

### THE IMPACT OF ECONOMIC DEVELOPMENT ON REGIONAL MIGRATION IN TURKEY

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#### Abstract:

Since its inception, Turkey has experienced several migration movements. It is a transit country that both have immigration and emigration structure. Although a wide variety of reasons for these migration movements, one of the reasons is economic development. For this reason, the main assumption of this study is that migration has effect on economic development. In the study the regional net migration data belongs to 2008, 2009, 2010, 2011, 2012 and also data obtained from SEGE-2011 published by Ministry of Development and annual data published by the Statistical Institute of Turkey were used. As a result of statistical analyzes it has been seen that economic development has an impact on the migration and migration has an impact on four item of expenditure (food and non-alcoholic beverages, housing and tenancy, restaurants and hotels, entertainment and culture).

**Key words:** Economic Development, Turkish Economy, Regional Migration, Consumption Expenditures.

#### INTRODUCTION

There are different definitions of migration. Migration is the movement of people from their social and cultural environment to spend all or a portion of their future life. This movement changes both themselves and the environment in which they enter (Akkayan, 1979: 18, Durugönül, 1997: 95). According to Morril (1965), migration is the actual movement of individuals and groups from one area to another. It is the spatial process makes possible the redistribution of population. Jordan and Düvell (2003) describe migration as "...people moving, as fish, birds and animals do, under forces of nature, frequently following their flocks in search of pasture". According to Thornthwaite (1934), migration is a process depending upon the establishment of means of intercommunication between areas having different intensities of population pressure.

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Although migration mobility in Turkey had begun since its establishment, the milestone of the internal migration has been the 1950s. During this period, the migration movements have occurred mostly from underdeveloped regions and cities to relatively the regions and cities that have better living conditions. Namely in this period, migration has occurred from rural to urban regions (Durugönül, 1997, s. 97; İçduygu ve Ünalan, 1997, s. 25).

This migration began after the 1950s in rural regions has continued in the 1960s. Especially between 1965 and 1970 the migration from rural regions reached the highest levels. As of the period, the utilization level of the services such as roads, water, electricity and education in rural regions seems to be extremely low. Although the level of accession to these services increased towards the end of the concerned period in rural, this situation did not eliminate the driving factors (Kurt, 2003, s. 71; Osmay, 1999, s. 143). Internal migration, or rural to urban migration, is in essence a change in the spatial distribution of population in a given country over time (Saracoğlu and Roe, 2004).

When the proportion change of the migration in the total population in 1965-2000 periods evaluated, it is seen that 2.7-4.8 million per year and a total of 21 million people have migrate. 10.7 of every hundred people migrated between 1965 and 1970, reductions were observed in migration rate over time. Migration rate has dropped to 6.5% in the period 1980-1985. This rate reached 8.1% with an increase of 25% between 1985 and 1990. It has been observed that 7.9 of every hundred people had migrated in the period of 1995-2000 (Yamak ve Yamak, 1999, s. 29; Kocaman, 2008, s. 17).

While 48.9% of the migrants migrated from urban to urban in the period of 1975-1980, this rate increased to 56.1% in the period of 1980-1985 and to 62.1% in the period of 1985-1990. The migration from city to city had decreased during the period 1995-2000, during this period the migration rate from urban to urban was 57.8%.

The rate of migration from rural to urban has been generally remained close in the concerned period that 17.1% of the migrants during 1975-1980, 22.5% of the migrants during 1980-1985, 17.9% of the migrants during 1985-1990 and 17.4% of the migrants during 1995-2000 have migrated from rural regions to urban (Kocaman, 2008, s. 18).

The first population census in 2007 took place with "Address Based Population Registration System" (ABPRS) and the migration data has been obtained after this year. With the data obtained from ABPRS system the migrations occur between 26 regions named as NUTS 2 are also determined. The data obtained in this way had provided a more rational measurement of



the impact of disparities between regions on migration. Fifth annual net migration data belongs to NUTS 2 are shown in Table 1.

Table 1: Annual net migration values of the regions in NUTS 2 (www.tuik.gov.tr)

Code	Regional Name	2008	2009	2010	2011	2012
TR10	İstanbul	26.675	39.481	102.583	121.782	30.461
TR21	Tekirdağ, Edirne, Kırklareli	21.652	9.979	11.819	13.701	16.567
TR22	Balıkesir, Çanakkale	8.422	2.594	2.780	2.160	8.485
TR31	İzmir	27.248	26.873	11.480	8.944	9.850
TR32	Aydın, Denizli, Muğla	20.347	1.074	4.722	6.427	10.155
	Manisa, Afyonkarahisar,					
TR33	Kütahya, Uşak	-12.903	-11.384	-15.247	-14.146	5.350
TR41	Bursa, Eskişehir, Bilecik	44.768	19.400	20.488	23.458	15.549
	Kocaeli, Sakarya, Düzce,					
TR42	Bolu, Yalova	37.393	23.170	17.091	19.366	21.541
TR51	Ankara	30.562	37.079	49.405	54.479	22.401
TR52	Konya, Karaman	-10.499	-5.535	-10.277	-4.171	3.793
TR61	Antalya, Isparta, Burdur	37.077	19.360	22.542	23.073	29.080
TR62	Adana, Mersin	-16.157	-1.256	-5.615	-15.181	-20.169
	Hatay, Kahramanmaraş,					
TR63	Osmaniye	-1.471	-13.314	-11.448	-19.689	-19.435
	Kırıkkale, Aksaray, Niğde,					
TR71	Nevşehir, Kırşehir	-9.377	-8.205	-20.757	-17.561	-3.808
TR72	Kayseri, Sivas, Yozgat	-24.922	-10.965	-13.867	-16.317	-12.054
TR81	Zonguldak, Karabük, Bartın	96	-4.712	-8.382	-9.722	-3.527
TR82	Kastamonu, Çankırı, Sinop	2.667	6.816	-6.973	-4.777	4.754
	Samsun, Tokat, Çorum,					
TR83	Amasya	-22.292	-12.946	-35.365	-25.058	-15.620
	Trabzon, Ordu, Giresun, Rize,					
TR90	Artvin, Gümüşhane	-5.622	1.585	-22.703	-24.949	18.495
TRA1	Erzurum, Erzincan, Bayburt	-27.538	-9.393	-11.380	-9.148	-9.561
TRA2	Ağrı, Kars, Iğdır, Ardahan	-30.730	-23.195	-18.724	-18.825	-24.873
	Malatya, Elazığ, Bingöl,					
TRB1	Tunceli	-6.271	-10.348	-11.356	-1.504	-9.320
TRB2	Van, Muş, Bitlis, Hakkari	-33.342	-22.859	-21.899	-60.175	-17.771
TRC1	Gaziantep, Adıyaman, Kilis	-7.474	-5.269	-2.691	-4.437	-7.766
TRC2	Şanlıurfa, Diyarbakır	-27.872	-19.498	-15.048	-15.894	-29.774
TRC3	Mardin, Batman, Şırnak, Siirt	-20.437	-28.532	-11.178	-11.836	-22.803

As seen in Table 1, in this five-year period; while 11 of 26 regions in 2008 and 2009, 9 of in 2010 and 2011, 13 of in 2012 have taken net migration, the rest of the regions have given net migration. Within 5 years, 9 regions consistently have taken, 12 regions have given net migration.

As seen in Table 1, the first three regions that have highest net migration rates for 5-year period are respectively, Istanbul (320.982-TR10), Ankara (193.926-TR51) and Antalya, Isparta, Burdur (131.132-TR61), and the first three regions that have highest emigration rates are respectively Van, Muş, Bitlis, Hakkari (156.046-TRB2), Ağrı, Kars, Iğdır, Ardahan (116.347-TRA2) and Samsun, Tokat, Çorum, Amasya (111.281-TR83).

Migration may be general or specific many different reasons in every country, every region or in every residential unit. Migration in general may arise from a variety of reason such as economic, political, cultural, security and natural events. But it is considered to be one of the most important reasons for getting migration or emigration is the level of development. According to the researchers, migrants make their decision to migrate according to the situations such as; income imbalances between the rural regions that they live and the urban (Pissarides and Wadsworth, 1989), cost of living differences across regions (Saracoğlu and Roe, 2004), the expectation of the present discounted life-time earnings when migrating exceeds their expected income when staying at the same place of residence, the probability of finding a job in urban regions (Harris and Todaro, 1970). According to above explanations it may be said that migration movements occur from underdeveloped regions to relatively more developed regions (Yakar, 2013, s. 28-29). This situation may be seen in migration between countries and within countries. The presence of regions having different development levels in a country can trigger migration within the country (Friedlander, 1992, s. 295).

### 2-MATERIAL

The first data set used in the study is migration data belongs to NUTS 2 for the years of 2008, 2009, 2010, 2011 and 2012. The second group of data used in the study is Socio-Economic Development Index (SEGE) published by DPT/Ministry of Development at certain periods in Turkey. In this context SEGE-2011 values which are the latest migration data, were used in the study. The third group of the data set used in the study is the household consumption expenditure components obtained as a result of the survey conducted by TSI (Turkish Statistics Institute).

TSI has applied consumption expenditure survey to the selected households according to a calendar year changing every month and stratified two-stage cluster sampling method. In this way the following consumption



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expenditure components belong to 2008, 2009, 2010, 2011 and 2012 have been used;

- Food and non-alcoholic beverages
- Alcoholic beverages, cigarettes and tobacco
- Clothing and footwear
- Housing and renting
- Furniture, household equipment and maintenance services
- Health
- Transportation
- Communication
- Entertainment and culture
- Restaurant and hotels
- Various goods and services

### **3-METHOD**

In the study panel data that arise with the monitoring of more than one variable in time were used. The first study has been carried out to determine whether there is a significant difference between the data obtained from 26 regions in NUTS 2 and SEGE-2011. For this purpose, t-test was used between independent two groups. In the second study, regression analysis has been established in order to measure the effect of SEGE-2011 values on migration; SEGE values were considered as independent and net migration values considered as the dependent variable. In the established model it is aimed to measure the relationship between the regions found in NUTS 2 and net migrations data obtained from SEGE-2011 for the years of 2008, 2009, 2010, 2011, 2012. Finally, in another established regression model, while measured average net migration values of the regions in NUTS 2 for the years of 2008, 2009, 2010, 2011, 2012 and average net migration rates separately used as independent variables, the average of consumption expenditures consist of 12 components were considered as dependent variable and analyzed. In this respect, t-test and regression analysis were used in the study. SPSS 15.0 (Statistical Package for Social Sciences) was used for statistical analyzes.

### 4-ANALYSIS AND FINDINGS

As stated previously, the regional net migration data used in the study belongs to 2008, 2009, 2010, 2011, 2012 were obtained from TSI.

Since the last census carried out in 2000 before ABPRS in Turkey and the migration data obtained from this census the sample covered for a period of 5 years. The most current migration data before 2008 is belongs to 2000. In addition, migration data for 2000 and previous years is a provincial basis. This has restricted the sample universe. Because of this information restriction migration data after 2000 obtained from TSI (2008-2012) was used. According to this data obtained from TSI, it has been identified that a total of 10.742.875 people migrated inter-regionally in Turkey between the years of 2008-2012. In this context it can be said that approximately one out of every seven people in Turkey replaced by regional migration within 5 years.

### 4-1-T-Test for regions with immigration and emigration

Statistical analysis has been initiated to determine whether there is significant difference between the averages of the 26 regions with immigration and emigration in NUTS 2 and SEGE-2011. For this purpose, T-test was used between independent two groups. In the study, the 5 year (2008-2012) migration values of the 26 regions collected and were inserted into the T-test with SEGE-2011 values. The 26 regions were separated as "immigration" and "emigration" on the basis of net migration data.

The significance between the average SEGE values of the regions with immigration and emigration was tested in the framework of the hypothesis H0 and HA.

H0: The average value of the regions with immigration and emigration is equal.

HA: The average value of the regions with immigration and emigration is not equal

Groups	n	Mean	t	р	
Immigration	10	1.4769±1.34738	4.500		
Emigration	16	- 0.3069±0.66225	4.528	.000	

Table 2: T-test results for regions with immigration and emigration

As seen in Table 2, while 10 of 26 regions received migration, the others gave migration in the 5-year period. As a result of the study, the average SEGE values of the regions receiving net migration amounted as  $1.4769 \pm 1.34738$ , the average of the other group amounted as  $-0.3069\pm0.66225$ . In addition, it has been found that the variance of the two groups is equal. In this context, "t" value was found as 4.528. The significance level (sig. 2-tailed) value corresponds to the "t" value was determined as 0.000. This result means that there is a statistically significant difference between the SEGE values of the regions receiving and giving migration. Thus, H0 hypothesis is rejected, the alternative HA hypothesis is accepted.



### 4-2-Regression Analysis and Structural Model

5 models were predicted in the established regression analysis, using net migration data of 26 regions by 5 years of and SEGE-2011 data. The explanatory variable in the predicted 5 models is the SEGE value calculated for 2011. In addition to this explanatory variable, the square of the same variable included in the model as explanatory variable too and in this way the characteristic of the effect of SEGE on dependent net migration variable was studied to predict. Based on this information, the predicted regression model is as follows:

*netmigration*<sub>i</sub> =  $\beta_{0i} + \beta_{1i}SEGE_{2011} + \beta_{2i}SEGE^2_{2011} + u_i = 2008,2009,2010,2011,2012$ The coefficient predictions of the predicted 5 regression models and  $R^2$  values of the models are seen in Table 3. It is seen that, the explanatory variable of SEGE has a significant effect on the dependent net migration variable in 5 years. This significant effect has been positive for five years. However, the coefficient sign of the square of the SEGE variable for the years 2008, 2009 and 2012 was predicted as negative. Considering this finding, it is possible to say that the effect of SEGE variable decreases when SEGE variable has higher values for the years 2008, 2009 and 2012.

Variabl	Model 1	Model 2	Model 3	Model 4	Model 5
e	2008	2009	2010	2011	2012
Consta nt term	- 2826.004	- 4041.89***	- 9789.19***	- 11046.19** *	-2650.014
	- 2995.908	-1480.251	-2000.453	-2617.414	-2232.436
SEGE	20365.93 ***	15142.16** *	11682.95** *	15976.46** *	14312.06 ***
	- 3242.591	-1602.134	-2165.17	-2832.932	-2416.254
SEGE <sup>2</sup>	- 2753.262 ***	- 955.7889** *	3018.746** *	2805.073** *	- 1561.428 **
	- 1014.817	-501.412	-677.6219	-886.6079	-756.2026
$\mathbb{R}^2$	0.67	0.86	0.89	0.87	0.67
	e Consta nt term SEGE SEGE <sup>2</sup>	e         2008           Consta         -           nt term         -           2995.908           20365.93           ***           -           3242.591           -           2753.262           ***           -           1014.817	e         2008         2009           Constant term         -	e200820092010Consta nt term $-2826.004$ $-4041.89^{***}$ $-9789.19^{***}$ $-2826.004$ $-4041.89^{***}$ $-9789.19^{***}$ $-2826.004$ $-4041.89^{***}$ $-9789.19^{***}$ $-2826.004$ $-1480.251$ $-2000.453$ $-2995.908$ $-1480.251$ $-2000.453$ $-20365.93$ $15142.16^{***}$ $11682.95^{***}$ $-3242.591$ $-1602.134$ $-2165.17$ $-3242.591$ $-1602.134$ $-2165.17$ $-2753.262$ $-555.7889^{***}$ $-3018.746^{***}$ $-1014.817$ $-501.412$ $-677.6219$	e2008200920102011Consta nt term- 2826.004- 4041.89***- 9789.19***- 11046.19**Consta 2995.908- 4041.89***- 9789.19***- 11046.19**SEGE20365.93 ***15142.16** *11682.95** *15976.46** *SEGE- 3242.591-1602.134-2165.17-2832.932SEGE2- 2753.262 ***- 955.7889** *3018.746** *2805.073** *SEGE2- 2753.262 ***- 501.412- 677.6219- 886.6079

Table 3: Regression analysis results of net migration for 5-years and SEGE-2011

Coefficient predictions signed as \*\*\* and \*\* show respectively 1% and 5% significance.

When taken into consideration that dependent variable of predicted 5 models is the same and the number of the independent variable is equal,  $R^2$  values are comparable. Therefore, 2010 ( $R^2 = 0.89$ ) is the year that has the highest rate of explanation of the changes in net migration variable by explanatory variables in the model. In other words, 89% of the changes occurred in net migration variable in 2010 could be explained by the SEGE and SEGE<sup>2</sup> explanatory variables.

According to Model 1, while independent variables can explain 67% ( $R^2 = 0.67$ ) of the changes in dependent variables, in Model 2, 86% ( $R^2 = 0.86$ ) of the changes, in Model 3, 89% ( $R^2 = 0.89$ ) of the changes, in Model 4 87% ( $R^2 = 0.87$ ) of the changes and in Model 5 67% ( $R^2 = 0.67$ ) of the changes in dependent variable can be explained by independent variables.

D	Region	Table 4: NU		Region	Design Name	
Row	v Code Region Name		Row	Code	Region Name	
1	TR10	Istanbul	14	TR71	Kırıkkale, Aksaray, Nigde, Nevsehir,	
1	TKIU		14	117/1	Kırsehir	
2	TR21	Tekirdag, Edirne, Kırklareli	15	TR72	Kayseri, Sivas, Yozgat	
3	TR22	Balıkesir, Canakkale	16	TR81	Zonguldak, Karabuk, Bartın	
4	TR31	Izmir	17	TR82	Kastamonu, Cankırı, Sinop	
5	TR32	Aydın, Denizli, Mugla	18	TR83	Samsun, Tokat, Corum, Amasya	
6	TR33	Manisa, Afyonkarahisar, Kütahya, Usak	19	TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gumushane	
7	TR41	Bursa, Eskisehir, Bilecik	20	TRA1	Erzurum, Erzincan, Bayburt	
8	TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	21	TRA2	Agrı, Kars, Igdır, Ardahan	
9	TR51	Ankara	22	TRB1	Malatya, Elazıg, Bingöl, Tunceli	
10	TR52	Konya, Karaman	23	TRB2	Van, Muş, Bitlis, Hakkari	
11	TR61	Antalya, Isparta, Burdur	24	TRC1	Gaziantep, Adıyaman, Kilis	
12	TR62	Adana, Mersin	25	TRC2	Şanlıurfa, Diyarbakır	
13	TR63	Hatay, Kahramanmaraş, Osmaniye	26	TRC3	Mardin, Batman, Şırnak, Siirt	

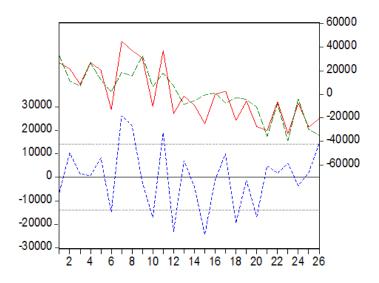
Table 4: NUTS 2 Regions

The orders of 26 regions in NUTS 2, regions codes and region names are seen in Table 4. In the established regression model, regions are taken according to this order and the analysis results in graphics were carried out accordance with this order too.

Graphical results of the regression analysis of net migration and SEGE-2011 data are shown below. Occurred net migration values are shown with straight line (red), coefficients of the predicted model and predicted net migration values are shown with repeated line (green). In addition, residue



series that show the difference between these two series are shown with repeated line in the lower portion of the graph. From this graph, the general performance of the model can be seen. Also, we can see the regions that predicted with higher certainty by the model. In prediction performance of the established model, remarkable declines in some periods for some regions have been occurred.

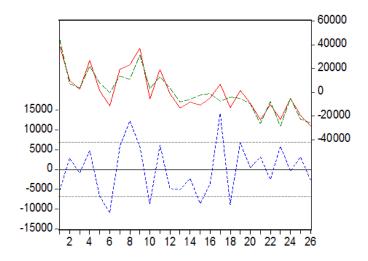


Graph 1: Net-Migration and SEGE-2011 Regression Analysis Model 1 Graphical Results

Model 1 (for 2008); Decline has occurred in the prediction performance of the model in the following regions:

- Bursa, Eskişehir, Bilecik (TR41),
- Kocaeli, Sakarya, Düzce, Bolu, Yalova (TR42),
- Konya, Karaman (TR52),
- Antalya, Isparta, Burdur (TR61),
- Adana, Mersin (TR62),
- Kayseri, Sivas, Yozgat (TR72),
- Samsun, Tokat, Çorum, Amasya (TR83),
- Erzurum, Erzincan, Bayburt (TRA1)

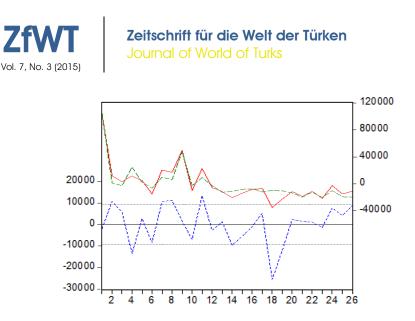
Mustafa Mete, Hakkı Özbaş The Impact of Economic Development on Regional Migration in Turkey

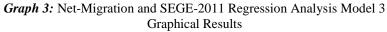


Graph 2: Net-Migration and SEGE-2011 Regression Analysis Model 2 Graphical Results

Model 2 (for 2009); Decline has occurred in the prediction performance of the model in the following regions:

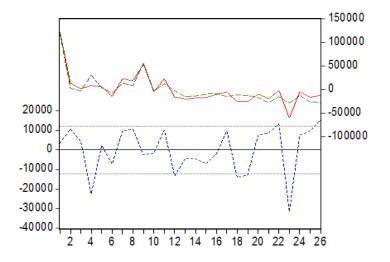
- Manisa, Afyonkarahisar, Kütahya, Uşak (TR33),
- Kocaeli, Sakarya, Düzce, Bolu, Yalova (TR42),
- Konya, Karaman (TR52),
- Kayseri, Sivas, Yozgat (TR72),
- Kastamonu, Çankırı, Sinop (TR82)
- Samsun, Tokat, Çorum, Amasya (TR83)





Model 3 (for 2010); Decline has occurred in the prediction performance of the model in the following regions:

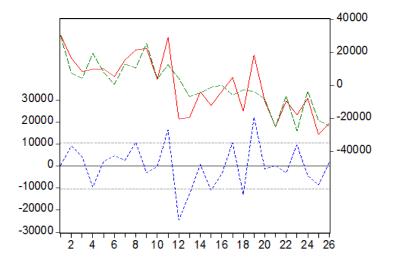
- Tekirdağ, Edirne, Kırklareli (TR21),
- İzmir (TR31),
- Bursa, Eskişehir, Bilecik (TR41),
- Kocaeli, Sakarya, Düzce, Bolu, Yalova (TR42),
- Antalya, Isparta, Burdur (TR61),
- Samsun, Tokat, Çorum, Amasya (TR83).



*Graph 4:* Net-Migration and SEGE-2011 Regression Analysis Model 4 Graphical Results

Model 4 (for 2011); Decline has occurred in the prediction performance of the model in the following regions:

- İzmir (TR31),
- Samsun, Tokat, Çorum, Amasya (TR83),
- Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane (TR90),
- Van, Muş, Bitlis, Hakkâri (TRB2),
- Mardin, Şırnak, Batman, Siirt (TRC3).



Graph 5: Net-Migration and SEGE-2011 Regression Analysis Model 5 Graphical Results

Model 5 (for 2012); Decline has occurred in the prediction performance of the model in the following regions:

- Antalya, Isparta, Burdur (TR61),
- Adana, Mersin (TR62),
- Samsun, Tokat, Çorum, Amasya (TR83),
- Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane (TR90)

Prediction performance of the model found as higher or close to higher in Istanbul (TR10), Balıkesir, Çanakkale (TR22), Aydın, Denizli, Muğla (TR32), Ankara (TR51), Istanbul, Kahramanmaras, Osmaniye (TR63), Kırıkkale, Nevşehir, Aksaray, Kırsehir, Nigde (TR71), Istanbul, Izmir, Bart (TR81), Agri, Kars, Iğdır, Ardahan (TRA2), Malatya, Elazığ, Bingöl, Tunceli (TRB1), Gaziantep, Adiyaman, Kilis (TRC1) and Şanlıurfa, Diyarbakır (TRC2) regions for all 5 periods. In other words, prediction performance found higher for 11 regions in all 5 models. Prediction



performance of the 6 regions found higher in 4 of 5 models. Prediction performance of the 6 regions found higher in 3 of 5 models. Prediction performance of the 2 regions found higher in 2 of 5 models. However these findings, prediction performance of 1 region never found higher in any period.

As seen in the graphs, prediction performance of dependent variable of model in the sub-regions found in especially have low development level East and Southeast Anatolia Regions is better than other regions. In addition, the prediction performance of the net migration dependent variable of the model is higher except for very small deviations in Istanbul (TR10) region. Against these findings, the prediction performance of the model has never seen higher in any period for Samsun, Tokat, Corum, Amasya (TR83) region. This situation negatively affects the general performance of the model. In addition it has seen that, Kocaeli, Sakarya, Düzce, Bolu, Yalova (TR42) and Antalya, Isparta, Burdur (TR61) regions negatively affected the established model. Higher development differences between the cities found in these regions may be shown one of the descriptors of this situation.

The performance of the model is adversely affected in due to the earthquake occurred in Van. Due to this earthquake, the net emigration rate of Van, Mus, Bitlis, Hakkari (TRB2) region was relatively higher than the predicted rate. Although this event has negative impact on the model, the performance of the model is relatively high.

The effect of the migration on consumption was measured in a second established regression model. For this purpose 24 regression model; dependent variable compose of consumption expenditures sub-items and independent variable compose of net migration and net migration pace. This variable values are consumption expenditures, net migration and net migration pace averages of the 26 regions found in NUTS 2 for the years of 2008, 2009, 2010, 2011, 2012.

Independent variable	Net Migration			Net Migration Pace		
Dependent variable	Constant	Gradient	R <sup>2</sup>	Constant	Gradient	R <sup>2</sup>
Food and non- alcoholic beverages	25,16***	-0,000161***	0,61	24,17***	-0,45***	0,61
Alcoholic beverages, cigarette and tobacco	4,41***	-0,0000047	0,06	4,37***	-0,02	0,05
Clothing and footwear	5,84***	-0,000001***	0,38	5,65***	0,08***	0,36
Housing and renting	25,23***	0,000118***	0,67	25,87***	0,29***	0,53
Furniture, household equipment and maintenance services	6,52***	- 0,0000075***	0,42	6,43***	-0,04***	0,28

*Table 4:* Regression analysis results of net migration, net migration pace and consumption expenditures averages averages

Mustafa Mete, Hakkı Özbaş The Impact of Economic Development on Regional Migration in Turkey

Health	1,95***	0,0000376	0,06	1,98***	0,015	0,13
Transportation	14,19***	0,000032*	0,12	14,46***	0,012***	0,23
Communication	4,18***	0,0000056***	0,19	4,22***	0,02***	0,29
Entertainment and culture	2,4***	0,0000129***	0,52	2,48***	0,03***	0,59
Education services	1,67***	0,0000149***	0,41	1,74***	0,03***	0,23
Restaurants and hotels	4,28***	0,0000409***	0,54	4,53***	0,11***	0,52
Various goods and services	4,14***	0,0000115	0,1	4,05***	-0,03**	0,14

Coefficient predictions signed as \*\*\* and \*\* are respectively show the coefficients found as 1% and 5% significance

Most of the coefficients found statistically significant in predicted regression models. The predicted net migration and net migration pace coefficients found as negative and significant at the 1% level for food and non-alcoholic beverages. Both 2 models have predicted the explained part of the dependent variable by independent variables as 0.61. In addition, it has also been found that the share of food and non-alcoholic beverages consumption in total consumption expenditures is high. It is thought that the main reasons of this finding are crowded living style culture and low income level of household of the traditional family structure in regions that seen emigration. The share separated for food increase parallel with the increase of the economic status. Urgent food expenditures begin to pose a lesser extent in total expenditures with enrichment of the households.

While the share of food within total household expenditures varies between 10-15% in developed countries, this ratio rises to 70% in underdeveloped countries (www.tuik.gov.tr). In Turkey, the share of food and non-alcoholic beverage consumption expenditures has been found high in Eastern and Southeastern Anatolia Regions.

The impact of net migration and net migration pace on housing and rental, entertainment and culture, and restaurants and hotels expenditures found as positive and significant at 1% level. When these consumption items examined,  $R^2$  values of the housing and rental expenditures in models predicted by independent variables found respectively as 0.67 and 0.53.

The effects of housing requirement in regions that took place immigration can be seen on housing and rental consumption expenditure items in the literature. If the urbanization pace of the regions with high immigration rates is not at the level to able to fulfill the migration pace, housing problem appears. Housing requirement also becomes a problem in the cities due to rural to urban migration. While rural to urban migration increasing urban population in one sense, on the other hand, this situation makes difficult having house. This problem was resolved by squatter at first (Coşkun ve Kunduracı, 2013, s. 5). Housing prices and rents are increasing



especially in the regions where immigration takes place, due to the reasons such as atempting to prevent the squatter legally, inadequate housing construction. In addition, housing and rental expenditures are the expenditures that have highest share percentage within total consumption expenditures (www.tuik.gov.tr).

The other regression models that the independent variable found significant include entertainment and culture, and restaurant and hotels expenditure items. As a result of the statistical analysis  $R^2$  values of the entertainment and culture expenditures found respectively as 0.52 and 0.59; for restaurant and hotels respectively as 0.54 and 0.52. These expenditure items are referred as luxury expenditures in the literature. Entertainment and culture expenditures in the literature. Entertainment and culture expenditures of, cat, dog food, football match tickets, amusement park fee, disco entry fee, sports activities related to course fees, cinema, theater and concert tickets and so on (www.tuik.gov.tr).

Briefly, in regions with emigration food and non-alcoholic beverages expenditures are higher from the regions with immigration, these expenditures decrease in regions with immigration; while in regions with immigration, entertainment and culture, restaurant and hotel expenditures decrease, these expenditures increase in regions with emigration.

### **5. CONCLUSION**

In respect of the consequences, regional development levels have led to various problems in developed and developing countries. Besides capital, it causes people becoming mobile. These situations give rise to migration. The development differences between the regions cause differences in the living standards of the people from each other.

In this study, it has been seen that economic development has effects on migration movements in Turkey as a result of the analysis. In all established 5 models between the years 2008 and 2012, it has seen that regional economic development has a high level effect on migration and this effect has occurred at a decreasing rate. The prediction performance of 11 of the 26 regions took place in a high level in all 5 models. The prediction performance of the 6 regions in 4 of the 5 models and 6 regions in 3 models of the 5 established models took place at a high level. These findings suggest that the level of the effects of economic development on migration is higher.

Economic development of a region not only affects that area, in addition it has an impact throughout the country. In this context, regional development gets away from being a regional problem and being one of the problems that needs to be considerate throughout the country. There are serious development differences between the regions in Turkey. Especially the sub-regions within Eastern Anatolia, Southeastern Anatolia and Black Sea Regions are located in the bottom row in terms of development.

People living in underdeveloped regions may tends to migration movement due to driving force of the underdevelopment, so constant migration tendency may occur from underdeveloped regions to developed regions. In this respect, the socio-economic disparities have triggered intense migration movements since 1950s and with these movements the increase or decreases of the population of the regions have changed substantially (Bülbül ve Köse, 2010, s. 91).

Some of the regions within NUTS 2 have become attraction center in terms of migration. Due to this situation, these regions become the regions that constant immigration movements take place. Istanbul found at the beginning of this example. The development level of Istanbul create a high attractive force for immigrants and it is seen that in the last 5 years, approximately one of every five people migrated between the regions in Turkey prefer Istanbul. In addition, continuously immigration takes place in the regions with high development index. A variety of problems have emerged in the regions along with intensive migration movements and these problems continue in the present day. Many problems such as squattering based on housing problem, irregular urbanization, urban service deficiency, traffic density, increase in crime rates and deficits in education and health services arise.

As a result of the analysis, it has also been found that migration has effects on consumption expenditures. A relationship close to high at 1% significance level was found between migration and 4 of 12 consumption items. It has been found that, the share of food and non-alcoholic beverages expenditures within budget is high in regions with emigration compared to other regions. This is due to the allocation of most of the income by people with lower income for food. This shows that households living in the regions with emigration have low income levels.

The other item affected by migration is housing and rental expenditures. It has been determined that the share of housing and rental expenditures items within the budget is higher in regions with immigration.

Basically, the problems need to be taken lie on the basis of the share variability of these two expenditure items. The high share rate of food and non-alcoholic beverages expenditures within the budget is due to the poor people of the region, higher housing and rental expenditures occurring in the cities that cannot take the burden of high level of migration.

It has been determined that hotels and restaurants and entertainment and culture expenditures have increased in regions with immigration. Even though at the base of increment of these expenditures called as luxury



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consumption expenditure, the absence of enough budget of immigrants or absence of appropriate places for this expenditures lie.

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