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**BUDGETS’ SELF-SUFFICIENCY OF THE UNITED TERRITORIAL COMMUNITIES AS THE BASIS FOR THE HUMAN RESOURCES DEVELOPMENT**

**Abstract.** The impact of self-sufficiency of the united territorial communities on human resources development, in particular financial self-sufficiency, is identified by the author in the article. The estimation of the united territorial communities’ budgets based on the three models, which are grounded on the criterion of correlation between individual revenues and budget funds of higher levels, i.e. “50/50”, “75/50”, “below 50 / more than 50”, is fulfilled.

**Keywords:** budget, human resources, united territorial community, development, self-sufficiency

Formulas: 2, fig.: 3, tabl.: 3, bibl.: 12

**JEL Classification:** D310, J210, O150

**Introduction.** The basis for the development of any economic system, for example, united territorial community, is its self-sufficiency. This feature significantly affects not only the development of a regional institution. But it defines its prospects for the future. The key element of the united territorial communities' functioning is human resources as “individuals themselves are the only element that can create value, but equipment, raw materials, energy are only inert potentials which naturally do not create anything and can not create until a person uses this potential, forcing it to work” [Fitz-enz 2006]. That is, human resources take an active part in forming the budget of communities, especially in terms of providing them with their individual revenues. In turn, the further human resources development is directly affected by the level of individual financial resources' provision, namely the ability to fully realize the skills and talents, occupy the appropriate place in society, sense of confidence, and increase of interaction effectiveness with other people. The number of successful people in the community directly influences its functioning and further development, as the results achieved by successful people are the contribution to its activities. The realization of the community's potential depends on the proper alignment of its members’ successful business results, application of the individual success to improve the performance of the community in general.

Based on the above mentioned, a logical conclusion is made about the certain interest in recognizing the abilities and talents of community members and helping to accomplish them. Consequently the community will be stronger in all aspects of its business. This is possible only if the level of the united territorial communities’ self-sufficiency is adequately high.

Particular attention is given to the assessment of the united territorial communities' self-sufficiency level, which is characterized, as a rule, by insufficient share of own rev-
enues and, accordingly, limited capacity for human resources development, which are the key to their successful functioning and determine the future of the community, in particular, and the region and country in general. Therefore, it is necessary to assess the self-sufficiency level, which is the foundation for the development of the entire community, and its human resources in the future.

**Literature review and the problem statement.** In scientific literature, self-sufficiency is considered both from the theoretical point of view — the definition of its essence in Sociology, Psychology, Economics, and in terms of practical application — assessment of certain systems’ self-sufficiency level.

Among Ukrainian scholars who have provided theoretical analysis of self-sufficiency are B. Zabolotskij, L. Makarenko, S. Osadchuck, N. Kyzym [Zabolotskij 2001, Makarenko 2007, Osadchuck 2009, Kyzym 2015], etc.

Methodological aspects of assessment and ensuring the required level of self-sufficiency are presented in the research works of O. Efremov, V. Tihonov, M. Popov [Efremov, Tihonov, Popov 2002], etc. Scholars interpret the assessment of the self-sufficiency level on the basis of certain normative indices achievement.


A small share of the united territorial communities’ individual revenues in the structure of the community’s budget, which, in turn, limits the possibilities for human resources full range development is one of the problems concerning its self-sufficiency ensuring. Therefore, the main task for communities is to increase the share of individual revenues and their appliance to strengthen and develop human potential. This will simultaneously advance the living standards of the population and improve the efficiency of community’s functioning.

**Research results.** In our study, according to a united territorial community, the concept of “self-sufficiency” is used in the analysis of the correlation between individual revenues of the community’s budget and the funds provided to cover expenditure from higher-level budgets.

Three models of the united territorial communities’ budgets on the basis of the analysis of the ratio between own funds and “attracted” ones (regulated are funds provided from higher-level budgets to balance incomes and expenditures) have been examined:

1) “50/50” is a model which means that the budget expenditures are covered by 50% at the expense of the united territorial communities’ own revenues, and by 50% at the expense of the higher-level budgets’ funds;

2) “75/25” is a model which means that the budget expenditures are covered by 75% at the expense of the united territorial communities’ own revenues, and by 25% at the expense of the higher-level budgets’ funds. The model is used in EU member-countries to ensure resilience to financial institutions (the European Charter);

3) “below 50 / more than 50” is a model which means that the budget expenditures are covered less than by 50% at the expense of the united territorial communities’ own revenues, and more than 50% of the expenses are reimbursed at the expense of the higher-level budgets’ funds.
Table 1 shows the model of budgets which is scrutinized at the example of Zaporizhzya region’s united territorial communities statuses [Investment Passports of Communities 2016].

We shall analyze the budgets of the united territorial communities (Table 1). Based on the proposed data, we shall determine the model which they belong to depending on the ratio of own funds and funds provided by the higher-level budgets. We group communities as follows:
- 75/25 – high level of budget sustainability;
- 50/50 – medium level of budget sustainability;
- below 50/ more than 50 – low level of sustainability.

Communities which have budget surplus belong to the 1st group of sustainability.

Table 1 - Budgets of Zaporizhzya region’s united territorial communities, by 2016

<table>
<thead>
<tr>
<th>№</th>
<th>Community</th>
<th>Expenditures, min. h.m.</th>
<th>Own revenues, min. h.m.</th>
<th>Own revenues, %</th>
<th>Higher-level budgets' funds, %</th>
<th>Ratio own revenues/attracted revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Smirnovska rural community</td>
<td>27.1</td>
<td>5.2</td>
<td>19</td>
<td>81</td>
<td>19/81</td>
</tr>
<tr>
<td>2</td>
<td>Malotokmachanska rural community</td>
<td>15.8</td>
<td>16.7</td>
<td>106</td>
<td>-6</td>
<td>surplus</td>
</tr>
<tr>
<td>3</td>
<td>Velykobilozerska rural community</td>
<td>61.2</td>
<td>24.5</td>
<td>40</td>
<td>60</td>
<td>40/60</td>
</tr>
<tr>
<td>4</td>
<td>Girsivska rural community</td>
<td>20.3</td>
<td>10.7</td>
<td>53</td>
<td>47</td>
<td>53/47</td>
</tr>
<tr>
<td>5</td>
<td>Komyshevaska settlement community</td>
<td>58.1</td>
<td>11.2</td>
<td>19</td>
<td>81</td>
<td>19/81</td>
</tr>
<tr>
<td>6</td>
<td>Dolynska rural community</td>
<td>33</td>
<td>22.6</td>
<td>68</td>
<td>32</td>
<td>68/32</td>
</tr>
<tr>
<td>7</td>
<td>Ostrykivska rural community</td>
<td>13,995</td>
<td>15.9</td>
<td>114</td>
<td>-14</td>
<td>surplus</td>
</tr>
<tr>
<td>8</td>
<td>Veselivska settlement community</td>
<td>68.5</td>
<td>54.2</td>
<td>79</td>
<td>21</td>
<td>79/21</td>
</tr>
<tr>
<td>9</td>
<td>Komysh-Zaryanska settlement community</td>
<td>45.6</td>
<td>15.6</td>
<td>34</td>
<td>66</td>
<td>34/66</td>
</tr>
<tr>
<td>10</td>
<td>Bilenkivska rural community</td>
<td>39.5</td>
<td>14.7</td>
<td>37</td>
<td>63</td>
<td>37/63</td>
</tr>
<tr>
<td>11</td>
<td>Shyrokiivska settlement community</td>
<td>25.6</td>
<td>14</td>
<td>55</td>
<td>45</td>
<td>55/45</td>
</tr>
<tr>
<td>12</td>
<td>Vodyanska rural community</td>
<td>10.2</td>
<td>5.5</td>
<td>54</td>
<td>46</td>
<td>54/46</td>
</tr>
<tr>
<td>13</td>
<td>Orhivska urban community</td>
<td>28.8</td>
<td>28</td>
<td>97</td>
<td>3</td>
<td>97/3</td>
</tr>
<tr>
<td>14</td>
<td>Berestivska rural community</td>
<td>23.3</td>
<td>23.8</td>
<td>102</td>
<td>-2</td>
<td>surplus</td>
</tr>
<tr>
<td>15</td>
<td>Voskresenska rural community</td>
<td>35.9</td>
<td>14.3</td>
<td>40</td>
<td>60</td>
<td>40/60</td>
</tr>
<tr>
<td>16</td>
<td>Preobrazhenska rural community</td>
<td>27.5</td>
<td>30.9</td>
<td>112</td>
<td>-12</td>
<td>surplus</td>
</tr>
<tr>
<td>17</td>
<td>Tavrijska rural community</td>
<td>16.8</td>
<td>5.2</td>
<td>31</td>
<td>69</td>
<td>31/69</td>
</tr>
</tbody>
</table>
Table 1

<table>
<thead>
<tr>
<th>№</th>
<th>Community</th>
<th>Expenditures, min. hrn.</th>
<th>Own revenues actual, min. hrn.</th>
<th>Own revenues, %</th>
<th>Higher-level budgets’ funds, %</th>
<th>Ratio, own revenues/attr. revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Primorska urban community</td>
<td>68,9</td>
<td>36,4</td>
<td>53</td>
<td>47</td>
<td>53/47</td>
</tr>
<tr>
<td>19</td>
<td>Pavlivska rural community</td>
<td>6,4</td>
<td>3,9</td>
<td>61</td>
<td>39</td>
<td>61/39</td>
</tr>
<tr>
<td>20</td>
<td>Gulyajpilska urban community</td>
<td>105,6</td>
<td>72,1</td>
<td>68</td>
<td>32</td>
<td>68/32</td>
</tr>
<tr>
<td>21</td>
<td>Kamjansko-Dniprovska urban community</td>
<td>21,03</td>
<td>11,3</td>
<td>54</td>
<td>46</td>
<td>54/46</td>
</tr>
<tr>
<td>22</td>
<td>Osypenkovska rural community</td>
<td>41,2</td>
<td>20,5</td>
<td>50</td>
<td>50</td>
<td>50/50</td>
</tr>
<tr>
<td>23</td>
<td>Chernigivska settlement community</td>
<td>101,9</td>
<td>53,3</td>
<td>52</td>
<td>48</td>
<td>52/48</td>
</tr>
</tbody>
</table>

Source: [Shatalova 2012]

Figure 1 presents grouping of Zaporizhzya region’s united territorial communities according to the level of budget sustainability.

**BUDGET SUSTAINABILITY**

- **Model “75/25”**
  - Malotomachanska rural community;
  - Ostrykivska rural community;
  - Veselivska settlement community;
  - Orihivska urban community;
  - Berestivska rural community;
  - Preobrazhzenska rural community.

- **Model “50/50”**
  - Girivska rural community;
  - Dolnyansk rural community;
  - Shyrokiivska settlement community;
  - Vodyanska rural community;
  - Primorska urban community;
  - Pavlivska rural community;
  - Gulyajpilska urban community;
  - Kamjansko-Dniprovska urban community;
  - Osypenkovska rural community;
  - Chernigivska settlement community.

- **Model “less than 50/ greater than 50”**
  - Smirnovska rural community;
  - Velykobilozerska rural community;
  - Komshuvaska settlement community;
  - Komish-Zaryanska settlement community;
  - Bilkenivska rural community;
  - Voskresenska rural community;
  - Tavrijska rural community.

**Figure 1** - Grouping of Zaporizhzya region’s united territorial communities according to the level of sustainability

**Source:** developed by author Pereverzieva A.
23 united territorial communities have been analyzed, i.e. information about expenditures and revenues. It should be noted that by 2017 36 communities have been formed in Zaporizhzhya region; 42 communities are planned to be formed in 2018. That is, the tendency to expand the number of territorial units within the region continues, and, accordingly, the urgent question about ensuring their self-sufficiency for the proper development of human resources and improving the well-being of the population of the communities increases.

Figure 1 clearly shows that most of the united territorial communities of Zaporizhzhya region have a medium level of budget sustainability (43%), i.e. they represent the “50/50” model. The amount of communities with high level of budget sustainability and low level of budget sustainability is about the same - 6 (26%) and 7 (31%) respectively.

To determine the impact of sustainability of the united territorial communities’ budgets, it is necessary to analyze them by 3 groups: average per capita expenditure; average revenue rate; average salary by group; average employment rate; the average unemployment rate. We consider two approaches to calculate average indices like the arithmetic mean and the geometric mean.

If to calculate average indices like the arithmetic mean:

\[
\frac{\sum_{i=1}^{N} a_i}{N},
\]

where \(a_i\) - represents the value of \(i\) index;
\(N\) - number of united territorial communities by group.

Calculation results according to the “arithmetic mean” approach are shown in Table 2.

Table 2 - Analysis of human resources development indicators in the context of separate groups of united territorial communities (arithmetic mean)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model «75/25»</td>
<td>4518,07</td>
<td>4150,95</td>
<td>5792,80</td>
</tr>
<tr>
<td>Model «50/50»</td>
<td>1018302,87</td>
<td>567643,71</td>
<td>315298,49</td>
</tr>
<tr>
<td>Model «below 50/ more than 50»</td>
<td>3049,50</td>
<td>3361,19</td>
<td>3989,71</td>
</tr>
<tr>
<td>Average own revenue rate, UAH</td>
<td>2466,00</td>
<td>2853,60</td>
<td>2442,86</td>
</tr>
<tr>
<td>Average number of employed, persons</td>
<td>1343,43</td>
<td>2327,95</td>
<td>1798,41</td>
</tr>
</tbody>
</table>

Source: [Zablotskyi 2001]

Table 2 shows that communities that operate at their own expense are characterized by low unemployment rate, but also rather insignificant values of other indicators of human resource development. Communities working at the expense of the funds provided from higher-level budgets have positive results. This indicates the inappropriateness of using the “arithmetic mean” approach, since it does not allow to harmonize low and high values of indicators but only counteract low values at the expense of high ones.

This can also be seen clearly in Figure 2 which shows the correlation between groups of united territorial communities by the above-mentioned models of budget sustainability in terms of individual indicators.
Figure 2 - Comparison of the average indices of united territorial communities by groups (arithmetic mean)
Source: developed by author Pereverzieva A.

Thus, in our opinion, it is recommended to use the "geometric mean" analytical approach which allows simultaneously to take into account low and high values of indicators but not to counterbalance one values at the expense of others.

The average values of the indicators within the framework of the "geometric mean" approach will be calculated according to the formula:

\[ \sqrt[N]{\prod_{i=1}^{N} a_i} , \]

where \(a_i\) - represents the value of i-index;
\(N\) - number of united territorial communities by group.
The results of calculations using the "geometric mean" approach are presented in Table 3.

Table 3 - Analysis of human resources development indicators in the context of separate groups of united territorial communities (geometric mean)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average per capita expenditure, UAH</td>
<td>4139,40</td>
<td>3257,21</td>
<td>5590,80</td>
</tr>
<tr>
<td>Average own revenue rate, UAH</td>
<td>1011004,70</td>
<td>564263,53</td>
<td>302622,28</td>
</tr>
<tr>
<td>Average salary by group</td>
<td>2852,75</td>
<td>3291,43</td>
<td>3893,11</td>
</tr>
<tr>
<td>Average number of employed, persons</td>
<td>1721,47</td>
<td>2416,24</td>
<td>2065,04</td>
</tr>
<tr>
<td>Average number of unemployed, persons</td>
<td>1024,97</td>
<td>1777,73</td>
<td>1488,30</td>
</tr>
</tbody>
</table>

Source: developed by author Pereverzieva A.
The benefits of using this approach is definitely presented in Figure 3.

Figure 3 - Comparison of the average indices of united territorial communities by groups (geometric mean)
Source: developed by author Pereverzieva A.

Data analysis presented in Table 3 and their visual representation in Fig. 3 proves that united territorial communities with a high-level of budget sustainability are characterized by better conditions for the development of human resources in the future. Although, according to some indicators they are characterized by lower values, but self-sufficiency determines a gradual increase in indicators, rather than “instantaneous growth with further developmental decay.” The communities which are highly subsidized and have low levels of self-sufficiency in the long run may have limitations and obstacles to the full development of human resources, even at the present time ensuring a higher level of remuneration.

Hence, the proposed approach to communities’ grouping depending on the level of budget sustainability allows to determine the success and prospects of human resources development of united territorial communities in the future.

Conclusions. The impact of self-sufficiency of the united territorial communities on human resources development, in particular financial self-sufficiency, is identified in the article. The estimation of united territorial communities budgets based on the three models, which are grounded on the criterion of correlation between individual revenues and budget funds of higher levels: “50/50”, “75/50”, “below 50 / more than 50”, is done.

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*Metho**dological aspects of achievement of socio-economic self-sufficiency of the region (2002).*


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