

SYRIAN IMMIGRATION EFFECT ON SOCIAL CAPITAL IN TURKEY: EMPIRICAL STUDY**Asst. Prof. Esra SATICI (Ph.D.)*** **Assoc. Prof. Halis KIRAL (Ph.D.)**** **ABSTRACT**

The aim of this study is to examine the impact of migration from Syria on Turkey's social capital. In this context, Turkey's social capital index is produced at the provincial level and be considered as intervention year of 2012. Accordingly 2007 is evaluated as pre-intervention year and 2017 as post-intervention year. The methods accepted in the impact analysis literature such as single group designs, comparative group designs, difference-in-difference method and trend score matching methods are used to examine the impact of immigrants who entered Turkey after the Syrian civil war on social capital. Empirical results show that the Syrian migration do not have a positive or negative effect on the social capital index values in Turkey evaluated within the scope of the criteria discussed in this study.

Keywords: Impact Evaluation, Social Capital, Migration, Difference-In-Difference Method, Propensity Score Matching.

JEL Codes: A13, C12, C93.

1. INTRODUCTION

After start of the Syrian civil war, millions of Syrians has been immigrated to neighboring countries. According to the 2020 mid-year statistical report of United Nations Refugee Agency¹, there are approximately 3.6 million Syrian refugees and asylum seekers in Turkey. Immigrants sheltered in the predetermined areas for a period of time. But after 2014 they have scattered through the internal regions of Turkey. It is thought that the migration, which took place in a short time and intensively, may have economic and social effects on Turkey.

In the literature on the socio-economic effects of migration, it has been the subject of different studies, both observational and empirical (Adams and Page, 2003; Longhi et al., 2005; Ratha et al., 2011; Artal-Tur et al., 2014; Alpaslan et al., 2021, etc.). However, the effects of migration on the social capital of that country as a whole have not been examined in any study. The fact that migration spreads

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¹ <https://www.unhcr.org/tr/en/unhcr-turkey-stats>

Makale Geçmiři/Article History

Başvuru Tarihi / Date of Application : 18 Temmuz / July 2023

Düzeltilme Tarihi / Revision Date : 20 Eylül / September 2023

Kabul Tarihi / Acceptance Date : 25 Eylül / September 2023

over the years and does not allow analysis of its effects on society as a whole is an important limitation at this point. However, the intense migration wave seen in Turkey in a short time makes it possible to examine the effect of migration phenomenon on the general social capital level of Turkey.

In this study, it is considered whether migration is a cause of change on social capital and its positive or negative effects are investigated. For this aim, impact evaluation techniques are utilized. Impact evaluation is defined as determination in a systematic way of generated influence of any positive or negative, intentional or unintended effects of intervention such as policy, plan, program, project, war and migration effect on household, institutions and environment (Gertler vd., 2010). Impact evaluation assume a crucial role on empirical measurement of this interventions (Asian Development Bank, 2006). Impact evaluation is important for decision makers for determination of results more clearly (Leeuw ve Vaessen, 2009). The critical point in here is to be able to determine how much of emerged result or change is caused by intervention and how much by other variables.

The study is planned in three stages within the migration, social capital and impact assessment frame. In the first stage, variables that can represent social capital in the perspective of Turkey are determined. Afterwards, provincial level social capital indices are produced related to 2007 and 2017's. In the last stage, by using the basic methods accepted in the impact assessment literature, it was investigated that whether migration has an any effect on social capital change.

2. LITERATURE OVERVIEW

It has been stated that the term social capital has spontaneously generated in social networks, and it is accepted as a plus value affecting public safety and prosperity. Starting from the beginning of 1980's, the term of social capital has been used and its importance has been stated by many sociologists, but at first including James Coleman and Robert Putnam. Social capital is defined by Coleman (1988) as a public property/interest which is a cooperation in a group for the aim of facilitation of productive activity. For Bourdieu (1986); social capital is the sum of actual and potential sources having connected with reciprocal acquaintance and recognition in more or less institutionalized relationships related with permanent network. Putnam (1993) on the other hand, used broader meaning to define social capital. According to this definition; social capital is defined on the intangible positive assets such as social networks, trust which can be increased society's productivity that are written and unwritten social behaviors and norms formed from rules to facilitation of social intuitional coordinated activities.

Norms/values are defined as common moral beliefs that are expected to be considered and obeyed by the individuals (Özmütâf et al., 2015). Social networks are one of the important indicators of social capital. Indicators such as the number, frequency of social network and clarity of communication between networks are identify the level of social capital. Trust is one of the hidden elements of social capital development. It is difficult to monitor the effects of socialization in national income statistics in countries with a high sense of trust. However, countries with a high sense of trust not only provide

incentives to accumulate physical capital, but also offer opportunities to earn higher returns from human capital accumulation (Sertkaya and Ozcan, 2017).

There have been many studies examining the effect of migration on social capital (Hammar et al., 1997; Massey et al., 1998; Schiff, 1998; Portes, 1998, 2000 etc.). In social capital studies, in which the phenomenon of migration is discussed, the information or assistance provided by previous immigrants and the excessive isolation of immigrants in their own communities are mostly emphasized (Portes and Stepick, 1985; Massey and García-España, 1987; Portes and Zhou, 1993; Massey, Goldring ve Durand, 1994; Zhou and Bankston, 1994; Palloni et al., 2001; Favell, 2003; Hagan et al., 2005 etc.). However, to the best of our knowledge, the effects of migration on the social capital of the emigrated country as a whole have not been examined in any study.

It is thought that this study contributes to the literature in terms of examining the effects of Syrian immigrants on Turkey's social capital at the provincial level, determining the change over the years, and also evaluating the effect of the Syrian civil war in terms of social capital for the first time in the literature.

3. DATA AND METHODOLOGY

3.1. Social Capital

Even though there is no consensus about the measurement of social capital, there are two methods can be mentioned when the literature is scanned (Tüysüz, 2011);

i) Survey studies which considers social capital as individuals' sum of social capitals and especially tries to measure trust,

ii) Empirical studies that are considering social capital as a value owned by groups rather than the individuals, and measuring it by using data sets obtained from statistic offices and evaluate the data with various statistical methods.

In this study, empirical measurement-based index values are obtained for provincial level social capital values. After the literature review, considering the availability of data, suitable variables for Turkey are used, which represent the phenomena on which social capital is based and allow for comparison between provinces. All of the data used in the study are obtained from the Turkish Statistical Institute. The variables used in this study to derived social capital index are given in Table 1.

Table 1. The Variables Used in to Obtain Provincial Level Social Capital Index Values

Variable	Data Date	Phenomenon
Number of association members per 1000 people	2007, 2016	Social networks (civic engagement)
Number of crime rates per 1000 people	2007, 2016	Norms/Values
Number of theater/cinema audiences per 1000 people	2007, 2017	Social networks
High educational population rate (%)	2008, 2017	Social trust and social networks
Tax collection rate	2008, 2016	Norms/Values
Crude suicide rate	2007, 2017	Social integration
Election turnout rate	2007, 2015	State contribution; Trust

3.2. Impact Evaluation Methods

In impact assessment studies, it is as important as the method itself to define a method that can be suitable for policies and activities. Impact evaluation is based on the principle of unbiased and randomly selection that is defined as gold standard. In this method, by selecting unbiased and random-selected groups, interventions made and its results are followed. In studies that could not be planned before the intervention, by using semi-empirical applications of counterfactual impact assessment methods, that is one of the impact evaluation methods, post-selection-oriented biases are tried to minimized and impact of program is estimated. The most frequently used semi-empirical methods in literature are; difference-in-difference and propensity score matching.

In difference-in-difference method; dissimilarities between “before-after” and “treatment-control” related groups are considered and false matches of these two simple methods are eliminated and these two methods are bringing together. In the aforementioned method by removing results post-intervention from the pre-intervention results, time independent individual properties related results are calculated and unobserved variables reasoned selection bias can be eliminated.

Comparisons based on propensity score matching method, which is one of the another semi-empirical methods, are generally considered as the second-best method after empirical designs (Baker, 2000). As well as this method is similar to empirical ones, the difference from the empirical methods is it is based on observable variables. According to this method, impact evaluation is carried out in two stages. At first, a model is generated which shows the possibility of utilization from the program is put in forth. Through this model, a control group is being formed, which is similar to treatment group in every aspect except for the situation of benefiting from the program. The probability value of benefiting from the program is being called as propensity score. Propensity score which is formed as a function of observable properties, is predicted with logit or probit regression. In the next step, effect of intervention is estimated by taking the difference of mean output values associated with matched groups’ (Heckman

et al., 1998).

In this study, logit model is used to determine propensity scores. The characteristics, which thought to have an effect on migration attraction of a province are population, GDP, employment and distance of province to border. So, these are specified as migration attraction parameters. Model was established based on these variables, propensity scores are calculated, the control and the treatment groups are determined according to the score values.

4. ANALYSIS

Within the scope of this study, firstly, provincial level social capital index values for 2007 and 2017 are produced for Turkey by using variables given in section 3.1. At first, by using Bartlett test interrelations between selected variables are insignificant, suitability for the factor analysis is tested ($p < 0,05$). At the same time, it is observed that the sample size is sufficient at a moderate level ($KMO=0,692$) according to Kaiser-Meyer. After the statistical control of the assumptions, factor analysis is applied and three principal components are specified. These three principal components explain nearly %73 of the total variance. Obtained factor loads are given in Table 2.

Tablo 2. Factor Loads Matrices

	Components		
	1	2	3
Theatre+cinema audience number per 1000 people	,355	-,081	,086
Association member number per 1000 people	,330	-,010	-,068
Highly educated population ratio (%)	,281	,169	,003
Election turnout rate	-,069	,514	,055
Crude suicide rate	-,008	-,060	,984
Tax collection rate	,338	-,233	-,030
Convicted person number per 1000 people	-,148	,598	-,132

In the first factor, it is observed that theatre and cinema audience number per 1000 people is the most effective variable. As a result of analysis, the index values are obtained for 3 principal components those eigenvalues are bigger than 1, by weighting the their weight sum is 1 according to variance explanation rates.

In the study of Ceritoğlu (2017), it is stated that the refugee flow shock started to be seen from the beginning of 2012 and thus 2012 is taken as the cut-off year for refugee migration. In the related study, the short-term effects of Syrian migration on the Turkish labor market are examined by using data for the period of two years ago and two years after within the scope of NUTS 2 classification data. Similarly, it is also investigated in this study that, Syrian migration effects on the social capital by accepting 2012 as a cut-off/threshold year. It is aimed to evaluate medium-term effects rather than the short-term changes when the elements that formed social capital are considered. Therefore, impact

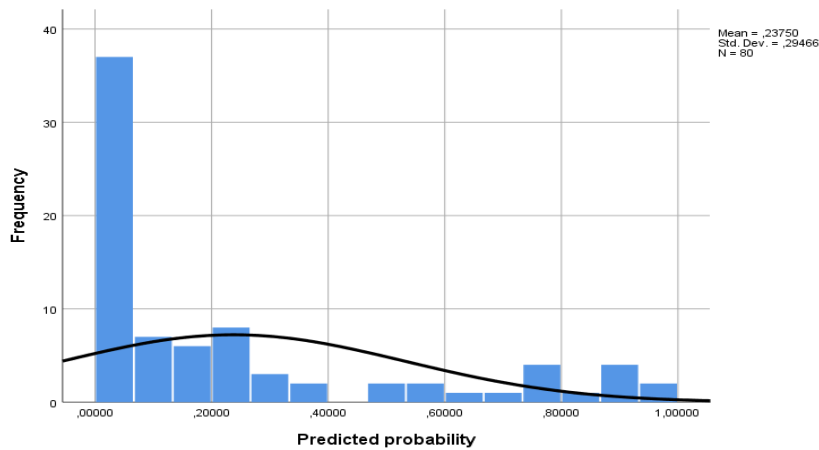
evaluation methods are applied by obtaining social capital index values for five years ago (2007) and five years later (2017).

At first, difference-in-difference method is applied which is one of the impact evaluation method. For this method, the immigrant population is over 2% provinces are accepted as experimental (treatment) group (for this assumption, the control and treatment groups forming these provinces are given in Appendix 1). Accordingly, differences between treatment group and control group are compared statistically for the pre-treatment and post-treatment period. As a result, it is observed that tendencies of the control and treatment groups pre and post intervention are similar and there is no difference in the changes for pre and post intervention ($p = 0,137 > 0,05$).

Secondly, propensity score matching method is applied. In this study, propensity scores are predicted with logit regression as a function of observable properties. Briefly in this method, after the control and treatment groups are determined according to statistically significant logit model probability values (propensity score), pre and post intervention differences are being tested. As a pre-intervention period, 2007 year's provincial level population, GDP, employment and province to border distance (km) variables are taken as independent variables. It is observed that the established model is statistically significant (Hosmer Lemeshow Test, Sig. 0,711) and has a %89 classification success.

Excessive propensity score values, namely zero and one, are excluded from the analysis. Propensity score distributions of the provinces are given in Figure 1.

Figure 1. Propensity Score Distribution of Provinces



For the propensity score matching method, nearest available matching (nearest neighbor matching) method is used by data replacement, owing to small of data available. Matchings are done in the region of the common support space and Istanbul, Edirne and Kırklareli, which are found to be outlier, are not taken into consideration. Propensity score matchings are given in Table 3.

Table 3. Propensity Score Matching

TRETMENT GROUP		CONTROL GROUP		
PROVINCE	PROPENSITY SOCORE	PROVINC E	PROPENSITY SCORE	DIFFERENC E
Gaziantep	0,96309	Ankara	0,93311	0,02998
Adana	0,93461	Ankara	0,93311	0,0015
Hatay	0,9256	Ankara	0,93311	-0,00751
Kahramanmaraş				
Şanlıurfa	0,89121	Ankara	0,93311	-0,0419
Kilis	0,88273	Ankara	0,93311	-0,05038
Mersin	0,84849	Diyarbakır	0,76836	0,08013
Osmaniye	0,78608	Diyarbakır	0,76836	0,01772
Adıyaman	0,75889	Diyarbakır	0,76836	-0,00947
Şanlıurfa	0,73572	Diyarbakır	0,76836	-0,03264
Malatya	0,66999	Diyarbakır	0,76836	-0,09837
Kayseri	0,64231	Siirt	0,53148	0,11083
Konya	0,59033	Siirt	0,53148	0,05885
Mardin	0,56151	Siirt	0,53148	0,03003
Batman	0,35084	Niğde	0,336	0,01484
İzmir	0,29543	Tokat	0,27413	0,0213
Nevşehir	0,26732	Aksaray	0,26584	0,00148
Şırnak	0,26237	Aksaray	0,26584	-0,00347
Bursa	0,1124	Amasya	0,11555	-0,00315
Burdur	0,02471	Sinop	0,0241	0,00061

The mean of the difference between propensity scores: 0,006336

The results, which include the statistical evaluation of differences between before and after the intervention are given in Table 4 for formed groups.

Table 4. Before and After Intervention Difference Evaluation of Groups Matched According to Propensity Scores

difference	Equal variance assumed	Levene's Test		Independent Test		Mean Difference	Std. Er.
		F	Sig.	t	Sig.		
		0,001	0,972	0,656	0,516		

When the Table 4 is examined it can be seen that there is no statistical difference exist in social capital index values for the matched groups according to propensity scores and there is no change in social capitals of the provinces after intervention.

5. CONCLUSIONS

In this study, Syrian migration effect on the social capital is examined by using impact evaluation methods. By taking the 2012 as the intervention year, 2007 and 2017 years are selected for the evaluation of mid-term effects. At first, provincial level social capital index values are obtained, thereafter change in the obtained indices is examined by using difference-in-difference and propensity matching score methods. Impact evaluation methods, which are the most suitable for data set used in our study and in literature it is accepted as the closest to gold standard and unbiased method, are included to the process. With the results, it is seen that Syrian migration has neither positive nor negative effect on the social capital index values within the scope of the criteria discussed in our study.

The result of the fact that Syrian migration has no positive or negative effect on social capital, which is considered as one of the important factors of economic growth, is considered that international migration is not of primary importance for policymakers and does not create a change in the social structure. Therefore it may be appropriate to evaluate more priority areas in the regulatory policies to be implemented.

Of course, there are parts of this study exist that are open to improvement in many aspects. Although, this level of the study is valuable as it is bringing new perspective to the literature. It is thought that the more sensitive results will be obtained with the help of data gathered from the field. Obtaining social capital values of the provinces more comprehensively is the most important gap in this regard. However, obtaining the provincial level social capital index values from the field is a very comprehensive and long-run study. Another contribution of this study is that it draws attention to this shortcoming.

REFERENCES

- Adams, R.H., and Page. J. (2003) “International Migration, Remittances and Poverty in Developing Countries”, World Bank Policy Research Working Paper, No. 3179, The World Bank.
- Alpaslan B., Kayaoglu A., Meckl J., Naval J., Vanore M., Ziesemer T.H. (2021) “Economic Effects of Remittances on Migrants’ Country of Origin”, In: Kourtit K., Newbold B., Nijkamp P., Partridge M. (eds) *The Economic Geography of Cross-Border Migration. Footprints of Regional Science.* Springer, Cham. https://doi.org/10.1007/978-3-030-48291-6_20
- Artal-Tur, A., Peri, G., and Requena-Silvente, F. (Eds.). (2014) “The Socio-Economic Impact of Migration Flows”, *Population Economics.* doi:10.1007/978-3-319-04078-3
- Asian Development Bank (2006) “Impact Evaluation – Methodological and Operational Issues”, Philippines.
- Baker, J. L. (2000) “Evaluating the Impact of Development Projects on Poverty, a Handbook for Practitioners”, the World Bank, Washington, D.C.

- Bourdieu, P. (1986) "The Forms of Capital", Handbook of Theory and Research for the Sociology of Education, edited by J.G. Richardson. New York: Greenwood Press: 241 –58.
- Ceritoğlu, E., Yuncular, B.G., Torun, H. (2017) "The Impact of Syrian Refugees on Natives' Labor Market Outcomes in Turkey: Evidence from a Quasi-Experimental Design", IZA Journal of Labor Policy, 6:5, DOI10.1186/s40173-017-0082-4.
- Coleman, J. S. (1988) "Social Capital in the Creation of Human Capital", American Journal of Sociology, 94: 95-120.
- Favell, A. (2003) "Games without Frontiers? Questioning the Transnational Social Power of Migrants in Europe", Archives Europeennes de Sociologie, 44(3): 106-36.
- Gertler, P., Martinez, S., Premand, P., Rawlings, L.B., Vermeersch, C.M.J. (2010) "Impact Evaluation in Practice", the World Bank, Washington, D.C.
- Hagan, J., Dinovitzer, R., Parker, P. (2005) "Choice and Circumstance: Social Capital and Planful Competence in the Attainments of the "one-and-a-half" Generation", Working paper: <http://ceris.metropolis.net/Virtual>).
- Hammar, T., Brochmann, G., Faist, T. (eds) (1997) "International Migration, Immobility and Development", Oxford: Berg.
- Heckman, J. J., H. Ichimura, P. Todd. (1998) "Matching as an Econometric Evaluation Estimator", Review of Economic Studies, 65: 261-294.
- Leeuw, F. ve J. Vaessen (2009) "Impact Evaluations and Development- NONIE Guidance on Impact Evaluation, NONIE (Network of Networks on Impact Evaluation).
- Longhi, S., Nijkamp, P., and Poot. J. (2005) "A Meta-Analytic Assessment of the Effect of Immigration on Wages", Journal of Economic Surveys, 19 (3): 451-477.
- Massey, D. ve García-España, F. (1987) "The Social Process of International Migration", Science 237: 733–38.
- Massey, D.S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A. and Taylor, J.E. (1998) "Worlds in Motion: Understanding International Migration at the End of the Millenium", New York: Oxford University Press.
- Massey, D.S., Goldring, L.P., Durand, J. (1994) "Continuities in Transnational Migration: An Analysis of 19 Mexican Communities", American Journal of Sociology 99: 1492–533.
- Özmütaf, N. M., Aktekin, E., Ergani, B., Çıta, K. (2015) "Sivil Toplum Kuruluşlarında Sosyal Sermaye Boyutlarının Gönüllük Performansına Etkisi: İzmir İli Örneği", I. Uluslararası Uygulamalı Bilimler Kongresi, Konya, 629-636.

- Palloni, A., Massey, D. S., Ceballos, M., Espinosa, K., and Spittel, M. (2001) “Social Capital and International Migration: A Test Using Information on Family Networks”, *American Journal of Sociology*, 106(5): 1262–1298.
- Portes, A. (1998) “Social Capital: Its Origins and Applications in Modern Sociology”, *Annual Review of Sociology*, 24: 1-24.
- Portes, A. (2000) “The Two Meanings of Social Capital”, *Sociological Forum*, 15(1): 1-12.
- Portes, A. ve Stepick, A. (1985) “Unwelcome Immigrants: The Labor Market Experiences of 1980 (mariel) Cuban and Haitian refugees in south Florida”, *American Sociological Review*, 50(4): 493-514.
- Portes, A. ve Zhou, M. (1993) “The New Second Generation: Segmented Assimilation and Its Variants”, *the Annals of the Academy of Political and Social Science*, 530: 7496.
- Putnam, R.D. (1993) “Making Democracy Work: Civic Traditions in Modern Italy”, Princeton, NJ: Princeton University Press.
- Ratha, D., Mohapatra, S., and Scheja, E. (2011) “Impact of Migration on Economic and Social Development: A Review of Evidence and Emerging Issues”, *World Bank Policy Research Working Paper No. 5558*.
- Schiff, M. (1998) “Trade, Migration and Welfare: The Impact of Social Capital”, Washington, DC: The World Bank, Development Economics Department.
- Sertkaya, B. ve Özcan, G. (2017) “Sosyal Sermayenin Ekonomik Gelişme Açısından Önemi: Gelişmiş ve Gelişmekte Olan Ülkeler Üzerine Bir Değerlendirme”, *Bulletin of Economic Theory and Analysis*, 2(1): 1-12.
- Tüysüz, N. (2011) “Sosyal Sermayenin Ekonomik Gelişme Açısından Önemi ve Sosyal Sermaye Endeksinin Hesaplanması”, *Kalkınma Bakanlığı Uzmanlık Tezi*.
- Zhou, M. ve Bankston, C.L. (1994) “Social Capital and the Adaptation of the Second Generation: The Case of Vietnamese Youth in New Orleans”, *International Migration Review*, 28(4): 821-45.

Appendix-1. Control and Treatment Groups

Treatment Groups (refugee-population ratio is above %2)			Control Groups (refugee-population ratio is below %2)		
City	Social Capital Index 2007	Social Capital Index 2017	City	Social Capital Index 2007	Social Capital Index 2017
Adana	73.58	82.12	Ankara	100	100
Adıyaman	65.63	75.76	Edirne	45.17	73.94
Batman	65.91	60.61	Eskişehir	71.31	72.12
Burdur	41.48	58.79	Tunceli	29.83	70.3
Bursa	36.93	56.67	Kocaeli	61.93	66.67
Gaziantep	32.39	49.09	Denizli	50	62.73
Hatay	46.59	49.09	Trabzon	56.53	60.61
İstanbul	30.97	44.55	Çanakkale	63.07	60.3
İzmir	37.5	42.42	Balikesir	52.27	59.39
Kahraman	23.58	42.42	Muğla	40.91	57.88
Kayseri	28.98	39.7	Aydın	43.18	57.27
Kilis	23.86	37.88	Karabük	63.35	56.67
Konya	15.06	37.27	Isparta	49.43	56.06
Malatya	26.7	36.97	Antalya	58.52	55.76
Mardin	19.03	30	Zonguldak	49.15	52.42
Mersin	11.36	19.39	Bolu	50	52.12
Nevşehir	14.49	15.76	Tekirdağ	49.72	52.12
Osmaniye	12.5	6.97	Samsun	42.61	51.21
Şanlıurfa	1.7	1.21	Yalova	47.73	50.3
Şırnak	5.11	0	Elazığ	28.41	49.09
			Erzincan	29.26	47.58
			Rize	39.77	47.58
			Çankırı	32.1	45.76
			Ardahan	20.17	45.45
			Uşak	46.31	45.15
			Kütahya	43.47	44.24
			Bartın	49.15	43.03
			Karaman	42.61	43.03
			Manisa	33.81	43.03
			Sinop	29.83	42.73
			Kırklareli	59.94	42.42
			Afyonkara	26.14	42.12
			Bilecik	40.63	41.21
			Kastamon	35.8	40.3
			Sakarya	39.49	40
			Artvin	60.23	39.39
			Kırşehir	42.61	39.09
			Çorum	34.38	38.48
			Erzurum	26.14	38.48
			Düzce	29.26	35.15
			Niğde	25	34.85
			Tokat	28.69	34.85
			Giresun	32.67	33.94
			Kırıkkale	49.43	33.33
			Amasya	27.84	33.03
			Kars	27.27	32.73
			Ordu	30.35	31.52
			Bayburt	20.45	28.18
			Bingöl	24.15	28.18
			İğdır	0	28.18
			Sivas	48.58	26.36
			Gümüşhar	23.86	24.85
			Aksaray	25	24.55
			Muş	11.65	23.03
			Ağrı	10.51	22.73
			Diyarbakır	19.89	20
			Yozgat	11.08	19.7
			Siirt	26.7	15.76
			Bitlis	16.76	15.15
			Van	16.19	3.03
			Hakkari	19.03	1.21

KATKI ORANI / CONTRIBUTION RATE	AÇIKLAMA / EXPLANATION	KATKIDA BULUNANLAR / CONTRIBUTORS
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Hakem Değerlendirmesi: Dış bağımsız.

Çıkar Çatışması: Yazar çıkar çatışması bildirmemiştir.

Finansal Destek: Yazar bu çalışma için finansal destek almadığını beyan etmiştir.

Teşekkür: -

Peer-review: Externally peer-reviewed.

Conflict of Interest: The author has no conflict of interest to declare.

Grant Support: The author declared that this study has received no financial support.

Acknowledgement: -
