SUSTAINABLE REGIONAL DEVELOPMENT AND AN APPROACH TO DECREASING REGIONAL DISPARITIES IN TURKEY

M. Oguz SINEMILLIOGLU (PhD) [1]
City Planner

Assistant Professor at
Dicle University
Department of Architecture
Architecture Faculty
21280 Diyarbakir
Turkey
Tel: +90 (412) 248 8001#3560
Fax: +90 (412) 248 8405
drmos@dicle.edu.tr

Abstract:

In this study, the regional development process of Turkey will be analyzed. Regional disparities, which dominate Turkey's underdevelopment, are one of the main subjects in almost all countries. First, this study will analyze the evolution of regional development in Turkey and the situation in Southeastern Anatolia Project (SAP) region. The process will be examined before, during, and after the SAP has been carried out by applying a formula used by Turkish Statistical Institute (Turkstat). Regarding the method, the development level of the SAP region and other regions of Turkey in given time periods are questioned and evaluated. This study will then examine and understand underlying reasons of disparity and importance of applied projects, which is a good opportunity to examine the development process. For the main findings, size and scale are vital; infrastructure is an important element in regional development, but it does not guarantee the elimination of disparities; and development is possible without special projects.

Key words: Regional development projects, development, regional disparities, sustainability, Southeastern Anatolia Project (SAP)

[1] Corresponding author

1 Introduction

In this study, the regional economic development process of Turkey will be analyzed. Regional disparities, which dominate Turkey's underdevelopment, are one of the main subjects in almost all countries. What is going to be done here, first, is to analyze the evolution of regional development in Turkey and the situation in Southeastern Anatolia Project (SAP) region. The process will be examined before, during, and after the SAP has been carried out by applying a formula used by Turkish Statistical Institute (Turkstat). Regarding the method, the only work done in the previous decades before the 1990s in Turkey and the development level of the SAP region and other regions of Turkey in given time periods are questioned and evaluated. The study will examine and understand underlying reasons of disparity and importance of applied projects, which is a good opportunity to examine the development process.

Regional (Pace, 2006; Malecki, 1997) disparities are vital problems for most countries, but in developing countries such as Turkey, these present a greater problem. Therefore, in this study, the SAP is analyzed as a development project in the regional development process of Turkey from a sustainable regional development perspective to outline the regional disparities and possibilities for decreasing it in Turkey.

The disparities in Turkey have been persisting since the foundation of the country in 1923. Turkey did not have any regional planning since the SAP was launched. The country usually had development plans and programs (SPO, 1967, 1979, 1995, 2006), but these programs lacked regional planning policies (Turkstat, 1973).

Regional planning strategies tend to concentrate on spatial elements, such as infrastructure, population distribution, and spatial interaction in Turkey. UNDP (1996) describes development that should enhance human capabilities, ensure the equitable distribution of the fruits of economic growth, and give everyone a chance to participate in the working of society, but they fail to be successful when the underlying social and economic interactions and conditions change. Spatial policies cannot achieve their objectives unless they are implemented along with sectoral and macro-economic policies.

Starting with the works of Myrdal's (1957) and Hirschman's (1958), regional development has undergone great change (Malecki 1991). Other studies have also made important contributions to this field (Isard, 1960, 2003; Alonso, 1964, 1975; Losch, 1964; Chadwick, 1987; Todaro, 1994; Nijkamp and Mills, 2000a; Nijkamp et al., 2000b; Khan, 2001; Fischer and Atalik, 2002; Stimson et al., 2002; Capello and Nijkamp, 2004; Lange, 2004; Sekeresova, 2004; Egger, Huber, and Pfaffermayr, 2005; Zhang, 2005). Regional development is also relatively a new area of study in Turkey and the works of Atalik (1989, 2002), Keleş (1976, 2004), and Tekeli (1991, 2001) have been crucial.

By the late 1980s, the concept of sustainability and sustainable development, which was described as 'development should be sustainable to ensure that the needs of the present generation are met without endangering the needs of future generations', was developed by WCED (1987). Later on, the concept of sustainability started to have more effects on regional development and on regional scientists, namely, Nijkamp and Opschorr (1997), Blowers (1997), Nijkamp (1999), Ekins (2000), Nijkamp and Vreeker (2000c), Stimson et al. (2002), Meadows et al., (1992, 2004), who not only used the concept but also made important contributions to both sides.

On the other hand, regional inequalities represent a continuing development challenge in most countries (Shankar and Shah, 2003). The European Union (EU) provides a useful example to understand the situation. The EU has not been able to overcome its regional disparities regardless of

its great efforts (Ertur and Le Gallo, 2003; Ertur and Koch, 2006; Nijkamp et al. 2003; Resmini, 2003; Magrini, 1999; Gianetti, 2002; Atalik, 2002; Qstbye and Westerlund, 2007). In addition to the persistence of regional disparities in EU, the process of enlargement has caused new problems.

However, it is not necessary to make out a direct relationship between the size of countries, regions, and disparities (Felsenstein and Portnov, 2005), It seems that there is an important role of country size in regional disparities, e.g., in Turkey.

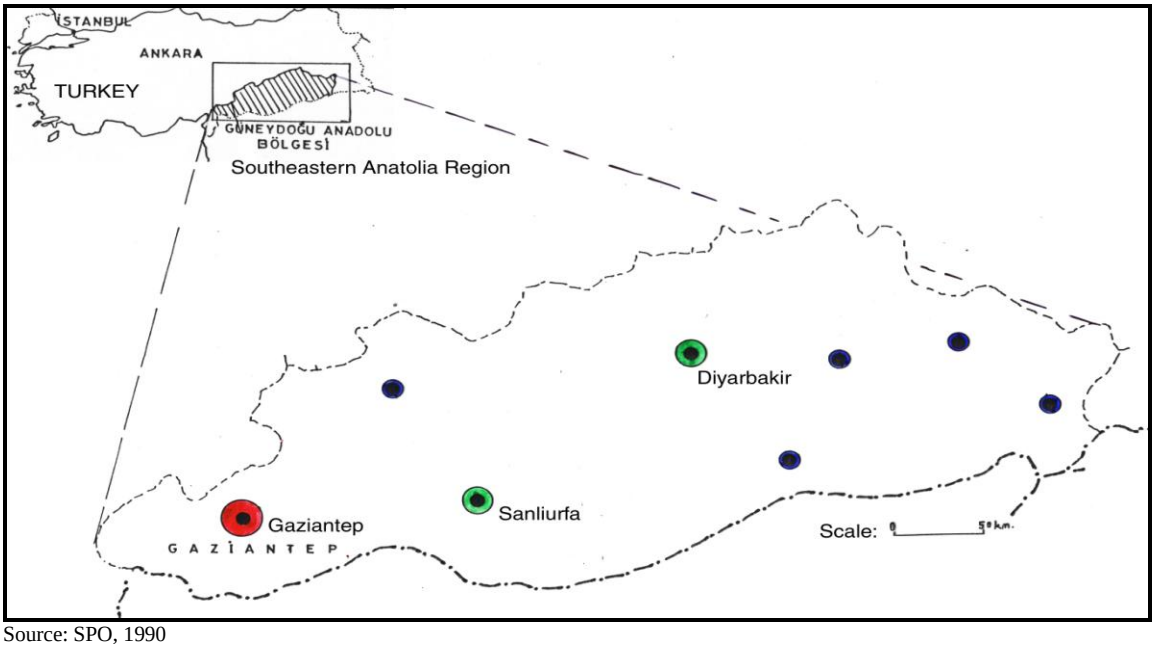
On the idea that the location of a region is very important in regional development (Wostner, 2005; Ertur and Le Gallo, 2003; Ertur and Koch, 2006), it seems a negative effect in the case of SAP for its development.

The SAP was formed as a result of the combination of the projects initiated by the State Water Management Authority (DSI) in the beginning of 1970 to contribute to the development of the region and the country's economy. Compared to other regional projects, mostly dam construction and irrigation projects, such as the Lower Seyhan Project and the Keban Dam and Hydro Power Plant, the SAP is the biggest development project ever carried out in Turkey. The project is considered to play a very important role for the development of SAP region and elimination of regional disparities in the country (SPO, 1990; SAP RDA, 2002).

The borders of the SAP are determined by administrative borders of the Southeastern Anatolia region as one of the seven geographical regions in Turkey. The SAP region includes the provinces of Adiyaman, Batman, Diyarbakir, Gaziantep, Kilis, Mardin, Siirt, Sanliurfa, and Sirnak. The SAP region covers an area of about 73,863 km^2, which accounts for 9.5% of Turkey's land (see Figure 1).

There was no perspective of sustainability at the beginning of the SAP and the 13 projects designed by DSI in the region for the purpose of irrigation and energy. Later, the SAP was transformed into a regional development project that had initially no objective other than taking the regional potential into the country's economy.

Figure 1 Southeastern Anatolia Region and Its Location in Turkey



Source: SPO, 1990

1.1 The Least Developed Region of Turkey: The SAP Region

The Southeastern Anatolia region can be classified as the least developed region of Turkey. In an earlier study, carried out by Turkstat (1973, p. 75), it was pointed out that the cities of the Southern and Southeastern Anatolia were the least developed ones in Turkey, and it seemed that they had no opportunities to compensate it.

Yerasimos (1992, p. 347) emphasizes historical, political, and social factors in the regional disparities in Turkey and economic problems in the Southeastern Anatolia region. He also states that "at the time when economic life was under control and all capitals were distributed in Ankara, elimination of colonist-feudal old Kurdish aristocracy from political power left the cut-off situation from other parts of the country as before."

The economic indicators such as gross domestic products (GDP) (SPO 2002) and social indicators such as "population per doctor" and/or "urbanization level" (SPO 2002) are important indicators to show the development level of the region. A supporting idea was stated by Mutlu (1992, p. 116): "The SAP region with the seven[2] most undeveloped cities plus Gaziantep has all characteristics of underdevelopment in every respect."

The State Planning Organization (SPO) established a special unit, namely, "Priority Regions in Development" in 1971 (SPO, 1990) to deal with the underdeveloped regions. However, somehow ironically, another organization of the state, Turkstat, estimates that the disparities between developed and underdeveloped regions will be wider in the years to come (Turkstat 1973). This difference in view between the state organizations is regarded as due to lack of communications and dealings with each other.

Therefore, as regarded by Hirschman (1965), the lack of interdependence and linkages, the most typical characteristic of an underdeveloped economy, is one of the main reasons for the region's underdevelopment.

In addition, in the SAP Master Plan (SPO, 1990; p: 217), the main problems of the region are listed as follows:

- Distance from main economic centers
- Improper topographic and climatic conditions
- Imbalance of land ownership distribution
- Lack of planning and administration
- Low quality of education and health services

1.2 Economic Situation and Potentials in the SAP Region

Although the SAP region is the least developed region of Turkey, it is rich in natural resources. It has a very important place in mining sector due to the fact that the region accounts for 99.25% of the country's crude oil production and 100% of asphalt, phosphate, and flint. Crude oil production per person in the region is 526 kg, while it is 47 kg in Turkey (Kasnakoğlu et al., 1990; p. 2). The region is also rich in water resources that form SAP's base.

A region's and/or a country's development level is usually explained by economic terms. Later, it

[2] At the time, the number of cities in the region was 8.

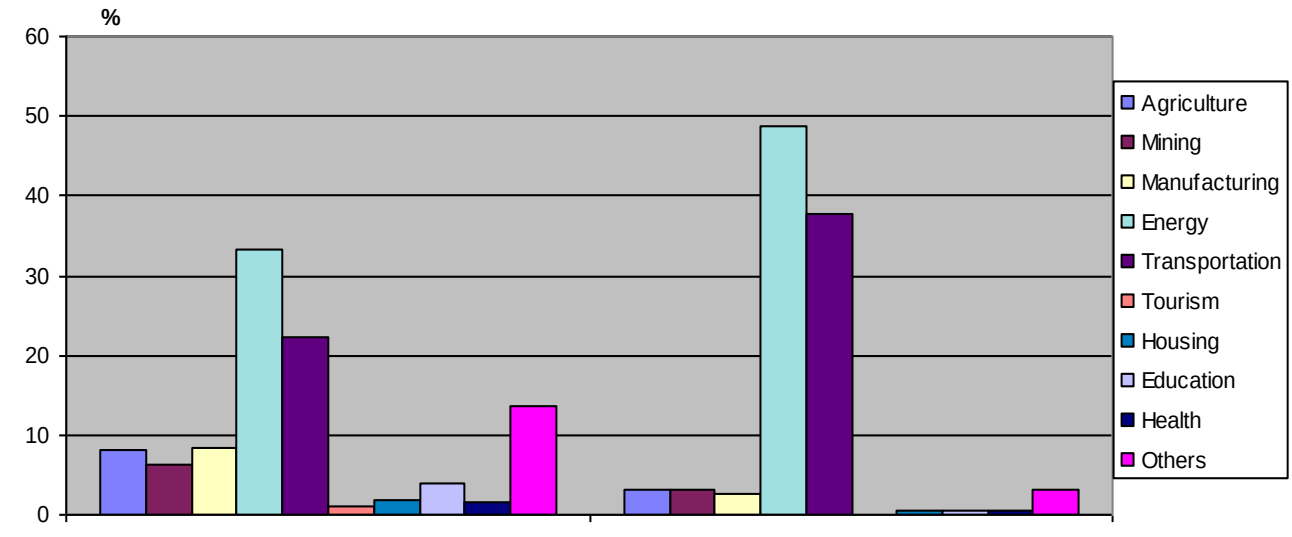
became more complicated by using such indicators like Human Development Index (HDI), social indicators, and capacity of raw materials, etc. Although I will use this kind of indicators in this work, it is better to mention some economic indicators of the region and the country, shown in Table 1, to have an idea about the situation of the region.

Table 1 Some Economic Indicators of SAP Region and Turkey		
Economic Indicators	SAP Region	Turkey
GDP Per Person	USD 675[3]/ 954 TL	USD 1301/ 1837 TL
Ratio of People **Employed in Agriculture** in Total	61.35%	48.38%
Ratio of People **Employed in Industry** in Total	7.06%	13.35%
Ratio of People **Employed in Trade** in Total	6.21%	9.67%
Car per 10000 (Ten Thousand) people	208	652
Source: http://www.dpt.gov.tr/bgyu/ipg/guneydogu/diyarbakirPER.pdf (Last visit on December 29, 2007)		

1.3 The Public Investments and the SAP Region

This part of the study outlines the infra-structural applications carried out during the SAP. Public investment expenditures are observed in terms of sectors in Turkey: the first sector is transportation at 33.2%, and the second sector is energy at 22.2%. As for the SAP region, the first two sectors are the same, although energy is ranked first at 48.7% and transportation is ranked second at 37.7%. The first two sectors in SAP region significantly account for 86.4%, while the total for agriculture, mining, manufacturing, tourism, housing, health, and other services accounts for 13.6% (see Figure 2). In addition, in all sectors except energy and transportation, Turkey's rates are more than those of the SAP region (see Figure 2).

Figure 2. Public Investments According to the Sectors, 1986



Source: SPO, 1990, V: 2, p:5.31

Another indicator for the regions' economic situation is given in a study conducted by SAP RDA to Sociology Association. "Data related to financial market show that investment atmosphere is still not well developed in the region. For instance, according to the 1991 data, the average money in accounts is 29 million Turkish Liras (TL) (6684 USD) per person in Turkey, while it is 0.5 million

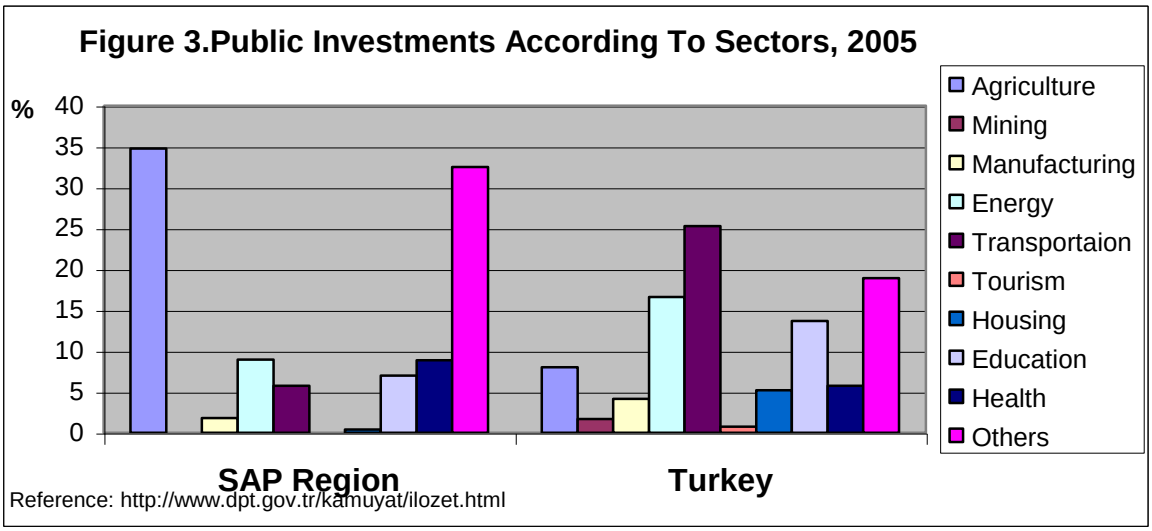
[3] Converted to USD with www.tcmb.gov.tr data

TL (115 USD) in the Southeastern Anatolia. Between 1991 and 1992, the share of the bank credits is only 0.7% for the region. As for regional distribution of bank branches, the share of the region is 3.5 %." Moreover, a number of bank branches were closed down during that time.

Another statement in this study is related to public investment and incentives. "In the SAP region, where productive and employment-creative investment ambiance and conditions are yet to form, public investment and encouragement have been in a recessive condition in recent years. For example, the share of the investment was 22.7% in 1990; however, it decreased to 12.6% and 2.3% in 1991 and 1992, respectively.

Public investment expenditures for the region amounted to 1,917 billion USD[4] (5.1 trillion TL) in 1990, based on 1993 figures; but in 1991, the value decreased to 784 million USD (3.4 trillion TL) and finally to 420 milion USD (trillion TL) in 1992. For decades, direct public investment and private investment incentives have not been operated although completed sometimes because of technology or hardware and sometimes because of social unrest" (SAP RDA and Sociology Association, 1994, p. 19).

When public investments were examined for 2005, it can easily be seen that there are differences and changes according to investments in 1986, but very large differences existed between the investments of Turkey and the region for agriculture, housing, and education. Changes in the region's parameters like increase in education and health are very important, although there is much to do like decreasing the share of agriculture and increasing the share of housing. We understand that this means that public investment ratio according to sectors and applications do not meet the requirements of sustainable regional development (see Figure 3).



Turkey, as a developing country, faced two serious economic crises in 1994 and 2001, which caused serious damages in Turkey's economic growth, especially in regional development in the last two decades. Therefore, SAP RDA began to evaluate the SAP Master Plan and to prepare a new plan so-called SAP Regional Development Plan (SAP RDP) (SAP RDA, 2002). As pointed out in the SAP RDP, there was a postponement in the SAP, although the main perspectives and decisions are true (SAP RDA, 2002, p. 6). The main difference between the SAP RDP and the SAP Master Plan is that the largest investment will be in agriculture (54.2% with 1998 data), the second in energy (9.6%), and the third in education (8.1%). It seems that investments in other areas, except agriculture, are neglected when compared to Turkey's expenditures in total. Regarding Lall's (2007) work, which points out the importance of infrastructure in transportation and communication, these two sectors are not in the top priority for investments in SAP region, as well.

[4] For currency convergence, web page of Central Bank of Turkey, http://tcmbf40.tcmb.gov.tr/cgi-bin/famecgi, was used.

1.4 Population Movements

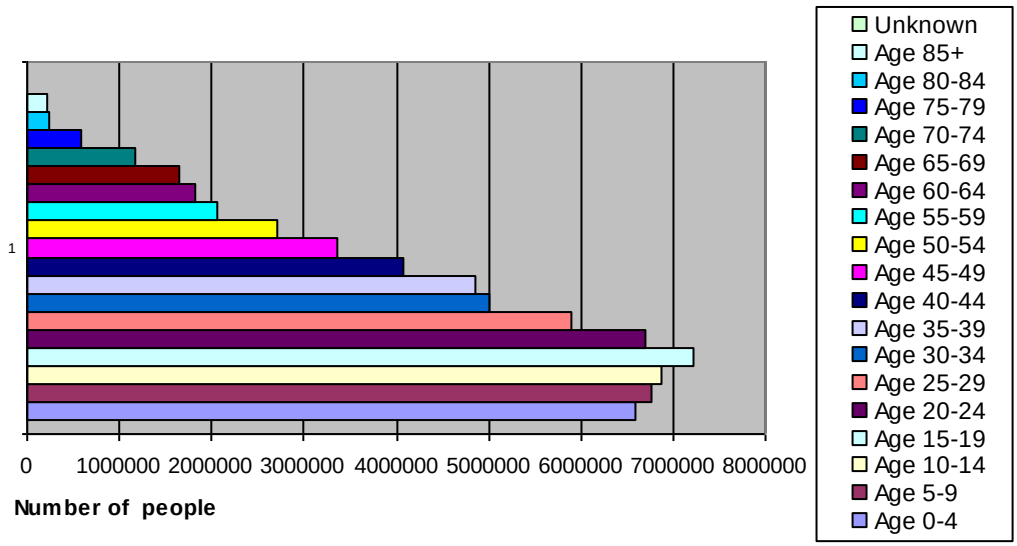
The ratio of the population of the region to the population of Turkey has constantly increased since 1945 (see Table 2.). This increase and the ratio of the SAP region in Turkey's total are worth analyzing because there has been a big migration flow from the region to Turkey's other regions, such as Marmara and Aegean regions. Moreover, birth rate of the region is much more than Turkey's average; as a result, the ratio of the region is increasing in total, although migration goes on.

Table 2. SAP Region's and Turkey's Populations in Total, 1945-2000.							
	1945	1950	1955	1960	1965	1970	1975
The Region	1,171,946	1,346,668	1,774,580	2,057,753	2,367,740	2,803,166	3,212,531
Turkey	18,790,174	20,947,188	24,064,763	27,754,820	31,391,421	35,605,176	40,347,719
Region/Turkey (%)	**6.24**	**6.43**	**7.37**	**7.41**	**7.54**	**7.87**	**7.96**

Table 2 (Continued)	1975	1980	1985	1990	2000	2007
The Region	3,212,531	3,567,628	4,346,947	5,158,013	6,608,619	70,600,000
Turkey	40,347,719	44,736,957	50,644,458	56,473,035	67,803,827	7,200,000
Region/Turkey (%)	**7.96**	**7.97**	**8,58**	**9,13**	**9,75**	**10,2**
Source: SAP RDA, 1993; http://www.turkstat.gov.tr/VeriBilgi.do (Last visit in January 24, 2008) http://www.gap.gov.tr/Turkish/Genel/sdurum.pdf (Last visit in Feb 03, 2010)						

The increase and movement in population are seen as serious obstacles for regional planning and development. The structure of population is depicted in the form of an age pyramid. Population structure as an important element (Rogers et al., 2002) of economic activities and push factor of regional development are quite different from each other when comparing Turkey and the region, especially for population between the ages of 0-19. Population structure of Turkey, which is more similar to developed countries than the region, is relatively better than the region (Figure 4 and Figure 6).

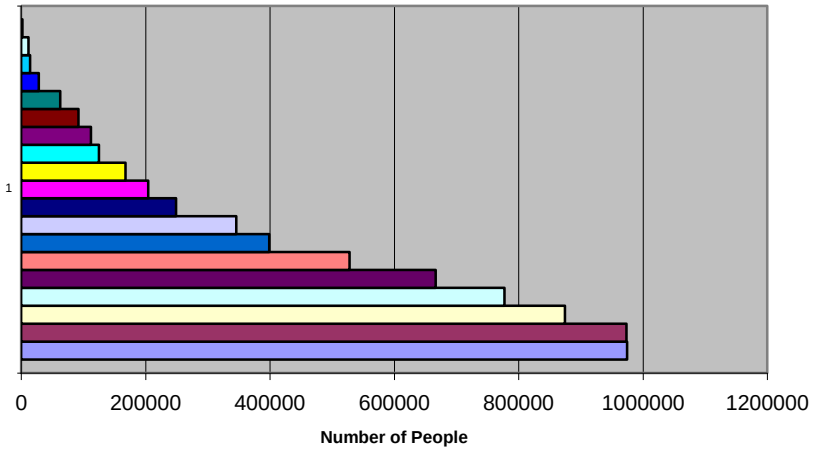
Figure 4 Population Pyramid in Turkey, 2000



Source: http://www.tuik.gov.tr/VeriBilgi.do?tb_id=39&ust_id=11

On the contrary, population structure of the region shows that there is much work to be done not only in economy but also in social services and investment. As seen from Figures 5 and 7, there is a very big population of young people for whom it is necessary to make investment for schools and other social investments to the human-being (Figure 5 and Figure 7).

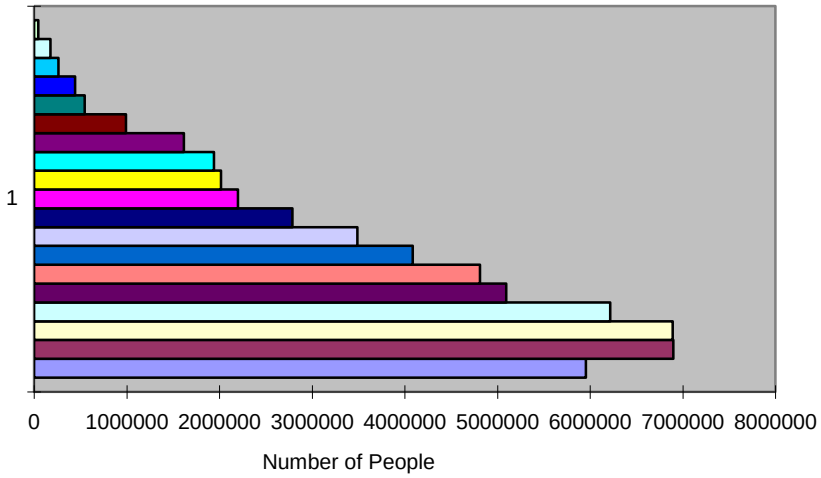
Figure 5. Population Pyramid in SAP Region, 2000



See Figure 4 for the Legend.
Source: http://www.tuik.gov.tr/VeriBilgi.do?tb_id=39&ust_id=11

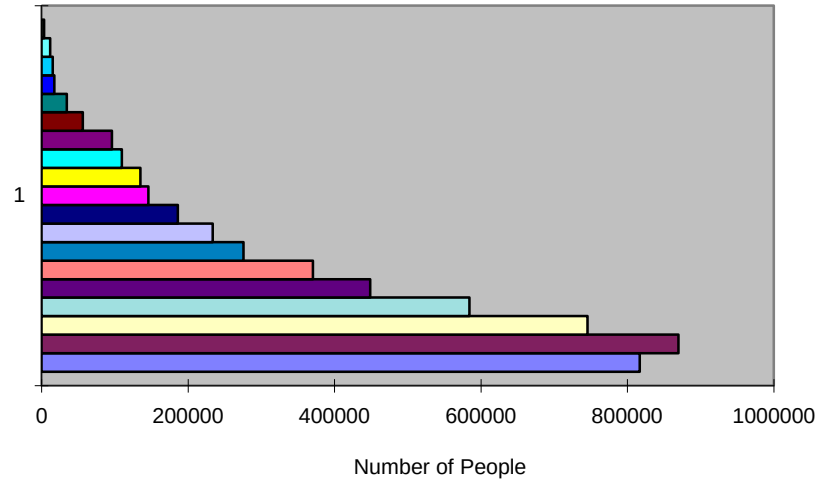
When the SAP region's population pyramid is examined, it can be argued that the population growth in the region will continue in the future. The migration from the region and rural areas to the cities has been another obstacle for regional development. For instance, during the period between 1985 and 1990, the urban population growth for Turkey was 0.338%, while for the region; it was 0.575% (SAP RDA, 1995).

Figure 6 Population Pyramid in Turkey, 1990



See Figure 4 for the Legend. Source: Turkstat 1997b

Figure 7 Population Pyramid in SAP Region, 1990



See Figure 4 for the Legend. Source: Turkstat 1997b

2 Region's Development Level – Analytical Comparison

Looking at the literature, one can see that there are many ways and formulas by which scientists try to analyze regional disparities. On the one hand, no doubt about their significance, almost all of these formulas reflect very important clues and results to understand disparities. Recently, for example, Kim and Kim (2005) tried to understand regional disparities by using alternative tax systems. Magrini (1999) used the method of "Markov chains." Ertur and Le Gallo (2003) and and Ertur and Koch (2006) used exploratory spatial data analysis (ESDA); Puga (Carluer, 2007) used Lorenz curve. Shankar and Shah (2003), Fingleton (2003), Grabowski, Self, and Shields (2007), and Rivas (2007) were some of those who cited and/or used "Gini index," "coefficient variation," and "maximum to minimum ratio." All these works, however, have main economic point of view, that is, some of the most recent works done by Silveira-Neto and Azzoni (2006), Rivas (2007), and Garett et al. (2007).

The region's development level will be analyzed and examined based on data of Turkstat, SPO, and SAP RDA for the period before, during, and after the SAP applications. Then the regions will be compared, especially for any change and effect by the SAP to understand the situation of regional growth, although "how (regional) growth occurs remains an inadequately understood process" (Cheshire and Malecki, 2004, p. 262).

The formula I used here is called "Index for Cities' Development Levels," which was used by Turkstat in 1973 to analyze all cities in Turkey. Since there are no works done in the same years until the 1990s, I converted the data to geographical regions because SAP has been carried out as a geographical region, and named the formula as "Index for Regional Development Levels" (RDL).

Development level of regions for 1973 is given in Table 3.

Table 3. Development Level of Regions of Turkey in 1973		
Regions	**Parameter A***	**Parameter B****
Marmara	103.4	155.1854
Aegean	78.63	118.0099
Mediterranean	74.86	112.3518
Central Anatolia	67.09	100.6904
Black Sea	55.23	82.89059
East Anatolia	45.83	68.78283
South East Anatolia	45.17	67.79229
TURKEY	66.63	100
Source: Turkstat, 1973		
* Converted from Turkstat 1973 **Parameter A*100/Parameter A for Turkey		

Although a relatively old one and there are lots of formulas as pointed out earlier, I insisted to use this formula here because it is the only work done in the previous decades before the 1990s in Turkey. Due to the lack of data and statistics in 1973, this formula seems very important. In other words, this formula is the only one by which regional development level has been analyzed before. The formula will help to give a picture of the development process in the region over time. Furthermore, I used it here is to have an opportunity to compare the past and present from the same point of view in order to give some clues for future development and work not only for regional economic development but also for social development. One more thing, it would be good to mention that the indicators used in the study are used to determine HDI (Todaro, 1994; UNDP, 1992, 1996; World Bank, 1997).

The formula is $RDL=12\sqrt{\mathbf{A*B*C*D*E*F*G*H*I*J*K*L}}$

where,

RDL is regional development level,
A is urban population (%),
B is facsimile per ten thousand people,
C is bed in hospitals per ten thousand people,
D is literacy (%),
E is diploma in under graduation (%),
F is employment in agriculture in total (%),
G is employment in industry in total (%),
H is GDP per person (at current prices in 1995),
I is value added per person in manufacturing industry,
J is average number of workers per company,
K is asphalt percentage in countryside,
L is income and intuitional tax per person,

Development level of regions for 1996 is given in Table 4, and for 2003 in Table 5.

Table 4. Development Level of Regions of Turkey in 1996

Regions	A	B	C	D	E	F	G	H	I	K	L
Marmara	76.26	27.04	198	88.16	5.66	28.89	24.34	1115,7259	400	34.64	100
Aegean	57.00	20.42	181	83.86	4.73	54.07	13.8	856,83509	215	35.46	51
Mediterranean	57.46	10.31	208	80.85	4.24	57.34	10.14	729,16471	123	30.73	36
Central Anatolia	64.53	12.51	177	84.49	5.65	50.48	11.19	750,6112	98	31.26	68
Black Sea	40.20	7.89	200	78.45	3.29	71.1	7.67	541,9836	67	12.49	27
East Anatolia	42.57	3.7	139	68.16	3.33	71.93	3.98	349,68471	24	15.9	17
SAP Region	55.65	2.31	95	60.42	3.17	67.29	6.32	433,23497	21	17.07	14
TURKEY	59.01	14.52	171	80.46	4.72	53.66	12.8	756,73466	173	22.89	54

Legend :

A	Urban Population (%)	**G**	Employment in Industry in Total (%)
B	Facsimile per Ten Thousand People	**H**	GDP Per Person (At Current prices in 1995) (USD)
C	Bed in Hospitals per Ten Thousand People	**I**	Value Added per Person in Manufacturing Industry (USD)
D	Literacy (%)	**K**	Asphalt Percentage in Countryside
E	Diploma in Under Graduation (%)	**L**	Income and Intuitional Tax Per Person (USD)
F	Employment in Agriculture in Total (%)		1USD=44023 TL (Year 1995), <www.tcmb.gov.tr>

Table 4. Development Level of Regions of Turkey in 1996 (Continued)

Regions	Index	Formula	Multiplication
Marmara	135.3913	1306.7	1,89642E+34
Aegean	109.1665	1053.5973	1,77591E+33
Mediterranean	89.6930	865.6525	2,04541E+32
Central Anatolia	97.4663	940.67521	5,10313E+32
Black Sea	67.8738	655.06941	9,53148E+30
East Anatolia	49.1538	474.39702	2,73881E+29
SAP Region	47.5310	458.73556	1,89316E+29
TURKEY	100.0000	965.12863	6,76764E+32

Index	TURKEY 100, Turkstat Formula, Index for 1996
Formula	**$12\sqrt{A*B*C*D*E*F*G*H*I*K*L}$** (The Formula used by Turkstat in 1973)
Multiplication	(A*B*C*D*E*F*G*H*I*K*L)

Notes: Average number of workers per company is not considered for work in the Regions.

Sources: Turkstat 1973, 1995, 1996a, 1996b, 1997a, 1997b; SPO 1996, Sinemillioglu 1998.

Table 5. Development Level of Regions of Turkey in 2003

Regions	A	B*	C**	D	E***	F	G	H	I	K	L
Marmara	79.07	876	280	92.4	9.95	25.33	25.67	1653	470	74.82	228
Aegean	61.48	799	230	89.78	8.42	50.48	13.84	1325	279	71.97	74
Mediterranean	59.78	615	190	88.16	8.28	54.97	8.78	1074	213	61.95	45
C. Anatolia	69.25	884	260	90.32	10.31	46.81	10.55	1132	156	60.74	123
Black Sea	49.03	435	240	85.82	5.92	66.1	7.29	868	80	25.59	33
Eastern Anatolia	53.05	197	180	77.71	6.13	66.41	3.26	523	24	25.97	17
SAP Region	62.69	208	130	73.22	4.99	61.35	7.06	593	45	36.24	17
Turkey	64.9	652	230	87.3	8.42	48.38	13.35	1143	218	45.23	10

Legend :

A	Urban Population (%)	**G**	Employment in Industry in Total (%)
B	Number of Private Automobile per Ten Thousand people*	**H**	GDP per person in USD
C	Bed in Hospitals per Ten Thousand People (2000)**	**I**	Value Added in Manufacturing Industry Per Person (USD)
D	Literacy (%)	**K**	Asphalt percentage in countryside
E	Diploma in Under Graduation (%) ***	**L**	Income and Intuitional Tax per person (USD)
F	Employment in Agriculture in Total (%)		

*: It was Facsimile per Ten Thousand People in Table 4

**: I multiplied by 10 since it was according to 10,000 people in 2000 data, to adapt with Table 4.

***: Ratio of Undergraduates to Graduates

Table 5. Development Level of Regions of Turkey in 2003 (Continued)

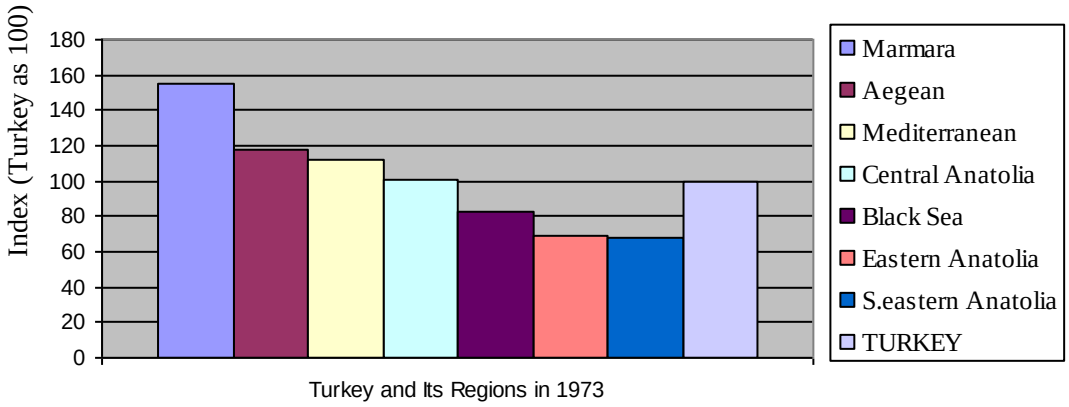
Regions	Index	Formula	Multiplication
Marmara	135.7137	270.028107	5.56543E+26
Aegean	107.4506	215.513232	4.65815E+25
Mediterranean	89.4197	177.829408	5.62392E+24
C. Anatolia	105.5620	208.697194	3.27102E+25
Black Sea	67.7026	134.457359	2.59675E+23
Eastern Anatolia	46.4632	91.0446525	3.56286E+21
SAP Region	52.6126	105.476892	1.79776E+22
Turkey	100.0000	198.949605	1.93274E+25

Index	TURKEY 100, Turkstat Formula, Index for 2003
Formula	$\mathbf{12\sqrt{A*B*C*D*E*F*G*H*I*K*L}}$ (The Formula used by Turkstat in 1973)
Multiplication	(A*B*C*D*E*F*G*H*I*K*L)
Notes: Average number of workers per company is not considered for work in the Regions.	
Sources	http://www.dpt.gov.tr/bgyu/bgr/sg/saglik.htm http://www.dpt.gov.tr/bgyu/ipg/guneydogu/ <http://www.dpt.gov.tr/bgyu/ipg/ipg.html> , (Last visit in Dec 30, 2007) SPO 1996, SPO 2002, and SPO 2003, SPO 2005 (Web Page)

2.1 Regions' Development Level in 1973

Analyzing regional development is one of the main objectives of this study, as understanding the process is fundamental for decreasing regional disparities. First, the development levels of Turkey and its regions from 1973 are compared (Table 3). It is clear that Marmara region is not only the leading region of Turkey, but also managing Turkey's economy. Aegean region is the second leading region, where the city of Izmir is located, and the third one is Mediterranean region. There are three similarities in these three regions: one is located on seaside, the second is in the west side of the country, and the third is historically leading the more developed regions. Central Anatolia is fourth and almost the same with Turkey's average. Southeastern Anatolia Region was the least developed region in 1973 (Figure 8).

Figure 8. Regions Development Index In 1973

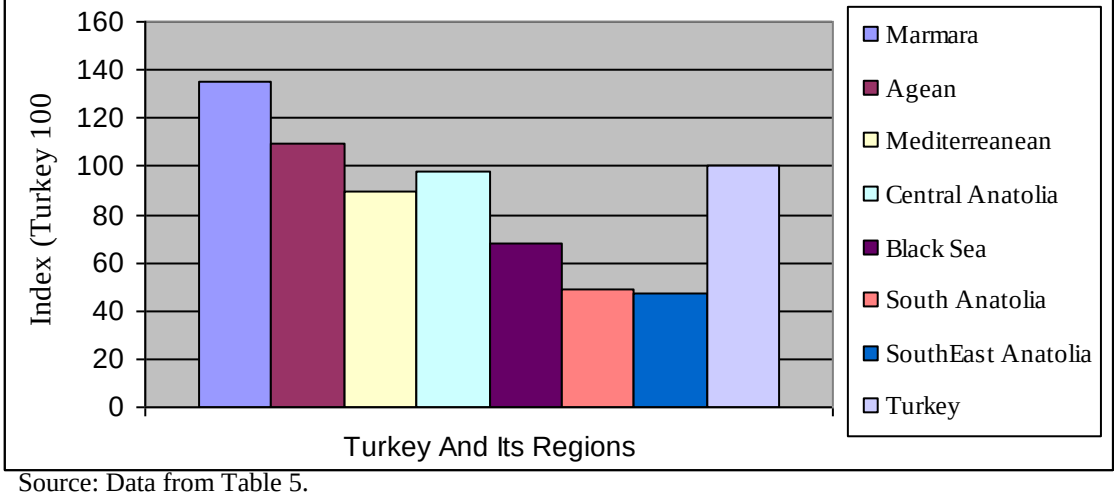


Source: Data from Table 3.

2.2 Regions' Development Level in 1996

Regions' development level was evaluated with the same method of calculation (Table 4). The SAP region had the lowest rank in the measurements performed in accordance with the geographical region structure. The nearest region to the SAP Region (48) is the Eastern Anatolia region (49), followed by Black Sea Region (68). The Aegean, Mediterranean, and Central Anatolia region had similar values as 109, 90, and 98, respectively. One of the important changes here is that Central Anatolia's performance, becoming the third region, means change in tradition, as I pointed out earlier, for leading regions located in the west side and have border to sea side. Regarding the Marmara region's uncompetitive position (135), with Istanbul located in it, the performance of Central Anatolia is impressive. This change should be underlined as a positive sign in regional development of Turkey. On the other hand, one thing has to be questioned because there is a positive change in Central Anatolia's development, without any special development plan, compared to a negative and/or stagnant change in SAP region's development, with a special regional development plan. One can say that the effect of SAP might be seen later because of infrastructural works (Figure 9).

Figure 9. Regions Development Index in 1996

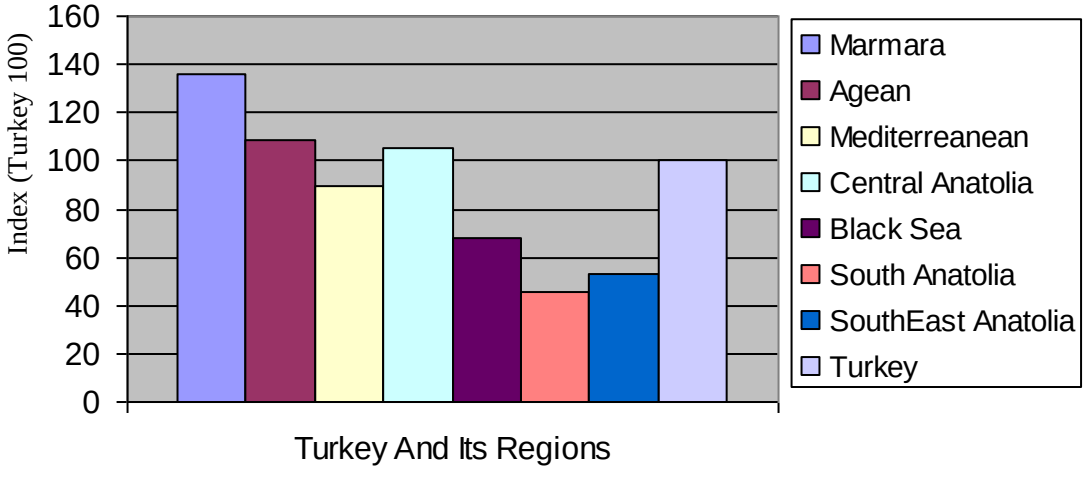


Source: Data from Table 5.

2.3 Regions' Development Level in 2003

The study was repeated by using 2003 data (Table 5), and the result was, with a slight difference, almost the same as in 1996. There are two main and important differences. One of them is that with the ongoing growth in Central Anatolia (106), there may be a competition for the second place between Aegean region (108) and Central Anatolia region (106) in the near future. The second change is that the SAP region (53) is ahead of Eastern Anatolia (47), increasing by 6.1%. This is a change from traditional tendency, although it is still, by far, behind the western regions. Another point would be good to mention, Central Anatolia's empowerment and amplification of its place are also very important. The fourth point is that the changes are negative: (-2.7%) for Eastern Anatolia, almost no change (-0.17%) for Black Sea region, and (-0.27%) for the Mediterranean, and (-1.71%) for the Aegean region. Marmara region is still leading but almost stagnant (0.32%). The most significant point here is that although the changes are at negligible levels, the increase in western and decrease in eastern regions must be regarded as an obvious warning for the future, and failure of SAP applications (Figure 10).

Figure 10. Regions Development Index in 2003



Source: Data from Table 5.

3 Conclusion

The main goal of this work could be outlined in three parts. The first one is to evaluate SAP and the effect of SAP on regional disparities; the second is to outline Turkey's regional disparities and analyze it; and the third is to find out some clues in regional development and growth, if any.

Evaluating SAP and the effect of SAP on Regional Disparities

Although it has been said and written in the project that decreasing regional disparity of SAP region would be most likely, there is no result about decreasing disparity. This study has demonstrated the applications, such as dam construction and irrigation projects, which remain as infrastructural works, while superstructure works for economy and social life remain negligible.

Additionally, administrative and organizational problems between the state institutions and lack of purpose in decision making are some of the other reasons. One of the SAP Master Plan decisions was to have no new regional development projects unless the SAP was completed (SPO 1990) and put in practice. On the contrary, initiation of projects such as Black Sea Regional Development Plan (DOKAP) (SPO and JICA, 2000), and Eastern Anatolia Project (DAP) (SPO, 2000), shows that there are no priorities determined for the development process. Thus, one can say that Turkey's regional development policies and programs are frequently neglected, postponed, changed, and not carefully planned.

Population structure of the region is crucial, and tendency of the population from the data suggests that social investments should be done as early as possible since the success of development depends on investments for the improvement of social structure. Migration from rural to urban, then to metropolitan areas and/or west is an important obstacle for development and decreasing disparities. It is hard to find any regional strategies in SAP RDP that can make so much contribution to development of the country.

Regional disparities in Turkey, from history up to now

SAP region, since the foundation of Turkey, has been the poorest region, and very unfortunately this situation is persisting. In the light of search, the reasons for becoming the least developed region are location, education, and attractiveness of the west side to investment. More specifically, birth rate and ethnic background of population may probably be the reasons of the battle in the region for about three decades.

Although regional development programs have been carried out to build up not only economic development but also social capital (Coleman, 1988), the results of the SAP are not very positive and could not build up economic development, so the disparity between Turkish regions is not eliminated. The underdeveloped state of the SAP region goes on and the disparity between the regions is increasing. Additionally, one can easily see the widening gap between east and west.

Regardless of SAP applications, I noticed that Central Anatolia's performance needs further search and analysis. Two points should be emphasized: one is that central Anatolia's performance is a change in tendency, and the second is that this performance could build up a new growth pole and crucial changes in regional dynamics of Turkey, resulting in disparities of the country.

Conclusion in General

Decreasing regional disparities concerning developing countries seems almost impossible. Regional disparities are almost stagnant as a vital problem around the world. Besides, the idea that "the rate of growth of a region appears not to be independent of that of its neighbors," said by Cheshire and Malecki (2004), fits for Turkey and the SAP region.

One of the main findings is that the effect of investment to infrastructure is negligible in decreasing regional disparities, though one cannot start to do anything in development without infrastructure. The change in Central Anatolia would be very much helpful in understanding regional dynamics and development of Turkey, and is noteworthy because of lack of a regional development program.

The experiences of SAP indicate that the success of regional development programs, at first, must be based on making right decisions, better organization, and involving the idea of sustainability.

Regarding the scale and size of SAP and comparing Turkey's economic capacity, one can assume that the smaller the size of a region and/or plan, the more likely the success of plans and programs.

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