

## METHODS OF EVALUATING THE INTERMUNICIPAL MIGRATION LINKS

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**Keywords:** municipal formation, intermunicipal interaction, population migration, migration links.

The author of the article represents her own method of evaluating the intermunicipal migration links, that allows to reveal the migration scale, determines the directions of migration flows between the municipalities, and determines the degree of intensiveness and the result of migration links.

The changes in local self-government in Russia have lead to the necessity of interaction between the municipalities of different levels aimed at expressing and defending their interests, experience exchange in the sphere of organizing local self-government, establishing intermunicipal economic communities for making joint decisions at the local level. There are enough prerequisites for developing intermunicipal interaction. However, it is quite difficult to accomplish the scientific analysis of the practice of this interaction and determine the degree of the intensive character of intermunicipal links because of the weak development of municipal statistics and the absence of the methods of evaluating the intermunicipal links.

Evaluating the interaction of municipalities within the boundaries of a country, a region or even a district is necessary for determining the degree of intermunicipal links' development, accomplishing the control of legislation in the sphere of local self-government and, finally, evaluating the efficiency of the bodies of local self-government.

There is no unified method of evaluating the links between the municipalities at present, that is why there is a necessity in an individual approach to every type of links. There are the following types of risks among the intermunicipal ones: resource, migration, economic, infrastructure, social, institutional. The author suggests the method of evaluating the intermunicipal migration links and its implementation for the analysis of the above mentioned links of Pokhvestnevo sub-region of the Samara region (Pokhvestnevo city okrug, Pokhvestnevskiy, Kamyshinskiy, Klyavinskiy municipal districts) during 2007 - 2009.

The following indices were used for evaluating intermunicipal migration links:

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1. Absolute indices characterizing migration scale and capacity - the number of incoming migrants, outgoing migrants and their aggregate (migration turnover).

2. The coefficients of the intensive character of migration links, defining the degree of the intensiveness of links between the municipalities.

3. Resulting coefficients of interregional migration links characterizing the number of outgoing migrants calculated per 1000/100/10 incoming migrants, depending on the scale of municipal migration.

The current statistics about population migration is used for calculating the coefficients of the intensiveness of interregional migration links:

$$K_{ij} = \frac{M_{ij}}{\sum_{i=1}^m M_{ij}} + \frac{S_{ij}}{\sum_{i=1}^m S_i} = \frac{M_{ij} \sum_{i=1}^m S_i}{S_{ij} \sum_{i=1}^m M_{ij}},$$

where  $K_{ij}$  is the coefficient revealing the intensiveness of interregional migration links;  $M_{ij}$  is the number of migrants arriving from  $i$ -region into  $j$ -region;  $S_i$  is the population of the  $i$ -region;  $m$  is the number of all outgoing regions.

However, in order to analyze the intensiveness of intermunicipal migration links it is more convenient to use the mean values of the coefficients. Let's divide the whole aggregate of coefficient values into 5 groups. The first group contains the coefficient with values up to 0,39. The second group contains the values from 0,40 to 0,79, the third one - from 0,80 to 1,25, the fourth - from 1,26 to 2,50 and the fifth one - from 2,51 and higher. Let's name the links of each group as: insignificant, visible, average, enhanced, high.

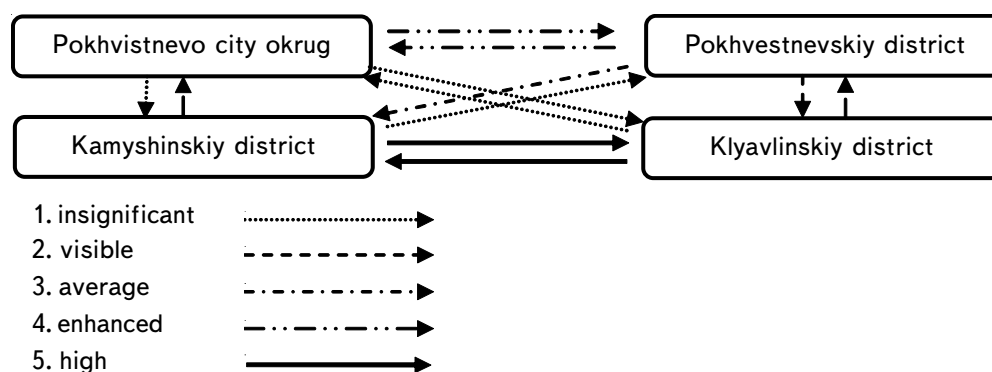


Fig. The degree of interregional migration links intensity of Pokhvistnevskiy subregion for the period 2007 - 2009

As a result we can make a conclusion that the highest degree of intensiveness of migration links (both direct and indirect) is between the Kamyshinskiy and Klyavlinskiy districts, Pokhvistnevo city okrug and Pokhvestnevskiy district, the average degree is between Pokhvestnevskiy district and Kamyshinskiy municipal districts, and there are insignificant migration links between other municipal formations of the sub-region.

It is necessary to mention that there is one more index evaluating the results of migration - the coefficient evaluating the result of migration links (CRML).

$$CRML = \left( \frac{\text{The number of outgoing migrants}}{\text{The number of incoming migrants}} \right) \cdot 1000.$$

CRML for Pokhvistnevskiy region was calculated as the aggregate for 3 years and characterized the number of outgoing migrants per 10 incoming ones. As a result we get that for 10 incoming migrants in Pokhvistnevskiy district from Pokhvistnevo city okrug we have 18 outgoing migrants for the city okrug; for 10 incoming migrants in Kamyshinskiy district from the city we have 65 outgoing migrants (6,5 times more); for 20 incoming migrants in Kamyshinskiy district there are 17 outgoing migrants for Pokhvistnevskiy and 17 for Klyavlinskiy districts; for 10 incoming migrants in Klyavlinskiy region from Pokhvistnevskiy region we have 5 migrants leaving the region. The coefficient=1 means that there is no migration exchange between municipal formations

(Pokhvistnevo city okrug and Klyavlinskiy district), but this fact does not reject the existence of migration links.

As a result of calculations in the frameworks of Pokhvistnevo subregion, two pairs of municipal formations were revealed having the most close migration links: Pokhvistnevo city okrug - Pokhvistnevskiy municipal district and Kamyshinskiy - Klyavlinskiy municipal districts. In the first pair migration direction is mainly in favour of the city okrug, in the second pair - in favour of Klyavlinskiy district.

Therefore the evaluation of intermunicipal migration links according to the suggested method helps to reveal the migration scale between the municipalities, and determine the degree of the intensiveness of these links. Two main destinations were revealed - Pokhvistnevo city okrug, and Klyavlinskiy municipal district. The main directions of migration flows are Pokhvistnevo city okrug - Pokhvistnevskiy municipal district and Kamyshinskiy - Klyavlinskiy municipal districts. The further analysis of the factors contributing to the development of population migration is aimed at determining the strategic directions of intermunicipal interaction development, as well as perspective measures of social policy in the Samara region.

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