An Assessment for NUTS Level-2 Regions in Terms of Regional Development Projects

— A Case Study for a New Developmental Administrative Structure in Turkey —

Abdulkadir Can TEKIN *, Enver Erdinc DINCSOY **

Regionalization movement has brought a new structuring process for candidate countries to the European Union. The main applications in this process can be simply based on the smaller region groups to collect more detailed and reliable data-information. In this regard, the aim of data and information collection should not be only the reason to start a new regionalization act. At the same time, this movement has to be considered together with developmental issues to solve regional inequalities among more and less developed regions and to apply the best regional development projects between specific region groups. However, the findings and results of our previous studies for geographic and especially for NUTS level-1 regions of Turkey did not deeply confirm GDP per capita income convergence in terms of Neoclassic Growth Model. For this reason, we have analyzed NUTS level-2 regions in this study and also compared it with other region groups. Finally, the achievement of regional convergence as a goal showed that regions need their own grouped regional development plans, projects, and administrative structures, which will also play the most important roles for Turkey in the solution of regional inequalities as much as integration with the EU and the world regional policies.

Key words: Turkey, NUTS Regions, Regional Development Projects, Convergence Model, Regional GDP per capita Incomes

1. Introduction

Turkey is basically divided into seven different geographical regions which comprise 81 provinces in terms of topography, climate, economy, and public service requirements. Furthermore, Turkey has been divided 12 NUTS (Nomenclature of Territorial Units for Statistics) level-1 regions, 26 NUTS

* Graduate School of Humanities & Social Sciences, Okayama University,
** Graduate School of Natural Science & Technology, Okayama University
level-2 regions, and 81 NUTS level-3 regions in the base of adaptation with the EU (European Union). NUTS level-3 is based on 81 provinces; level-2 regions were defined by grouping the neighbor provinces in the scope of level-3, and similarly, level-1 regions were constituted by grouping the NUTS level-2 regions.

However, there are significant differences among Turkey’s regions in terms of socio-economic conditions. These interregional differences and developmental issues have inevitably arisen from the inadequate distribution and inefficient use of resources, unfavorable topographic structure, severe climatic conditions, neutralization from domestic-foreign markets, dispersed settlement, and insufficient investments. Besides, uncontrolled population movements from underdeveloped regions have also caused many additional problems such as unemployment, inadequate infrastructure and superstructure, shanty suburbs, and environmental pollution in the metropolitan areas.

Basically, the applications and efforts of the regional development in the world have been built on achieving economic, social, and cultural developments by decreasing the interregional differences (Genli and Yirmibesoglu, 2003). These applications can be segregated under some basic priority targets, which are development sectors, development areas, and development projects.

Regional development efforts in Turkey were firstly started in 1950s for pilot areas and aimed to solve different regional problems. After the establishment of SPO (State Planning Organization) in 1960, the perspective of development plans and works were changed into the Five-Year Development Plans; and institutionalization efforts were also accelerated in the following years. However, regional issues were usually penetrated in the Five-Year Development Plans.

Nowadays, the number of regional arrangements has reached more than ten comprehensive development projects since 1950s, and some of them are completed projects but others still under construction with some delays. Similarly, Five-Year Development Plans has been published eight times since 1963, which correspond to more than forty years.

Currently, regional arrangements are directly related to local administration as a part of Turkey’s obligations to access to the EU. These necessary legal and administrative arrangements were firstly outlined in the Eighth Five-Year Development Plan unlike other plans. These developments and changes during the years surely affected the condition of regions. Thus, we examined geographic and NUTS level-1 regions of Turkey to analyze the diversifications and differentiations among region groups in the previous studies. Therefore, we have focused on NUTS level-2 regions to analyze the diversifications and differentiations from multidimensional perspectives in this study, in other words, another dimension than other studies. In this regard, we discussed per capita income performances and population movement tendencies as key indicators in NUTS level-2 regions to determine the best
rationalistic approach for project implementation and administration in Turkey.

2. Regional Development and Planning in the World and Turkey

Regional development planning aims at eliminating the unevenness among regions in general. At least, it focuses on providing economic balance between regions in different developmental levels. Today, it is obvious that there is a need to redefine regional development components in a changing world due to globalization processes. The impact of globalization process on regional development components can be summarized as; changing the role of local governance, increasing the capacity of local governments in order to direct global economic forces more effectively, reorienting the regional development efforts towards a more explicit concern with poverty alleviation in the context of a global-local nexus, and planning of urban and regional structure in a sustainable way. In other words, with this processes, fundamental importance is given to the regional resilience, learning regions and providing high connectivity among regions, groups, and institutions that can be built the relational networks which enable regions to become more flexible (Levin, 2000).

On the other hand, the globalization process has indicated that urban and local economies are placed in the global economy as an impressive actor. Also, we believe that competition among local economies is the main actor that defines the development performance of local economies in the world. Strategies and policies should be developed by local economies in global competition form, in the base of the regional development policies, which accelerate the local specialization process as well. Hence, these policies have been put into implementation to remove economic and social disparities among countries, regions and sub-regions by the EU and OECD (Organization for Economic Co-operation and Development) countries. In this regard, Turkey as a candidate country to the EU and a member of OECD needs to pay more attention on these policies as well.

In terms of regional development, Turkey has central planned socio-economic development policies and implementations for a long time because of various differences and inequality between its regions, with its dynamic economic and social structure.

The industrialization policies, which take a very important place in regional development approaches, started in Turkey after World War-II. This change also caused rapid urbanization, rural transformation, diversification, and differentiation among regions. In that time, Turkey has also entered into a new period like other countries in the world. With the establishment of SPO in 1960, specific development projects were started to apply for local units (usually based on district, provincial and/or regional levels) to eliminate the diversification and differentiation among the regions by means of dams and irrigation systems. Some important and large scale projects can be named as Southeastern Anatolia
Project, Zonguldak-Bartin-Karabuk Project, Eastern Anatolia Project, and Eastern Black Sea Regional Development Plan. Unfortunately, some of them accelerated the regional problems as a side effect by causing to regional migrations from project areas to metropolitan centers (Swiss Federal Institute of Technology, 2001). Another oversight of the projects was the ignorance of socio-economic interactions among regions in which development remained in only specified project areas.

Recently, Turkey has fairly changed its project approaches on regional development movements facing the effects of globalization process and membership to the EU; and Turkey has applied some joint plans and programs for NUTS level-2 regions, which are also supported by the EU (Table 1).

<table>
<thead>
<tr>
<th>Priority Field of Program</th>
<th>Support from the EU</th>
<th>Addition from Turkey</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Development</td>
<td>12.26</td>
<td>4.08</td>
<td>16.34</td>
</tr>
<tr>
<td>SMEs</td>
<td>18.37</td>
<td>6.13</td>
<td>24.50</td>
</tr>
<tr>
<td>Small Scale Infrastructure</td>
<td>30.62</td>
<td>10.21</td>
<td>40.83</td>
</tr>
<tr>
<td>Technique Support</td>
<td>8.00</td>
<td>--</td>
<td>8.00</td>
</tr>
<tr>
<td>Support for Organizations</td>
<td>0.75</td>
<td>0.25</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>70.00</strong></td>
<td><strong>20.67</strong></td>
<td><strong>90.67</strong></td>
</tr>
</tbody>
</table>

Note: SMEs indicates Small and Medium Enterprises.
Source: SPO (2003a)

Consequently, for catching regional development standards, the existence of interregional differences has been one of the most important problems and concerns in Turkey. Regional convergence as a policy item, the result of regional applications to find out the solution ways will have additional importance for Turkey's membership to the EU as much as integration with world standards.

3. Defining the Regional Units in Turkey

As shown in Figure 1, the country is divided into seven different geographical regions which comprise 81 provinces. These are Marmara (eleven provinces), Aegean (eight provinces), Mediterranean (eight provinces), Southeastern Anatolia (nine provinces), Eastern Anatolia (fourteen provinces), Black Sea (eighteen provinces), and Central Anatolia (thirteen provinces) Regions.
Figure 1. Geographical Regions in Turkey

1. Marmara Region
2. Aegean Region
3. Mediterranean Region
4. Southeastern Anatolia Region
5. Eastern Anatolia Region
6. Black Sea Region
7. Central Anatolia Region

Source: SPO (2004a)

Furthermore, as shown in Figure 2, the country has been divided 12 NUTS level-1 regions, which also comprises 26 NUTS level-2 regions. These are Istanbul Region (one NUTS level-2 region), Western Marmara Region (two NUTS level-2 regions), Aegean Region (three NUTS level-2 regions), Eastern Marmara Region (two NUTS level-2 regions), Western Anatolia Region (two NUTS level-2 regions), Mediterranean Region (three NUTS level-2 regions), Central Anatolia Region (two NUTS level-2 regions), Western Black Sea Region (three NUTS level-2 regions), Eastern Black Sea Region (one NUTS level-2 region), North Eastern Anatolia Region (two NUTS level-2 regions), Central Eastern Anatolia Region (two NUTS level-2 regions), and South Eastern Anatolia Region (three NUTS level-2 regions).

Figure 2. 12 NUTS Regions in Turkey


Source: SPO (2004b)

Similarly, Figure 3 also shows 26 NUTS level-2 regions in Turkey based on the grouping 81 provinces. These regions are Istanbul (one province), Tekirdag (three provinces), Balikesir (two provinces), Izmir (one province), Aydin (three provinces), Manisa (four provinces), Bursa (three provinces), Kocaeli (five provinces), Ankara (one province), Konya (two provinces), Antalya (three provinces), Adana (two provinces), Hatay (three provinces), Kirikkale (five provinces), Kayseri (three
provinces). Zonguldak (three provinces), Kastamonu (three provinces), Samsun (four provinces), Trabzon (six provinces), Erzurum (three provinces), Agri (four provinces), Malatya (four provinces), Van (four provinces), Gaziantep (three provinces), Sanliurfa (two provinces), and Mardin (four provinces).

Figure 3. 26 NUTS Regions in Turkey

<table>
<thead>
<tr>
<th>Region Code</th>
<th>Region Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR10</td>
<td>Istanbul</td>
</tr>
<tr>
<td>TR21</td>
<td>Tekirdag</td>
</tr>
<tr>
<td>TR22</td>
<td>Balikesir</td>
</tr>
<tr>
<td>TR31</td>
<td>Izmir</td>
</tr>
<tr>
<td>TR32</td>
<td>Aydin</td>
</tr>
<tr>
<td>TR33</td>
<td>Manisa</td>
</tr>
<tr>
<td>TR41</td>
<td>Bursa</td>
</tr>
<tr>
<td>TR42</td>
<td>Kocaeli</td>
</tr>
<tr>
<td>TR51</td>
<td>Ankara</td>
</tr>
<tr>
<td>TR52</td>
<td>Konya</td>
</tr>
<tr>
<td>TRA1</td>
<td>Erzurum</td>
</tr>
<tr>
<td>TRA2</td>
<td>Agri</td>
</tr>
<tr>
<td>TRB1</td>
<td>Malatya</td>
</tr>
<tr>
<td>TRB2</td>
<td>Van</td>
</tr>
<tr>
<td>TRC1</td>
<td>Gaziantep</td>
</tr>
<tr>
<td>TRC2</td>
<td>Sanliurfa</td>
</tr>
<tr>
<td>TRC3</td>
<td>Mardin</td>
</tr>
<tr>
<td>TRC4</td>
<td>Samsun</td>
</tr>
</tbody>
</table>

Source: SPO (2004c)

As seen from explanations above, the main regionalization process is simply based on the grouping of provinces which are neighbor to each other. This structure can give additional advantage to collect more detailed and reliable data-information from region groups. However, data and information collection should not be only the reason to start a new regionalization act. At the same time, it is necessary to be considered together with developmental issues to solve regional inequalities among more-less developed regions. With this consideration, appropriate regional development projects which take the most important part of the balanced regional development, should be applied among regions.

4. Social and Economic Indicators according to the Region Groups

Although Turkey has made great strides in regional development, disparities among regions are still creating a problem. In this regard, it can be also said that regional development projects are not so efficient to solve the problems or to establish a balanced distribution among regions in terms of social and economic conditions.

As also mentioned before, development projects in Turkey require some additional well-organized modifications. For example, the regions which are faced with expansion and reduction problems can be more functional for regional socio-economic convergence by establishing investment, production, and employment connections or networks among those region groups.

As one of the most important indicators to identify the regional problems, population tendencies and movements are given and examined below. Firstly, as seen in Table 2, only two regions have a
Table 2. Population Distribution according to Geographic Regions in Turkey

<table>
<thead>
<tr>
<th>Regions</th>
<th>Population</th>
<th>1990</th>
<th>2000</th>
<th>Population Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>City</td>
<td>Village</td>
<td>Total</td>
</tr>
<tr>
<td>Mediterranean</td>
<td>7026,489</td>
<td>4,051,596</td>
<td>2,974,893</td>
<td>8,723,839</td>
</tr>
<tr>
<td>Eastern Anatolia</td>
<td>5,348,512</td>
<td>2,285,796</td>
<td>3,062,714</td>
<td>6,147,603</td>
</tr>
<tr>
<td>Aegean</td>
<td>7,594,977</td>
<td>4,344,471</td>
<td>3,250,506</td>
<td>8,953,375</td>
</tr>
<tr>
<td>Southeastern Anatolia</td>
<td>5,157,160</td>
<td>2,873,801</td>
<td>2,283,359</td>
<td>6,604,205</td>
</tr>
<tr>
<td>Central Anatolia</td>
<td>9,913,306</td>
<td>6,412,910</td>
<td>3,500,396</td>
<td>11,625,109</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,647,035</strong></td>
<td><strong>33,656,275</strong></td>
<td><strong>22,816,760</strong></td>
<td><strong>67,844,903</strong></td>
</tr>
</tbody>
</table>

Source: SPO (2004d)

Table 3. Population Distribution according to NUTS Level-1 Regions in Turkey

<table>
<thead>
<tr>
<th>Regions</th>
<th>Population</th>
<th>1990</th>
<th>2000</th>
<th>Population Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>City</td>
<td>Village</td>
<td>Total</td>
</tr>
<tr>
<td>TR1</td>
<td>7,195,773</td>
<td>6,779,594</td>
<td>416,179</td>
<td>10,018,735</td>
</tr>
<tr>
<td>TR2</td>
<td>2,589,490</td>
<td>1,255,780</td>
<td>1,333,710</td>
<td>2,895,980</td>
</tr>
<tr>
<td>TR3</td>
<td>7,594,977</td>
<td>4,344,471</td>
<td>3,250,506</td>
<td>8,938,781</td>
</tr>
<tr>
<td>TR4</td>
<td>4,688,514</td>
<td>3,005,754</td>
<td>1,682,760</td>
<td>5,741,241</td>
</tr>
<tr>
<td>TR5</td>
<td>5,204,217</td>
<td>3,906,981</td>
<td>1,298,236</td>
<td>6,443,256</td>
</tr>
<tr>
<td>TR6</td>
<td>7,026,489</td>
<td>4,051,596</td>
<td>2,974,893</td>
<td>8,706,005</td>
</tr>
<tr>
<td>TR7</td>
<td>3,818,444</td>
<td>1,925,361</td>
<td>1,893,083</td>
<td>4,189,268</td>
</tr>
<tr>
<td>TR8</td>
<td>4,889,323</td>
<td>2,024,087</td>
<td>2,865,236</td>
<td>4,895,744</td>
</tr>
<tr>
<td>TR9</td>
<td>2,852,806</td>
<td>1,162,757</td>
<td>1,690,049</td>
<td>3,131,546</td>
</tr>
<tr>
<td>TRA</td>
<td>2,354,030</td>
<td>965,156</td>
<td>1,388,874</td>
<td>2,507,738</td>
</tr>
<tr>
<td>TRB</td>
<td>3,101,812</td>
<td>1,361,937</td>
<td>1,739,875</td>
<td>3,727,034</td>
</tr>
<tr>
<td>TRC</td>
<td>5,157,160</td>
<td>2,873,801</td>
<td>2,283,359</td>
<td>6,008,619</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56,473,035</strong></td>
<td><strong>33,656,275</strong></td>
<td><strong>22,816,760</strong></td>
<td><strong>67,803,927</strong></td>
</tr>
</tbody>
</table>

Source: SPO (2004c)

decreasing tendency in village areas, which are Eastern Anatolia Region and Black Sea Region. However, both two regions like other regions have positive growth in the city levels. Secondly, to show the population tendencies in detail, the data was given above for NUTS level-1 regions. It is clearly seen in Table 3 that the population movement has more critical tendency in village areas (TR2, TR7, TR8, TR9, TRA, and TRB). Especially, there is a significant decrease in Western Black Sea and North Eastern Anatolia regions.

On the other hand, NUTS level-1 regions also have an increasing tendency like geographic regions in all city levels which affected total population numbers in the regions. Previous project applications were usually based on geographic region level which covered large-size areas. In this regard, it can be said that the importance of regional convergence and interactions with other regions were not deeply considered because of their large scale. For this reason, we focus on NUTS level-2 regions and suggest it as implementation field in terms of the quality and quantity of regional development projects.

(91) 140
Thirdly, as shown in Table 4, there is no population decrease for city levels in NUTS level-2 regions and for village levels there have been negative growth rates. This can be also explained as migration from rural area to urban centers or losing the agricultural sector in some regions.

On the other hand, the biggest increase in TR10 (Istanbul region) can not be explained by the development of agricultural sector, and it is just because of provincial covered area which is the smallest region. Also, all regions have approximately given population to TR10 region because it is the most developed region among all regions. However, this situation should be a starting point for new regional development project by creating a bridge among TR10 and other underdeveloped regions. In this point, the negative growth rates of TR81, TR82, TR83, TRA1, TRA2, and TRB1 regions are very significant values to reach a regional balance in the view of new projects. Another focus must be given on the differentiation of provincial population densities in total, especially on TR22, TR33, TR72, TR81, TR82, TR83, TRA1, and TRA2 regions, because uncontrolled population reduction will

<p>| Population Distribution according to NUTS Level-2 Regions in Turkey |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|</p>
<table>
<thead>
<tr>
<th>Regions</th>
<th>Total</th>
<th>City</th>
<th>Village</th>
<th>Total</th>
<th>City</th>
<th>Village</th>
<th>Total</th>
<th>City</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR10</td>
<td>7,195,773</td>
<td>6,779,594</td>
<td>416,179</td>
<td>10,018,735</td>
<td>9,085,599</td>
<td>933,136</td>
<td>33,09</td>
<td>29,27</td>
<td>80,72</td>
</tr>
<tr>
<td>TR21</td>
<td>1,182,953</td>
<td>618,393</td>
<td>564,560</td>
<td>1,354,658</td>
<td>815,487</td>
<td>539,171</td>
<td>13,55</td>
<td>27,66</td>
<td>-4,60</td>
</tr>
<tr>
<td>TR22</td>
<td>1,406,537</td>
<td>637,387</td>
<td>769,150</td>
<td>1,541,322</td>
<td>793,166</td>
<td>748,156</td>
<td>9,15</td>
<td>21,86</td>
<td>-2,77</td>
</tr>
<tr>
<td>TR31</td>
<td>2,694,770</td>
<td>2,137,721</td>
<td>557,049</td>
<td>3,370,866</td>
<td>2,732,669</td>
<td>638,197</td>
<td>22,38</td>
<td>24,55</td>
<td>13,60</td>
</tr>
<tr>
<td>TR32</td>
<td>2,138,507</td>
<td>920,207</td>
<td>1,218,300</td>
<td>2,516,114</td>
<td>1,175,369</td>
<td>1,340,745</td>
<td>16,26</td>
<td>24,47</td>
<td>9,57</td>
</tr>
<tr>
<td>TR33</td>
<td>2,761,700</td>
<td>1,286,543</td>
<td>1,475,157</td>
<td>3,051,801</td>
<td>1,587,537</td>
<td>1,464,264</td>
<td>9,99</td>
<td>21,02</td>
<td>-0,74</td>
</tr>
<tr>
<td>TR41</td>
<td>2,413,259</td>
<td>1,720,914</td>
<td>692,345</td>
<td>3,025,475</td>
<td>2,312,348</td>
<td>713,127</td>
<td>22,60</td>
<td>29,53</td>
<td>2,96</td>
</tr>
<tr>
<td>TR42</td>
<td>2,275,255</td>
<td>128,484</td>
<td>2,146,771</td>
<td>2,715,765</td>
<td>1,554,707</td>
<td>1,161,059</td>
<td>17,69</td>
<td>19,06</td>
<td>15,89</td>
</tr>
<tr>
<td>TR51</td>
<td>3,236,378</td>
<td>2,836,802</td>
<td>399,576</td>
<td>4,007,860</td>
<td>3,540,522</td>
<td>467,338</td>
<td>21,37</td>
<td>22,15</td>
<td>15,66</td>
</tr>
<tr>
<td>TR52</td>
<td>1,967,839</td>
<td>1,069,179</td>
<td>898,660</td>
<td>2,435,376</td>
<td>1,434,729</td>
<td>1,000,647</td>
<td>21,31</td>
<td>29,40</td>
<td>10,75</td>
</tr>
<tr>
<td>TR61</td>
<td>1,821,881</td>
<td>961,102</td>
<td>860,779</td>
<td>2,490,235</td>
<td>1,377,788</td>
<td>1,112,447</td>
<td>31,24</td>
<td>36,01</td>
<td>25,64</td>
</tr>
<tr>
<td>TR62</td>
<td>2,816,486</td>
<td>1,913,725</td>
<td>902,761</td>
<td>3,500,878</td>
<td>2,397,073</td>
<td>1,103,805</td>
<td>21,75</td>
<td>22,51</td>
<td>20,10</td>
</tr>
<tr>
<td>TR63</td>
<td>2,388,122</td>
<td>1,176,769</td>
<td>1,211,353</td>
<td>2,714,892</td>
<td>1,429,342</td>
<td>1,285,550</td>
<td>12,82</td>
<td>19,44</td>
<td>5,94</td>
</tr>
<tr>
<td>TR71</td>
<td>1,528,813</td>
<td>724,581</td>
<td>804,232</td>
<td>1,690,826</td>
<td>896,257</td>
<td>794,569</td>
<td>10,07</td>
<td>21,26</td>
<td>-1,21</td>
</tr>
<tr>
<td>TR72</td>
<td>2,289,631</td>
<td>1,200,780</td>
<td>1,088,851</td>
<td>2,498,442</td>
<td>1,469,314</td>
<td>1,029,128</td>
<td>8,73</td>
<td>20,18</td>
<td>-5,64</td>
</tr>
<tr>
<td>TR81</td>
<td>1,103,750</td>
<td>451,677</td>
<td>672,073</td>
<td>1,024,879</td>
<td>456,040</td>
<td>568,839</td>
<td>-7,41</td>
<td>5,49</td>
<td>-16,67</td>
</tr>
<tr>
<td>TR82</td>
<td>937,703</td>
<td>339,434</td>
<td>598,269</td>
<td>871,405</td>
<td>416,491</td>
<td>454,914</td>
<td>-7,33</td>
<td>20,45</td>
<td>-25,29</td>
</tr>
<tr>
<td>TR83</td>
<td>2,847,870</td>
<td>1,232,976</td>
<td>1,594,894</td>
<td>2,999,460</td>
<td>1,545,534</td>
<td>1,453,926</td>
<td>5,18</td>
<td>20,98</td>
<td>-9,25</td>
</tr>
<tr>
<td>TR90</td>
<td>2,852,806</td>
<td>1,162,757</td>
<td>1,690,049</td>
<td>3,131,546</td>
<td>1,545,914</td>
<td>1,585,632</td>
<td>9,32</td>
<td>28,47</td>
<td>-6,38</td>
</tr>
<tr>
<td>TRA1</td>
<td>1,254,782</td>
<td>586,422</td>
<td>668,360</td>
<td>1,351,588</td>
<td>774,113</td>
<td>577,475</td>
<td>7,43</td>
<td>27,76</td>
<td>-14,61</td>
</tr>
<tr>
<td>TRA2</td>
<td>1,099,248</td>
<td>378,734</td>
<td>720,514</td>
<td>1,156,150</td>
<td>515,761</td>
<td>640,389</td>
<td>5,05</td>
<td>30,87</td>
<td>-11,79</td>
</tr>
<tr>
<td>TRB1</td>
<td>1,585,242</td>
<td>780,735</td>
<td>804,507</td>
<td>1,770,597</td>
<td>1,041,933</td>
<td>728,664</td>
<td>11,05</td>
<td>28,85</td>
<td>-9,90</td>
</tr>
<tr>
<td>TRB2</td>
<td>1,516,570</td>
<td>581,202</td>
<td>935,368</td>
<td>1,956,437</td>
<td>965,445</td>
<td>990,992</td>
<td>25,46</td>
<td>50,74</td>
<td>5,78</td>
</tr>
<tr>
<td>TRC1</td>
<td>1,651,421</td>
<td>1,047,566</td>
<td>603,855</td>
<td>2,023,784</td>
<td>1,423,050</td>
<td>600,734</td>
<td>20,33</td>
<td>30,62</td>
<td>-0,52</td>
</tr>
<tr>
<td>TRC2</td>
<td>2,097,902</td>
<td>1,147,054</td>
<td>950,848</td>
<td>2,806,130</td>
<td>1,659,821</td>
<td>1,146,309</td>
<td>29,08</td>
<td>36,94</td>
<td>18,69</td>
</tr>
<tr>
<td>TRC3</td>
<td>1,407,837</td>
<td>679,181</td>
<td>728,656</td>
<td>1,778,705</td>
<td>1,060,265</td>
<td>718,440</td>
<td>23,38</td>
<td>44,53</td>
<td>-1,41</td>
</tr>
<tr>
<td>Total</td>
<td>56,473,035</td>
<td>33,656,275</td>
<td>22,816,760</td>
<td>67,803,927</td>
<td>44,006,274</td>
<td>23,797,653</td>
<td>18,28</td>
<td>26,81</td>
<td>4,21</td>
</tr>
</tbody>
</table>

eventually affect the all socio-economic sectors.

As another important development indicator of regions, GDP per capita incomes were illustrated below. Giving GDP per capita income distributions with population tendencies it is aimed to examine the economic conditions of regions as well. Additionally, it gives practically general information about social dynamics of regions such as human welfare, literacy level, housing, fertility and infant mortality, expenditure on food, medical care, transport, and communication. Besides, regional GDP distributions will be subject to analyze the convergence tendency of regions in the following part of the study according to the several region groups.

Table 5 shows the regional GDP per capita income distribution in geographic regions. This data has been used by many researches in the analysis of Turkey from different points. However, it gives only limited information about regions because of its limited sample size. As seen in Table 5, Marmara region takes the highest value in each year as 2,232,730 TL in 1987, 2,325,991 TL in 1995, and 2,318,719 TL in 2001 but it can not show the same performance in growth rate. Aegean region also takes the highest growth rate among 1987-1995 with 0.14 and Black Sea region takes the highest growth rate among 1995-2001 with 0.07. As also mentioned before, these regions had been the main application field for regional development projects since 1950; however, it is very difficult to make a comprehensive decision for regions in this regional level.

NUTS level-1 regions, of course, give more applicable data opportunity as indicated in the establishment aim of NUTS regions. As shown in Table 6, TR4 region with 2,423,605 TL has overreached TR1 region in 2001. In this point, it could be expected that TR1 region would take the highest value in geographic regions. On the other hand, the most considerable development is seen in two neighbor regions, which are TR9 and TR8 with taking highest ratio (0.33) and third lowest ratio (0.07) among 1987-1995; conversely taking the lowest ratio with -0.07 and the highest ratio with 0.25 among 1995-2001, respectively.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Marmara Region</td>
<td>2,232,730</td>
<td>2,325,991</td>
<td>2,318,719</td>
<td>0.04</td>
<td>0.00</td>
</tr>
<tr>
<td>Aegean Region</td>
<td>1,763,388</td>
<td>2,006,804</td>
<td>2,030,079</td>
<td>0.14</td>
<td>0.01</td>
</tr>
<tr>
<td>Mediterranean Region</td>
<td>1,392,593</td>
<td>1,518,992</td>
<td>1,498,072</td>
<td>0.09</td>
<td>-0.01</td>
</tr>
<tr>
<td>Central Anatolia Region</td>
<td>1,335,397</td>
<td>1,491,057</td>
<td>1,480,437</td>
<td>0.12</td>
<td>-0.01</td>
</tr>
<tr>
<td>Black Sea Region</td>
<td>929,497</td>
<td>1,110,456</td>
<td>1,193,638</td>
<td>0.19</td>
<td>0.07</td>
</tr>
<tr>
<td>Eastern Anatolia Region</td>
<td>579,038</td>
<td>630,947</td>
<td>620,311</td>
<td>0.09</td>
<td>-0.02</td>
</tr>
<tr>
<td>Southeastern Anatolia Region</td>
<td>855,824</td>
<td>860,889</td>
<td>904,705</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Average</td>
<td>1,298,352</td>
<td>1,420,734</td>
<td>1,435,137</td>
<td>0.10</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Table 6. Regional GDP per capita Incomes for NUTS Level-1 (Thousand TL, at 1987 prices)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TR1</td>
<td>Istanbul</td>
<td>2,451,686</td>
<td>2,361,306</td>
<td>2,304,744</td>
<td>-0.04</td>
<td>-0.02</td>
</tr>
<tr>
<td>TR2</td>
<td>Western Marmara</td>
<td>1,524,695</td>
<td>1,937,505</td>
<td>1,904,794</td>
<td>0.27</td>
<td>-0.02</td>
</tr>
<tr>
<td>TR3</td>
<td>Aegean</td>
<td>1,747,793</td>
<td>1,959,202</td>
<td>1,953,715</td>
<td>0.12</td>
<td>0.00</td>
</tr>
<tr>
<td>TR4</td>
<td>Eastern Marmara</td>
<td>1,989,270</td>
<td>2,310,788</td>
<td>2,423,605</td>
<td>0.16</td>
<td>0.05</td>
</tr>
<tr>
<td>TR5</td>
<td>Western Anatolia</td>
<td>1,522,287</td>
<td>1,807,423</td>
<td>1,676,860</td>
<td>0.19</td>
<td>-0.07</td>
</tr>
<tr>
<td>TR6</td>
<td>Mediterranean</td>
<td>1,325,582</td>
<td>1,418,954</td>
<td>1,406,364</td>
<td>0.07</td>
<td>-0.01</td>
</tr>
<tr>
<td>TR7</td>
<td>Central Anatolia</td>
<td>937,135</td>
<td>1,083,905</td>
<td>1,080,717</td>
<td>0.16</td>
<td>0.00</td>
</tr>
<tr>
<td>TR8</td>
<td>Western Black Sea</td>
<td>947,305</td>
<td>1,011,937</td>
<td>1,264,006</td>
<td>0.07</td>
<td>0.25</td>
</tr>
<tr>
<td>TR9</td>
<td>Eastern Black Sea</td>
<td>854,567</td>
<td>1,132,445</td>
<td>1,053,000</td>
<td>0.33</td>
<td>-0.07</td>
</tr>
<tr>
<td>TRA</td>
<td>North Eastern Anatolia</td>
<td>505,719</td>
<td>531,171</td>
<td>563,501</td>
<td>0.05</td>
<td>0.06</td>
</tr>
<tr>
<td>TRB</td>
<td>Central Eastern Anatolia</td>
<td>551,686</td>
<td>597,059</td>
<td>596,964</td>
<td>0.08</td>
<td>0.00</td>
</tr>
<tr>
<td>TRC</td>
<td>South Eastern Anatolia</td>
<td>827,709</td>
<td>817,163</td>
<td>927,567</td>
<td>-0.01</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td>1,265,453</td>
<td>1,414,072</td>
<td>1,429,653</td>
<td>0.12</td>
<td>0.03</td>
</tr>
</tbody>
</table>


Table 7. Regional GDP per capita Incomes for NUTS Level-2 (Thousand TL, at 1987 prices)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TR10</td>
<td>Istanbul</td>
<td>2,451,686</td>
<td>2,361,306</td>
<td>2,304,744</td>
<td>-0.04</td>
<td>-0.02</td>
</tr>
<tr>
<td>TR21</td>
<td>Tekirdag</td>
<td>1,568,938</td>
<td>1,989,958</td>
<td>2,168,095</td>
<td>0.21</td>
<td>0.08</td>
</tr>
<tr>
<td>TR22</td>
<td>Balikesir</td>
<td>1,480,452</td>
<td>1,885,053</td>
<td>1,641,493</td>
<td>0.21</td>
<td>-0.15</td>
</tr>
<tr>
<td>TR31</td>
<td>Izmir</td>
<td>2,375,057</td>
<td>2,601,629</td>
<td>2,439,027</td>
<td>0.09</td>
<td>-0.07</td>
</tr>
<tr>
<td>TR32</td>
<td>Aydin</td>
<td>1,647,685</td>
<td>1,909,663</td>
<td>2,002,954</td>
<td>0.14</td>
<td>0.05</td>
</tr>
<tr>
<td>TR33</td>
<td>Manisa</td>
<td>1,220,638</td>
<td>1,306,314</td>
<td>1,419,163</td>
<td>0.11</td>
<td>0.04</td>
</tr>
<tr>
<td>TR41</td>
<td>Bursa</td>
<td>1,809,298</td>
<td>2,241,538</td>
<td>2,339,763</td>
<td>0.19</td>
<td>0.04</td>
</tr>
<tr>
<td>TR42</td>
<td>Kocaeli</td>
<td>2,169,242</td>
<td>2,380,039</td>
<td>2,507,448</td>
<td>0.09</td>
<td>0.05</td>
</tr>
<tr>
<td>TR51</td>
<td>Ankara</td>
<td>1,899,474</td>
<td>2,194,791</td>
<td>2,085,920</td>
<td>0.13</td>
<td>-0.05</td>
</tr>
<tr>
<td>TR52</td>
<td>Konya</td>
<td>1,145,099</td>
<td>1,420,056</td>
<td>1,267,800</td>
<td>0.19</td>
<td>-0.12</td>
</tr>
<tr>
<td>TR61</td>
<td>Antalya</td>
<td>1,261,934</td>
<td>1,377,455</td>
<td>1,403,890</td>
<td>0.08</td>
<td>0.02</td>
</tr>
<tr>
<td>TR62</td>
<td>Adana</td>
<td>1,620,512</td>
<td>1,678,189</td>
<td>1,719,880</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>TR63</td>
<td>Hatay</td>
<td>1,094,302</td>
<td>1,201,217</td>
<td>1,095,323</td>
<td>0.09</td>
<td>-0.10</td>
</tr>
<tr>
<td>TR71</td>
<td>Kirikkale</td>
<td>1,085,874</td>
<td>1,275,425</td>
<td>1,209,326</td>
<td>0.15</td>
<td>-0.05</td>
</tr>
<tr>
<td>TR72</td>
<td>Kayseri</td>
<td>788,396</td>
<td>892,385</td>
<td>952,108</td>
<td>0.12</td>
<td>0.06</td>
</tr>
<tr>
<td>TR81</td>
<td>Zonguldak</td>
<td>1,164,473</td>
<td>1,056,976</td>
<td>1,651,306</td>
<td>-0.10</td>
<td>0.36</td>
</tr>
<tr>
<td>TR82</td>
<td>Kastamonu</td>
<td>779,491</td>
<td>918,763</td>
<td>1,019,963</td>
<td>0.15</td>
<td>0.10</td>
</tr>
<tr>
<td>TR83</td>
<td>Samsun</td>
<td>897,952</td>
<td>1,060,071</td>
<td>1,120,749</td>
<td>0.15</td>
<td>0.05</td>
</tr>
<tr>
<td>TR90</td>
<td>Trabzon</td>
<td>854,567</td>
<td>1,132,445</td>
<td>1,053,000</td>
<td>0.25</td>
<td>-0.08</td>
</tr>
<tr>
<td>TRA1</td>
<td>Erzurum</td>
<td>687,743</td>
<td>630,221</td>
<td>646,090</td>
<td>-0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>TRA2</td>
<td>Agri</td>
<td>323,695</td>
<td>432,121</td>
<td>480,912</td>
<td>0.25</td>
<td>0.10</td>
</tr>
<tr>
<td>TRB1</td>
<td>Malatya</td>
<td>738,766</td>
<td>836,567</td>
<td>854,594</td>
<td>0.12</td>
<td>-0.04</td>
</tr>
<tr>
<td>TRB2</td>
<td>Van</td>
<td>364,606</td>
<td>357,551</td>
<td>389,379</td>
<td>-0.02</td>
<td>0.08</td>
</tr>
<tr>
<td>TRC1</td>
<td>Gaziantep</td>
<td>1,003,291</td>
<td>1,003,454</td>
<td>1,235,471</td>
<td>0.00</td>
<td>0.19</td>
</tr>
<tr>
<td>TRC2</td>
<td>Sanliurfa</td>
<td>752,858</td>
<td>820,734</td>
<td>862,853</td>
<td>0.08</td>
<td>0.05</td>
</tr>
<tr>
<td>TRC3</td>
<td>Mardin</td>
<td>726,978</td>
<td>627,301</td>
<td>684,377</td>
<td>-0.16</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td>1,227,423</td>
<td>1,371,201</td>
<td>1,404,061</td>
<td>0.09</td>
<td>0.03</td>
</tr>
</tbody>
</table>

NUTS level-2 regions which take the main research point of this study, show more comprehensive regional GDP per capita income distribution according to other region groups. As also seen in Table 7 below, income distributions have irregular growth tendency, which is one of the most chronic problems of Turkey. Many regions in Table 7 have very different growth ratios, for instance, TR22, TR51, TR52, TR71, and TR90 regions reach very high growth rate among 1987-1995, but they also tend to show negative growth among 1995-2001, Conversely, TR81 and TRC3 have remarkable negative growth among 1987-1995 and take high growth rates among 1995-2001.

As a simple and single approach, this irregular income tendency can indicate a convergence finding if the most or more developed regions take a ratio from positive growth towards negative one, similarly, least or lesser developed regions take a ratio from negative growth towards positive one, continuously.

5. Discussion

Today, there is a need to redefine the regional components and development projects in the world and especially in Turkey. In this regard, if Convergence Model is taken as an aim, then it can be used for only academic researches in application. Countries or regions, when they reach regional convergence, can be considered as developed countries or successful in regional development issues. However, Convergence Model can be applied for countries or regions as a tool in terms of mapping regional development projects.

In this regard, we firstly need to find a convergence tendency among regions by recombining the region groups. This is just like the relation of mother and child. Thus, more developed areas can be taken as a main region focus and combined with less developed regions one by one successively. After reaching statistically significant convergence finding, new multiregional development projects should be applied according to socio-economic differences among two or more regions. These project implementations will be more functional than previous projects because single and local regional projects can not provide a convergence, it can provide development for that region and its neighbors. At the same time, it is important to remember that the developed regions will continue to grow by themselves.

This combination approach was applied for the case of Turkish regions by recombining NUTS level-2 regions for project implementations according to population and GDP per capita indicators and with this combination, 13 regional development projects in terms of developmental levels of regions are needed in the regions (Table 8). Naturally, this is a restructuring process for project implementation which gives us an opportunity to balance regional differences and reach the regional convergence
targets. On the other hand, as an advance step, this approach can be also expanded by including sectoral indicators of regions such as agriculture, industry, and service, which will give a further opportunity to apply the compound projects among regions as well.

**Table 8. Defining Regional Development Projects Areas**

<table>
<thead>
<tr>
<th>Primary Region</th>
<th>Secondary Region</th>
<th>13 Project Areas</th>
<th>Regional Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR31 İzmir</td>
<td>TR33 Manisa</td>
<td>1. TR 31-33</td>
<td>Border</td>
</tr>
<tr>
<td>TR10 İstanbul</td>
<td>TR21 Tekirdag</td>
<td>2. TR 10-21</td>
<td>Border</td>
</tr>
<tr>
<td>TR32 Aydin</td>
<td>TR61 Antalya</td>
<td>3. TR 32-61</td>
<td>Border</td>
</tr>
<tr>
<td>TR41 Bursa</td>
<td>TR22 Balikesir</td>
<td>4. TR 41-22</td>
<td>Border</td>
</tr>
<tr>
<td>TR42 Kocaeli</td>
<td>TR81 Zonguldak</td>
<td>5. TR 42-81</td>
<td>Border</td>
</tr>
<tr>
<td>TR51 Ankara</td>
<td>TR82 Kastamonu</td>
<td>6. TR 51-82</td>
<td>Border</td>
</tr>
<tr>
<td>TR62 Adana</td>
<td>TR52 Konya</td>
<td>7. TR 62-52</td>
<td>Border</td>
</tr>
<tr>
<td>TR63 Hatay</td>
<td>TR81 Malatya</td>
<td>8. TR 63-B1</td>
<td>Border</td>
</tr>
<tr>
<td>TR71 Kirikkale</td>
<td>TR72 Kayseri</td>
<td>9. TR 71-72</td>
<td>Border</td>
</tr>
<tr>
<td>TR88 Samsun</td>
<td>TR90 Erzurum</td>
<td>10. TR 83-90</td>
<td>Border</td>
</tr>
<tr>
<td>TRA1 Trabzon</td>
<td>TRA2 Agri</td>
<td>11. TR A1-A2</td>
<td>Border</td>
</tr>
<tr>
<td>TRC1 Gaziantep</td>
<td>TRC2 Sanliurfa</td>
<td>12. TR C1-C2</td>
<td>Border</td>
</tr>
<tr>
<td>TRC3 Mardin</td>
<td>TMB2 Van</td>
<td>13. TR C3-B2</td>
<td>Border</td>
</tr>
</tbody>
</table>

Source: Authors

Let’s see the first three converged regions and what kind of benefits may occur. First, when we see the TR31 and TR33 combination, we can easily say that TR33 is the hinterland of the region TR31 and that means stocks of raw materials, agricultural and industrial resources may be easily provided to the local industries in TR31. Next, since there is a well-maintained highway connection between TR10 and TR21, the transportation of raw materials and finished product linkage between these two regions can be easily installed. Similarly, between TR32 and TR61 regional groups, the key word for the local investment activities is tourism. Since these two regions are facing to Mediterranean and Aegean seas, there is a huge amount in number of beds and facilities in the accommodation facilities in these regions. So, our attempt is firstly to find out the common points between regions. It is indeed important to appeal these common points and final benefits before and after the investment. Surely, that will affect the domestic and international investors and may encourage them to invest into these regions.

In this process, our aim is additionally to establish a new administrative structure to balance these regional projects; moreover, project implementation also needs well organized management skills. In this regard, we first showed the current administration structure and second shaped out the new one for the project management in the administrative structure to reach the regional convergence targets.
Figure 4. The Central Government Control over Local Governments

Note: The numbers in the figure reviewed for 2005 and show the unit of administrations in Turkey

Figure 4 shows the current administrative structure of Turkey, and it is clearly seen that there is no regional government neither deconcentrated nor decentralized bodies, but there are a few types of local governments such as special provincial administrations, municipalities, and villages. Besides, another chronic problem is the weak cooperation among appointed and elected local bodies, which affects all executive works including advisory funds (Dinesoy and Okur, 2005).

On the other hand, figure 5 shows the new additional administrative structure for development projects into the Central Government. With this structure, we aim to divide the responsibilities more specifically focusing on the development projects because the central government tries to undertake all development functions including some basic function that should be left to local governments. All public works, local social services, and administration are concentrated in central government. Due to this concentration, the local governments do not have the resources to undertake these functions.

However, with this additional administrative organization (Figure 5), the management of development project will be more functional, easier and more economical for both central and local units. In this regard, the main responsibilities should be divided among governors, sub-governors and other local bodies such as Safety, Social Capital, Education, Welfare-Health, and Economy. Similarly, in
terms of arranging the necessary projects and building the coordination networks among region groups, project implementation fields should be mainly based on 'encouraging the private sector investments by giving a governmental support' and 'balancing migration by increasing the living standards' towards underdeveloped regions.

6. Conclusion

As a result, it is observed that the EU and geographic type regionalization could not bring an additional input for Turkey because it was mainly shaped by conditions of boundary lines or neighbor provinces and ignored social and economic conditions of other regions. However, the EU type
regionalization brought an idea to where we need to go.

Thus, old or new regionalization should not ever be an aim; it should be used for an instrument to reduce regional inequalities. We also strongly believe that development can not be stopped in the developed regions, expected balance and convergence tendency among the most and less developed regions can not be achieved successfully without specific and particular solution projects. In this point, developmental issues will take a very important role which is closely linked with well-organized state management, determined and reliable regional policies in the region groups by increasing the amount of public investments and encouraging the private sector investments from developed region to underdeveloped; particularly by using all local forces more effectively.

Finally, a new regional development act is mentioned as an instrument for a balanced regional development in this study; but for balancing regional inequalities, we also need to change the direction of plan and projects towards new region groups by restructuring plans and projects including administrative organizations between more and less developed region groups.

References
Selim Parle, A. (1991); Local Administration and Economic and Social Development in Turkey p.5.


SPO (2004c): İstatistik Göğüs Birimleri Nitelendirilmesi İhtibariyle İllerin Dağılıımı (Distributions of Provinces according to the NUTS-2 Regions), in Turkish.


Swiss Federal Institute of Environmental Science and Technology (2001): Center for International Studies, Case-Study: Southeastern Anatolia Project in Turkey – GAP, 2, pp.5-6.
