 327102.3 (\text{R-squared}=0.78, \text{prob}=0.04) \qquad (3)$$

$$P = 4575.5*HB + 543.3*HH - 98819.9 \ (\text{R-squared}=0.99, \text{prob}=0.01) \qquad (4)$$

So, this institution stimulates rather the influx of population than the people's activity. The most significant tool of increasing the social attractiveness of a territory is providing the population with the necessary number of hospital beds, which guarantee the adequate and timely medical care.

*Basic infrastructure services institution.* The correlation and regression analysis showed high significance of the indicators characterizing this institution for P. The equation (5) gives the corresponding regression:

$$P = 0.17*CS + 13857.5 \ (\text{R-squared}=0.92, \text{prob}=0.009), \qquad (5)$$

where CS – the gross production and distribution of power, gas and water.

However, along with high significance of this indicator, there is rather low regulating effect. The reason seems to be the low elasticity of demand on communal public services. Thus, this tool can be seen more as a strategic one, rather than tactic, concerning the regulation of social attractiveness on aconcerned territory.

*Education institution.* This institution is most effective in terms of the birth rate level. According to the analysis, the most significant factor is the level of secondary education. Its regulating effect is described by the formula (6):

$$P = 50.3*SS - 55807.7 \ (\text{R-squared}=0.91, \text{prob}=0.01) \qquad (6)$$

The analysis did not reveal any apparent correlation concerning other levels of education system. Moreover, in terms of higher education, the correlation proved negative pointing at the lower fertility attitude along with the higher education level among the population. As opposed for migration,

the effect of this indicator is positive (r=0.85), as significant as the effect of vocational education (r=0.82). Therefore, all the levels of education system prove important for increasing the social attractiveness of a territory in terms of the population influx.

*Information support institution.* Since information has become the most important of all the resources nowadays, the dramatic effect of this institution on all the characteristics of social attractiveness seems inevitable. The biggest correlation concerning P was demonstrated by the library provision and the Internet access (r=0.88 and r=0.86, respectively). However, the indicator of Internet access proved significant only concerning GRP (r=0.9). The regression concerning the Internet access effect on the integral indicator A is given by the equation (7):

$$A = 143.9*IN - 132080 \text{ (R-squared=0.89, prob=0.05)} \qquad (7)$$

*Transport institution.* This institution most affects the gross regional product; the corresponding dependence is described by the equation (8):

$$GRP = 9.55*T + 100637.48 \text{ (R-squared=0.99, prob=0.00005)} \qquad (8)$$

This institution did not show direct influence on the migration flows and the birth rate. However, the indirect effect it has on the integrated indicator A demonstrates high significance of this factor.

$$A = 10105579.4*TQ - 1435037742.88 \text{ (R-squared=0.91, prob=0.05)}, \qquad (9)$$

where TQ – the passenger traffic flow, with particular role of such kinds of transport as buses, trams, trolleybuses, metro.

*Leisure institution.* The analysis showed the importance of this institution mostly regarding the indicators of gross regional product and migration characteristics. It affects indirectly the integral indicator A as well, with this effect being most obvious regarding museums:

$$A = 3510360119.27*M + 334420925033 \text{ (R-squared=0.9, prob=0.05)} \qquad (10)$$

There is also a noticeable effect on GRP from the turnover of restaurants, cafes and other catering institutions (F):

$$GRP = 61.08*F + 272029.46 \text{ (R-squared=0.91, prob=0.05)} \qquad (11)$$

This index affects migration to a lesser extent.

So, the most significant indicators regarding this institution are museums and catering companies. Such characteristics as the number of theaters and performances, the number of parks, cinemas, clubs did not reveal any controlling effect.

Summing up all the above said, it is necessary to emphasize that the territorial infrastructure, on the larger extent being the companies of public sector, enjoys a powerful regulating potential on the indicators of social territorial attractiveness. Such institutions as health care, education, information, and basic infrastructure services are most effective regarding the population reproduction and immigration activity. The population's business activity, on the other hand, is most affected by the institutions of information, transport and leisure. It is believed that the appropriate use of the methodology provided will increase the social attractiveness of the Sverdlovsk region, as well as will help develop a set of stimulating measures for the other Russia's regions.

**The list of the used literature**

1. *Blanchard O. and Shleifer A.* Federalism with and without Political Centralization. China versus Russia // IMF Staff Papers. 2001. 48. 171-179 (Special Issue);

2. Lindahl E. Die Gerechtigkeit der Besteurung. Lund, - Cambridge University Press 1919

3. *Oates W.* Fiscal Federalism. N. Y.: Harcourt, Brace, Jovanovich, 1972.

4. *Oates W.* An Essay on Fiscal Federalism // Journal of Economic Literature. 1999. 37. 1120—1149

5. *Prud'homme R.* The Dangers of Decentralization // The World bank research observer. 1995. 10 (2). 201-220; *De Mello L.* Fiscal Decentralization and Intergovernmental Fiscal Relations: A Cross-Country Analysis // World Development. 2000. 28 (2). 365-380

6. Samuelson P.A. The Pure Theory of Public Expenditure // Review of Economics and Statistics. 1954;

7. *Treisman D.* State Corroding Federalism // Journal of Public Economics. 2004. 88. 819-843.

8. Белоусова С.В. Проблемы учета особенностей феномена «общественное благо» // Журнал экономической теории. 2007. № 4. С. 60.

9. Кац И.С. Современная децентрализация локального общественного сектора // Журнал экономическоц теории. 2011. №4

10. Попов Е.В., Кац И.С. Институциональная эволюция сектора общественных благ // Вестник ЮРГТУ. 2009. №4.

11. Рубинштейн А.Я. К вопросу расширения «чистой теории общественных расходов». – М.: ИЭ УрО РАН, 2007;

12. Смит Адам Исследование о причинах и богатстве народов - Издательство социальной экономической литературы – Москва 1962 – стр. 650

13. Таллок Г. Общественные блага и перераспределение ренты – Издательство института Гайдара, 2011 год – стр. 224

14. Шефле А. Сущность социализма – Типография «работника» и «громады» 1881 год - стр. 143