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İSTANBUL KEMERBURGAZ ÜNİVERSİTESİ SOSYAL BİLİMLER DERGİSİ
ISTANBUL KEMERBURGAZ UNIVERSITY JOURNAL OF SOCIAL SCIENCES

Cilt 1, Sayı 2 | Kış 2016
Volume 1, No. 2 | Winter 2016, 7-32

Structural Change in Wage Differentiation Patterns for Turkey in Terms of Working in the Same Industry

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Abstract

This paper investigates the wage differentiation patterns in Turkey between couples who work in the same industry and those who work in different industries. The Turkish Household Labor Force Surveys from 2004 to 2014 are utilized as the main data. As the graphical representation verifies, regions can be grouped into three with respect to wage differentiation. In the first group, differentiation gap remains the same; for the second group, the gap increases; and for the last group, while the gap first decreases and disappears, it then increases again in favor of who the ones who work in the same industry. These findings are valid not only for females' but also males' mean hourly income. In the empirical analyses, the squared wage differences are clustered into three categories by using K-Means clustering method. Then, the behavior of each region changing from one cluster to the other are tracked and calculated with variations of this behavior. It is examined that not only eastern regions but also northern and landlocked regions changed their clusters during the last decade. In addition to that, their calculated variation of this behavior is higher compared to the ones for western, southern and seaside regions. If the variation is higher for the region, this is probably due to structural changes in those regions.

Keywords: Wage Income, Same Industry, Regional Variations, K-Means Clustering.

JEL Codes: J12, J31, C38

Kısa Özet

Bu çalışma içerisinde, aynı endüstrilerde ve farklı endüstrilerde istihdam edilen eşler açısından ücret farklılaşması örüntüsü incelenmiştir. Bu amaçla, 2004-2014 arasında yapılmış TÜİK Hanehalkı İşgücü Anketleri kullanılmıştır. Çizelgeler incelendiğinde, ortalama ücretlerdeki faklılaşma örüntüsü, bölgeler açısından üç farklı küme içerisinde yer almaktadır. İlk küme için bu farklılaşma belirgin ve sabit iken, ikinci küme için bu farkın belirgin ve artmakta olduğu görülmüştür; son grupta ise ücret farklılığı önce azalmakta ve eşitlenmekte iken, ardından tekrar artış eğilimine girmektedir. Ücretlerdeki bu farklılaşma, kadınlar ve erkekler açısından aynı örüntüdedir. Görgül analizlerde öncelikle, ücretlerdeki bu farklılaşma, farklılığın kareleri alınarak üç kümeye ayrılmış; sonrasında ise bölgelerin bu kümeler içerisindeki hareketliliği takip edilmiş ve değişimleri hesaplanmıştır. Nihayetinde on bir yıla dayanan gözlemlere göre doğu, kuzey ve karasal bölgelerin, kümeler içinde hareketliliğe sahip olduğu gözlemlenmiştir. Hareketliliği ölçmek için hesaplanan varyanslar bu bölgelerde, batı, güney ve sahil bölgelerine nazaran daha yüksek bulunmuştur. Eğer bir bölgenin takip edilmiş hareketliliğini ölçen varyansı yüksek ise bu, bölge içerisinde ücret farklılaşmaları açısından yapısal bir dönüşümün gerçekleştiğini göstermektedir.

Anahtar Kelimeler: Ücret, Aynı Endüstri İstihdamı, Bölgesel Farklılaşma, K-Ortalamalar Kümeleme Analizi.

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1. Introduction

Despite the strong correlation between the social and economic network and labor market outcomes, there are only a few studies focusing on the subject in Turkey. Yanık-İlhan and Kütük (2016a), and Kütük and Yanık-İlhan's (2016b) are among the rare works on the effect of sharing economic, social and cultural resources by couples over their labor market outcomes. For this study, it is used the Turkish Household Labor Force Survey (HLFS) from 2004 to 2014 provided by Turkish Statistical Institute (TURKSTAT). The means of males' wages and females' wages at the same household are calculated by NUTS2-level and years respectively. Household wage income is calculated as the sum of spouses' wage income. Then, the means of household wage incomes (by NUTS2-level and being in the same industry which is encoded from NACE Rev.2 with two digits level and not) are examined. Thus, the study focuses on the variations of means of household wage incomes in different geographical the regions, with a specific focus on couples working in the same, or in a different industry. The analysis is important not only for economists working on wage, income inequalities and marriage markets, but also for sociologists, psychologists and political scientists, who are interested in regional differences the factors that create discrepancy between regions, and the factors that influence the marriage market.

Before focusing on the impact of social ties on labor market issues for couples, it is taken into account the factors that may have effects on marriages. Marriage and cohabitation have an impact not only on the immediate family life but also on individuals' long-term economic implications – the most obvious being the labor market outcomes and income level. Several studies examined the determinants of marriage and cohabitation. A number factors have an impact on the marriage (cohabitation) decision. These factors are rooted from both demographic and socioeconomic determinants. However, no matter which determinant is dominant, individuals are more likely to choose an individual similar to themselves (homogamy). This similarity may be in terms of belief, ethnicity, socio-economic status and so on. These factors could influence the decision of marrying a person both directly and indirectly. The indirect effect results from the fact that homogamy increases the chances of couples to meet due to spatial proximity. Working in the same industry creates the same spatial circumstances, and thus may also have an indirect effect on the marriage, where interests, networks and job opportunities create a workspace that its borders are not certainly determined so that to meet a partner.

The literature on homogamy focuses on marriages between individuals with a similar level of education (Hamplová and Le Bourdais, 2008; Han, 2010; Smits and Park, 2009) and with the same ethnicity or country of origin (Dribe and Lundh, 2008; Muttarak and Heath, 2010). Other studies examine the role of parental occupational status over the marriage decision (Bull, 2005 ; Dribe and Lundh, 2005 ; Bozon and Heran, 1989; Kalmijn, 1991; Kalmijn and Flap, 2001; Uunk, 1996). However, other studies criticize whether the presence of this influence exist in the twentieth century (Bozon and Heran, 1989; Kalmijn, 1991; Kalmijn and Flap, 2001; Uunk, 1996). The importance of parental status homogamy decreased in the last few centuries, as industrialization weakened parental influence over individuals (Kalmijn, 1998; Smiths et. all., Ultee, and Lammers, 1998; Uunk, 1996; Van Leeuwen and Maas, 2002, 2010).

The decision of marriage (cohabitation), by and large, changes the person's social networks, which directly influence labor market situation and income. Family as the smallest unit of a society is also a social

network that household members benefit from. As it is stated in Bernasco (1994), spouses share their economic, social and cultural resources, and therefore they are able to enhance each other's achievements. Also according Montgomery (1991), network effect, or specifically social ties are crucial on wage income. He noted that those having more social ties (networks) tend to be wealthier than the ones who have less. These findings are related to the supply side of labor market. From the demand side of the issue, firms are more likely to hire employees who have referrals (a network), because it is cheaper, less time-consuming and more reliable than other ways to hire (Holzer, 1987 ; Montegomery, 1991). Many researchers focused not only theoretically but also empirically on the network effect in the labor market (Calvó-Armengol and Jackson, 2004; Granovetter, 1973, 1995; Rees, 1966). Networking creates asymmetries for suppliers and it has a positive impact on the wages . Yanık-İlhan and Kütük (2016a) find a reciprocal and additional effect for spouses in the same industry, increasing their wages, and thus, the total income of the household. However, this result is valid for only certain areas of Turkey specifically where the urban population outweighs or overpowers the rural population.

Being in the same industry or in the same occupation, and as a result, having a broader network, can reciprocally enhance the achievements of a couple. These findings can also be linked with the status-similarity hypothesis. For women whose potential occupations differ from their husbands', the probability of being employed is lower than those with potential occupations similar to their husbands' (Smits et. al., 1996). In addition, Simpson and England (1981) stated that if spouses have similar interests and thus they can understand each other's problems and they are more likely to share responsibilities. Moreover, using status of consistency theory, Hornung and McCullough (1981) stated that differences between occupational statuses of spouses causes marital dissatisfaction and stress. Based on these studies, it can be said that having the same occupation increases the happiness in the household which has an impact on production efficiency. Thus, it can be asserted that the increase in production efficiency also lead to increase in wage income which is desired at the supply side of labor market.

On the other hand, having the same occupational status may also lead to marital problems between couples as well as compensatory reaction. According to within-family-competition hypothesis, a woman is forced to drop out of the labor force or moves to a downward position, so that she is at the same or at a lower occupational position with her spouse. In other words, her husband's position has a glass ceiling effect over her achievements (Phillibert and Vannoy-Hiller, 1990). Bernasco et al. (1998) use the concept, "spouse effects" when a terminology is needed for describing the research question. In general, partners are generally matched according to assortative mating by using occupational attainment. Besides, they narrow their accession for finding a job. In cohabitation, spouses are exposed to the same local and regional circumstances. As suppliers of the labor market, this narrowness can be seen as a negative impact. Still, other researchers emphasize the utility and stated that utilities of each partner are joined, and thus, their utility functions must be jointly maximized (Bernasco et al.,1998; Berk and Berk, 1983). From a sociological perspective, when a partner or both of them has comparative advantage, they need to specialize more on their field in order to maximize the joint utility function by enhancing their skills, which heavily depend on investment in education, on-the-job training and learning by doing. Bernasco et al. (1998) investigated that male's resources for entry in the labor market increase the probability of female partner for entry or re-entry in the labor market. In contradiction to this view, from the neo-classical economist's

perspective, one partner's specialization in market-related skills might be beneficial for the household's joint utility function, the other partner specializes in domestic skills performed at home. There are researchers arguing against this argument (Oppenheimer, 1977 ; Smits et al., 1996). As the dual-earners family pattern has become more established (Hanson and Ooms,1991 ; Spitze, 1988), old school social stratification or family duty assignment theories have fallen into disuse. Marriages were seen as shaped by matching occupational statuses. Moreover, occupational attainment becomes more determinative in marriages than any other factor in the United States (Hiller and Philliber, 1986; Rossi et al., 1974).

In sum, there are many factors that affect the marriage decision related to similarities between individuals. These factors are also linked to social and economic networks, which have an impact on the labor market outcomes and income levels of married couples. Therefore, social and economic networks are at work both before marriage and after the marriage.

The literature do not go in deeper, especially regional differences for a country in the perspective of marriage market. But in this paper, variations of wage differentials between couples who are working in the same industry and the ones who are working in different industries among the regions are examined in detail. In other words, variations of wage differentials between couples who have more social networks than the ones who have less social networks due to working in the same industry are investigated. If there is a structural change meaning change in wage differentiation in the region, then the impact of social and economic network on marriage decision and the consequences of the marriage will probably be different. By doing this, we can indicate if a region went thorough structural change[1].

The following section will discuss data and methodology. In the third part, we represent the results of our research. The last part is a conclusion where we discuss our findings.

2. Data & Methodology

Household Labor Force Survey (HLFS) from 2004 to 2014 provided by Turkish Statistical Institute (TURKSTAT) are utilized. However, the questions asked change every year. This is why we took into account the context of wage differentiations in marriages and cohabitations and their answers to match them together. Second, we included only above 15 years-old individuals living together in the same home are included in the sample as the core of households. Afterwards, incomes are deflated[2] on the basis of year 2009. In addition, only the wages of spouses whose wage is different from zero are included. Then, wage per hour is computed and a natural logarithm of it is used in computations[3] by using per week of a month[4].

A NACE Rev.2[5] indicator[6] with a two-digit level reflects if the partners are in the the same industry or not. Therefore, means of males' hourly wage and females' wages at the same household are calculated ye-

1 In the context of this study, it may be defined as the change or shift in wage differential patterns of partners and households in favor of who work in the same industry.

2 Deflators for Turkey are rendered from WDI (http://data.worldbank.org ; accessed: 16.08.2016).

3 Wage per hour is computed as follows: Wage income is divided by 4.33 to estimate weekly income. Then it is again divided by weekly working hour of individual.

4 Per Week of a Month= $\left(\frac{\#\text{ Weeks in a year}}{\#\text{ of Months in a year}}\right) \cong 4.33$)

5 http://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF (accessed: 16.08.2016)

6 It is simply 1 if partners work in the same industry (according to first two digit of Nace Rev.2), otherwise 0.

arly by NUTS2-level and NACE Rev2. indicator, respectively. Then, household hourly wage income is calculated as the sum of spouses' hourly wage income. Afterwards means of household's wage incomes (by NUTS2-level and being in the same industry which is encoded from NACE Rev.2 with two digit level and not) are examined.

Afterwards, wage differences between those working in the same industry and those working in different industries are estimated for the household, for both males and females in accordance with their NUT2-level. Then, these differences are squared in order to clarify their distances and to get rid of the negative ones. Eventually the squared wage differences are clustered into 3 categories by using K-Means clustering method (MacQueen, 1967; Bishop, C. M. ,2006) used as a very basic step for unsupervised machine learning tasks (Ding and He, 2004) with the advantages of Euclidean distance formulated as follows:

Euclidean Distance (Minkowski's[7] Generalized Formula)

$$d_k = \sqrt[m]{\sum_{k=1}^{r} \left(x_{ik} - x_{jk}\right)^m}$$

$d: distance, m: power\ of\ distance, r: \#\ of\ clusters$

$x: mean\ differences\ of\ wage\ incomes\ between\ NACE\ Rev2.groups$

$i = 1\ (HH, M\ or\ F\ partners\ are\ in\ the\ same\ industry), j = 0\ (otherwise)$

$k = \{1, \ldots\ldots, 26\}\ (NUTS2\ Levels)$

Note: $m = 2$ is Euclidean distance[8] (for computation please follow link[9])

These three categories are numbered from 1 to 3, representing low, middle and high differentiation between those who work in the same industry and others who work in a different industry[10]. The results are presented in the Table 1, Table 2 and Table 3. The mean squared hourly wage differences for these categories are summarized in the Appendix 1.

There are some studies being not to inquiry in the marriage market but gender perspective. Selim and İlkkaracan (2002) that underlying if a woman has the same occupational and industrial affiliation as a man , she would still get only the 91.9 per cent of a man's wage. This is the wage gap between men and women. In this research, it is found that if men and women work in the same industry (i.e. having same occupational and industrial affiliations), they are more likely to have an equal wage. In addition,

7 https://en.wikipedia.org/wiki/Minkowski_distance

8 in original Minkowskian version of the formula, p=1 for simplification

9 http://docs.scipy.org/doc/scipy/reference/generated/scipy.spatial.distance.minkowski.html

10 If it is thought in the level of households, female and male partner form core household. Then the difference between households indicates both partners work in the same industry and both partners are working in distinct industry. If it is thought in the level of individual, female or male partners who earn their wages by working in the same industry are compared with other female or male partner who earns their wages by working in the distinct industries.

they also observed that administrative, executive and managerial positions, in addition to scientific and technical professionals are the highest returns occupations for both males and females. More developed and industrialized regions are more likely to have job opportunities in those occupations. As Tansel (2004) underlines, there are more private sector workers in the Marmara region than in any other region, with the exception of the Aegean. This is valid not only for males both also for females. Medium size and large size firms have similar returns for both males and females (Selim and İlkaracan, 2002). Again, it can be argued that if a region is developed and/or industrialized, there are more job opportunities in the private sector. Moreover, in these areas women are more likely to be hired and paid equally as administrative, executive and managerial employees and/or scientific and technical professionals. Thus, there is a higher chance for a woman to work at the same industry with her spouse in the private sector. When a woman works at the same industry, it leads to an increase their total wage. Thus, the wage gap between the ones who work at the same industry and the ones who work at different industries also widens. There are also other reasons that have effects on the wage differentials. These are related to levels of overall economic activity. Yanık-İlhan and Assaad (2004) found out that a healthier local economy, which is measured as the provincial unemployment rate or GDP growth rate, promotes greater female employment in non-governmental wage work. Therefore, if the overall economic activity is better in a region, it is expected that there will be more female employment in non-governmental wage work, which increases the probability to meet a partner working in a different industry.

3. Results

In this section, figures and tables specifying the means of hourly wage of males, of females and the combined wage are examined both for the households, in which the spouses work at the same industry and for those, in which the spouses work in a different industry by Nuts2. Figure 1 shows the means of the hourly wage for the entire household, males and females for all of the nuts, respectively. The black line indicates the means of the hourly wage for the households, in which the spouses work at same industry for the years 2004 – 2014. The dotted line shows the means of the hourly wage for the households, in which the spouses work in different industries for the same years. This is valid for all the figures.

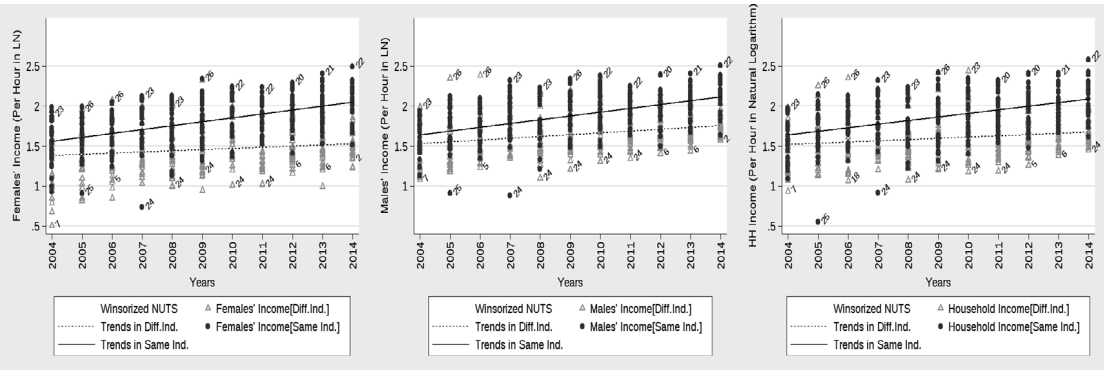
As can be seen from Figure 1c, there is a gap between these lines for all the years and the gap increases with the lapse of time. The dots represent the means of the hourly wage of households, in which the spouses work at the same industry, while the triangles represent the households, in which the spouses do not work at the same industry for each Nuts (26 Nuts), respectively. The outliers are marked by using their Nuts' number. Figure 1c indicates that the means of the hourly wage for the households in which the spouses work at same industry converges after 2008. Moreover, it has an increasing trend. On the other hand, for most of the Nuts, means of the hourly wage for the households, in which the spouses do not work at same industry converges to a lower point, although there seems to be an increasing trend.

The figure for the males and the figure for the combined wages look the same. Yet, the figure for the females differs a bit from the two of them. For example, there is an increase not only in the means of the hourly wages of males but also in the means of wages for females. In other words, there is an increasing

trend. However, the trend is steeper for the means of the hourly wages of males. This is valid for the households, in which the spouses work at the same industry and the ones, in which the spouses do not work at the same industry. Outlier regions are also presented in the figures by marking the points. Regions numbers next the points of outliers are mostly the same for males', females' and total's figures while they change yearly. For all the cases, the outliers above the average of clusters composed yearly are the Subregions of Van, Mardin, Malatya, Erzurum, and Ağrı. On the other side, the outliers below the averages of clusters are İstanbul, Şanlıurfa, Aydın, Gaziantep, Manisa, Tekirdağ.

Figure 1: Means of Hourly Wages by NACE Indicator

a) Females b)Males c)Total



Author's Calculations, 2016 (NUTS-2 Codes are fully stated in Table 1).

Figure 2-4 represents the means of the hourly wages for females, males and the total wage by Nuts2-Level, respectively. Same as above, black line indicates the means of the hourly wage for the households, in which the spouses work at same industry. The dotted lines present the means of the hourly wage for the households, in which the spouses do not work at same industry. Three different types of shapes are worth of attention. In one type, the two lines are parallel to each other; in the other type, the gap between the two lines is increasing; and in the last type, the lines intersect. Note that for the first two types, the black lines are above the dotted lines for the whole period. For the latter type, at the beginning the dotted lines are above the black lines.

More developed/industrialized regions, such as Istanbul, Tekirdağ-Edirne, Bursa-Eskişehir-Bilecik, are all in type one (parallel to each other). Developing regions, such as Denizli-Aydın-Muğla, Trabzon-Ordu-Giresun, are in type two, and thus the gap is increasing between the means. Underdeveloped regions, such as South-Eastern Anatolia (Mardin-Batman-Şırnak) and Eastern Anatolia: (Diyarbakır-Şanlıurfa) are in type three. While at the beginning the dotted lines are above the black lines, as the time lapses, the opposite is valid. In other words, type three begins to look like type two after a certain year. The break point changes depending on the region and gender.

Figure 2: Means of Hourly Wages of Females by NACE Indicator, Nuts2-Level

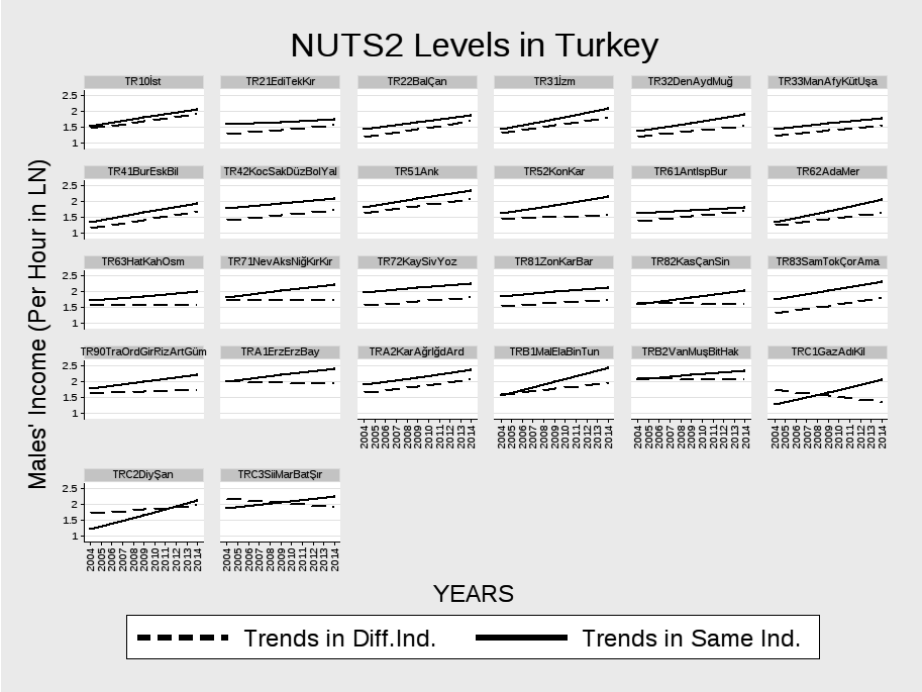


Figure 3: Means of Hourly Wages of Males by NACE Indicator, Nuts2-Level

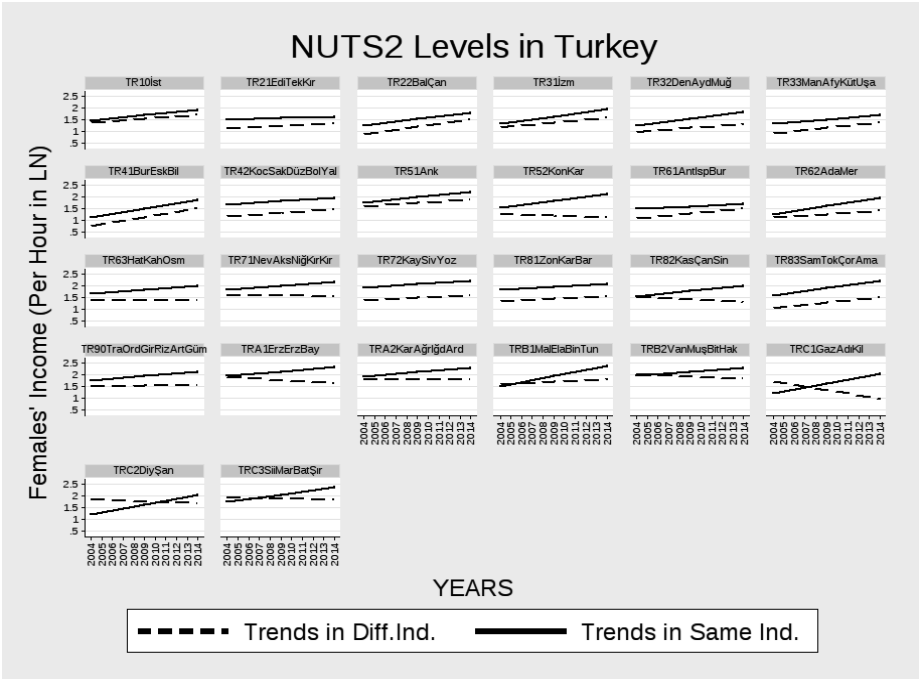


Figure 4: Means of Hourly Wages of Total Household by NACE Indicator, Nuts2-Level

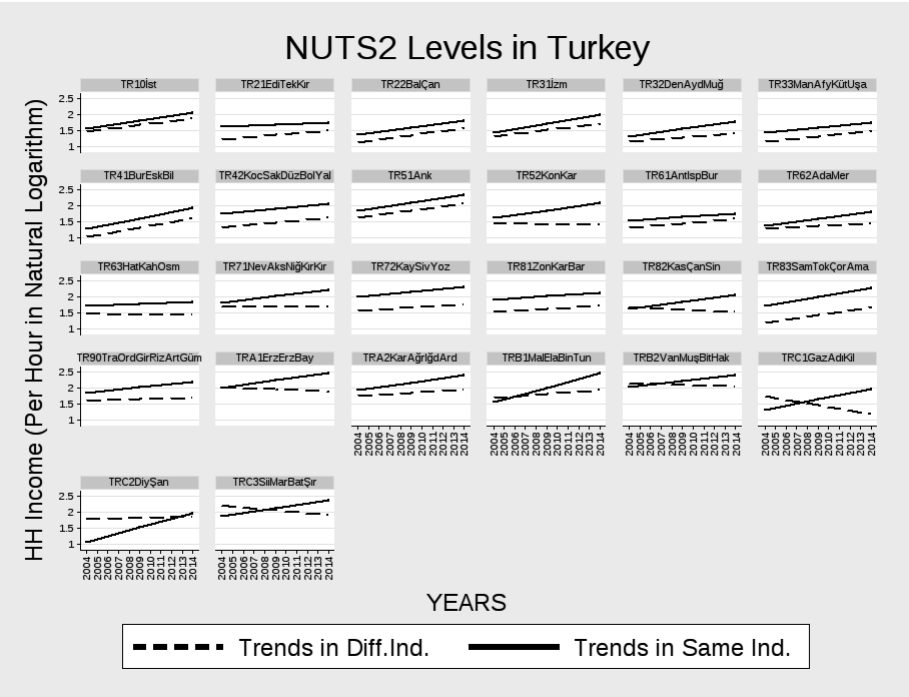


Table 1 illustrates the clusters of regions by total household wage income differences. Table 2 and 3 show the clusters of regions by male and female wage income differences, respectively. Clusters are computed as squares of the wage income differences between the same and different by NACE Rev2. If a cluster takes a value "1", it means that there is a low differentiation. If a cluster takes a value "2", then it means that there is a mid-sized differentiation in that region. Columns represent each year from 2004 – 2014 and the last column is the variance among these years. If the variance of a region is "0", it means that this region has not changed its cluster during this time interval. If the variance is higher than "0", it means that there has been a change. For the total household wage income differences and female wage income differences, Istanbul region's variance is "0". However, for male household wage income differences, it is around 0.42. It is significant that the lowest value for males belongs to Tekirdağ (Edirne-Tekirdağ-Kırklareli) which is 0.25. The highest variance belongs to Erzurum, Erzincan, and Bayburt region for all of the cases. In addition to that, for the total household wage income, the variations in western regions are much smaller than the ones in eastern regions. The variations in Central Anatolia and developing/industrializing regions, such as Ankara, Aydın, Kocaeli, are around 0.5. This is valid for females, but not males. In addition to these, the variations in Northern regions and landlocked regions are higher than the variations in Southern and seaside regions. This is due to both economic factors and social differentiations. In Southern regions leading less variance due to co-movement in wages is not only resulting from economic factors which can be stated as there are some certain sectors developed more than other regions. This causes

wage convergence for spouses working at the same industry or not, such as tourism, agriculture. Additionally it is also resulting from traditions and behavioral decisions shaping marriages. These factors are also valid for the differentiation between the seaside regions having less variance and landlocked regions having higher variances.

In addition to all of these, t-tests for the gap in between the spouses who work in the same industry and those who work in different industries are examined, first at the level of household, then at the level of female and male partner (see Appendix 2). It can be seen that the wage gap for these two groups is statistically significant for Nuts1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15 and 18, 19 in general at the level both households and each of the spouses. This also indicates that the wage gap remained intact in those regions. For other regions, the wage gap has recently developed due to structural changes in the time interval 2004 – 2014.

Table 1: Clusters of Regions by Wage Income Differences, All, Turkey

HOUSEHOLDS (K-MEANS Clusters)		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	VARIANCE
*TR10	1- İstanbul (İstanbul)	1	1	1	1	1	1	1	1	1	1	1	0.0000
*TR21	2- Tekirdağ (Edirne-Tekirdağ-Kırklareli)	2	2	2	2	1	1	2	2	1	1	1	0.2727
*TR22	3- Balıkesir (Balıkesir-Çanakkale)	2	1	1	2	2	1	1	1	2	2	2	0.2727
*TR31	4- İzmir (İzmir)	1	1	1	1	1	2	1	1	1	1	2	0.1636
*TR32	5- Aydın (Denizli-Aydın-Muğla)	1	1	1	1	2	2	2	1	3	1	1	0.4727
*TR33	6- Manisa (Manisa-Afyonkarahisar-Kütahya-Uşak)	1	1	2	2	2	2	1	1	2	2	1	0.2727
*TR41	7- Bursa (Bursa-Eskişehir-Bilecik)	2	2	2	1	1	1	1	1	3	2	1	0.4727
*TR42	8- Kocaeli (Kocaeli-Sakarya-Düzce-Bolu-Yalova)	2	2	2	2	3	3	2	2	3	2	2	0.2182
*TR51	9- Ankara (Ankara)	1	1	1	1	2	1	1	1	3	2	1	0.4545
*TR52	10- Konya (Konya-Karaman)	1	1	2	1	2	3	3	3	3	3	2	0.7636
*TR61	11- Antalya (Antalya-Isparta-Burdur)	1	1	1	1	2	2	1	1	2	1	1	0.2182
*TR62	12- Adana (Adana-Mersin)	1	1	1	1	1	1	1	1	1	2	2	0.1636
*TR63	13- Hatay (Hatay-Kahramanmaraş-Osmaniye)	1	2	2	2	1	2	2	1	1	3	2	0.4182
*TR71	14- Kırıkkale (Nevşehir-Aksaray-Niğde-Kırıkkale-Kırşehir)	1	2	2	1	2	1	2	2	1	3	3	0.5636
*TR72	15- Kayseri (Kayseri-Sivas-Yozgat)	2	1	3	3	3	1	2	3	3	3	3	0.6727
*TR81	16- Zonguldak (Zonguldak-Karabük-Bartın)	3	2	1	1	2	3	1	2	3	2	2	0.6000
*TR82	17- Kastamonu (Kastamonu-Çankırı-Sinop)	1	1	1	1	1	1	1	2	3	3	3	0.8545
*TR83	18- Samsun (Samsun-Tokat-Çorum-Amasya)	2	2	3	3	3	3	2	3	3	3	3	0.2182
*TR90	19- Trabzon (Trabzon-Ordu-Giresun-Rize-Artvin-Gümüşhane)	1	2	2	2	1	2	1	2	3	3	3	0.6000
*TRA1	20- Erzurum (Erzurum-Erzincan-Bayburt)	1	1	1	1	1	2	1	3	3	3	3	0.9636
*TRA2	21- Ağrı (Kars-Ağrı-Iğdır-Ardahan)	1	1	1	1	3	3	2	2	2	2	2	0.5636
*TRB1	22- Malatya (Malatya-Elazığ-Bingöl-Tunceli)	1	1	1	1	1	1	1	2	1	2	3	0.4545
*TRB2	23- Van (Van-Muş-Bitlis-Hakkari)	1	1	1	1	1	1	1	1	2	2	3	0.4545
*TRC1	24- Gaziantep (Gaziantep-Adıyaman-Kilis)	2	1	3	2	1	2	3	2	1	3	3	0.6909
*TRC2	25- Şanlıurfa (Diyarbakır-Şanlıurfa)	3	3	2	1	2	2	2	1	2	1	1	0.5636
*TRC3	26- Mardin (Siirt-Mardin-Batman-Şırnak)	1	1	2	1	1	1	1	1	1	1	3	0.4182

Note: Author's calculations, clusters are determined as squares of the wage income differences between same and different NACE Rev2.
1-Low Differentiation, 2-Middle Differentiation, 3- High Differentiation

Table 2: Clusters of Regions by Wage Income Differences (Male Partner, Turkey)

MALES (K-MEANS Clusters)		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	VARIANCE
*TR10	1- İstanbul (İstanbul)	1	1	3	1	1	1	1	1	2	1	1	0.4182
*TR21	2- Tekirdağ (Edirne-Tekirdağ-Kırklareli)	2	2	2	2	2	1	1	2	2	1	1	0.2545
*TR22	3- Balıkesir (Balıkesir-Çanakkale)	3	2	3	2	2	1	1	1	1	2	2	0.5636
*TR31	4- İzmir (İzmir)	1	1	3	1	1	2	1	1	2	1	2	0.4727
*TR32	5- Aydın (Denizli-Aydın-Muğla)	1	1	2	2	3	2	2	2	1	2	1	0.4182
*TR33	6- Manisa (Manisa-Afyonkarahisar-Kütahya-Uşak)	1	1	3	1	2	2	1	1	1	1	1	0.4545
*TR41	7- Bursa (Bursa-Eskişehir-Bilecik)	2	2	2	1	1	1	1	1	3	2	1	0.4727
*TR42	8- Kocaeli (Kocaeli-Sakarya-Düzce-Bolu-Yalova)	2	2	2	2	3	3	2	2	2	1	2	0.2909
*TR51	9- Ankara (Ankara)	1	1	2	1	3	1	1	1	3	2	1	0.6727
*TR52	10- Konya (Konya-Karaman)	1	1	2	1	3	3	3	3	3	3	1	0.9636
*TR61	11- Antalya (Antalya-Isparta-Burdur)	2	2	3	1	2	1	1	1	1	1	1	0.4727
*TR62	12- Adana (Adana-Mersin)	1	2	3	1	2	1	1	2	3	3	2	0.6909
*TR63	13- Hatay (Hatay-Kahramanmaraş-Osmaniye)	1	1	2	1	2	2	2	1	2	2	3	0.4182
*TR71	14- Kırıkkale (Nevşehir-Aksaray-Niğde-Kırıkkale-Kırşehir)	2	3	2	1	2	1	2	2	2	3	2	0.4000
*TR72	15- Kayseri (Kayseri-Sivas-Yozgat)	3	2	1	3	3	1	2	2	2	2	3	0.5636
*TR81	16- Zonguldak (Zonguldak-Karabük-Bartın)	3	2	3	1	2	3	1	2	3	2	2	0.5636
*TR82	17- Kastamonu (Kastamonu-Çankırı-Sinop)	1	1	2	1	1	1	1	1	2	3	3	0.6727
*TR83	18- Samsun (Samsun-Tokat-Çorum-Amasya)	2	2	1	3	3	3	2	3	2	3	3	0.4727
*TR90	19- Trabzon (Trabzon-Ordu-Giresun-Rize-Artvin-Gümüşhane)	1	2	2	1	2	2	1	2	3	3	3	0.6000
*TRA1	20- Erzurum (Erzurum-Erzincan-Bayburt)	1	1	3	1	1	1	1	2	3	3	2	0.8182
*TRA2	21- Ağrı (Kars-Ağrı-Iğdır-Ardahan)	3	1	3	1	3	2	2	1	1	2	1	0.7636
*TRB1	22- Malatya (Malatya-Elazığ-Bingöl-Tunceli)	1	1	3	1	2	1	2	2	2	2	3	0.5636
*TRB2	23- Van (Van-Muş-Bitlis-Hakkari)	1	1	3	1	2	1	1	1	1	1	3	0.6727
*TRC1	24- Gaziantep (Gaziantep-Adıyaman-Kilis)	2	2	1	3	2	2	3	2	2	3	3	0.4182
*TRC2	25- Şanlıurfa (Diyarbakır-Şanlıurfa)	3	3	3	1	3	1	2	1	1	1	1	0.9636
*TRC3	26- Mardin (Siirt-Mardin-Batman-Şırnak)	1	2	1	2	3	1	1	1	3	1	2	0.6545

Note: Author's calculations, clusters are determined as squares of the wage income differences between same and different NACE Rev2.
1-Low Differentiation, 2-Middle Differentiation, 3- High Differentiation

Table 3: Clusters of Regions by Wage Income Differences (Female Partner, Turkey)

FEMALES (K-MEANS Clusters)		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	VARIANCE
*TR10	1- İstanbul (İstanbul)	1	1	1	1	1	1	1	1	1	1	1	0.0000
*TR21	2- Tekirdağ (Edirne-Tekirdağ-Kırklareli)	2	2	2	2	1	1	2	2	2	1	1	0.2545
*TR22	3- Balıkesir (Balıkesir-Çanakkale)	3	2	1	2	2	1	1	1	2	1	2	0.4545
*TR31	4- İzmir (İzmir)	1	2	1	1	1	1	1	1	2	1	2	0.2182
*TR32	5- Aydın (Denizli-Aydın-Muğla)	1	1	2	2	2	2	2	2	3	1	1	0.4182
*TR33	6- Manisa (Manisa-Afyonkarahisar-Kütahya-Uşak)	1	2	2	2	2	2	1	1	1	1	1	0.2727
*TR41	7- Bursa (Bursa-Eskişehir-Bilecik)	2	3	2	2	1	1	1	1	2	1	1	0.4727
*TR42	8- Kocaeli (Kocaeli-Sakarya-Düzce-Bolu-Yalova)	2	3	2	3	3	2	2	2	2	1	2	0.3636
*TR51	9- Ankara (Ankara)	1	2	1	1	2	1	1	1	2	1	1	0.2182
*TR52	10- Konya (Konya-Karaman)	1	1	2	1	2	3	3	3	3	3	3	0.8182
*TR61	11- Antalya (Antalya-Isparta-Burdur)	2	2	2	2	2	2	2	1	1	1	1	0.2545
*TR62	12- Adana (Adana-Mersin)	1	1	1	1	2	1	2	2	2	2	2	0.2727
*TR63	13- Hatay (Hatay-Kahramanmaraş-Osmaniye)	1	3	2	3	2	1	2	2	2	2	3	0.4909
*TR71	14- Kırıkkale (Nevşehir-Aksaray-Niğde-Kırıkkale-Kırşehir)	1	2	2	2	2	1	2	2	2	2	2	0.1636
*TR72	15- Kayseri (Kayseri-Sivas-Yozgat)	2	2	3	3	3	2	2	3	3	2	2	0.2727
*TR81	16- Zonguldak (Zonguldak-Karabük-Bartın)	3	3	2	2	3	2	2	2	3	1	3	0.4545
*TR82	17- Kastamonu (Kastamonu-Çankırı-Sinop)	1	1	1	2	1	1	1	3	3	2	3	0.8182
*TR83	18- Samsun (Samsun-Tokat-Çorum-Amasya)	2	3	3	3	3	2	2	3	2	3	3	0.2545
*TR90	19- Trabzon (Trabzon-Ordu-Giresun-Rize-Artvin-Gümüşhane)	1	2	2	2	2	2	1	2	2	2	3	0.2909
*TRA1	20- Erzurum (Erzurum-Erzincan-Bayburt)	1	1	1	1	1	1	1	3	3	3	3	1.0182
*TRA2	21- Ağrı (Kars-Ağrı-Iğdır-Ardahan)	1	1	1	1	3	2	2	1	1	2	1	0.4727
*TRB1	22- Malatya (Malatya-Elazığ-Bingöl-Tunceli)	1	1	1	1	2	1	1	1	2	2	3	0.4727
*TRB2	23- Van (Van-Muş-Bitlis-Hakkari)	1	1	1	1	1	1	1	1	2	1	3	0.4182
*TRC1	24- Gaziantep (Gaziantep-Adıyaman-Kilis)	1	1	2	3	1	2	3	3	2	3	3	0.7636
*TRC2	25- Şanlıurfa (Diyarbakır-Şanlıurfa)	3	3	1	1	3	1	1	1	1	1	1	0.8727
*TRC3	26- Mardin (Siirt-Mardin-Batman-Şırnak)	1	1	2	1	1	1	1	1	2	1	3	0.4545

Note: Author's calculations, clusters are determined as squares of the wage income differences between same and different NACE Rev2.
1-Low Differentiation, 2-Middle Differentiation, 3- High Differentiation

4. Conclusions

In this paper, the patterns of wage differentiation in Turkey are examined by comparing couples who work at the same industry and the ones who work at different industries. Due to the trends of the wage incomes by Nuts-2 level, we grouped them into three sub-categories. In industrialized and modernized regions, like the first Nuts-2 level (TR10-Istanbul), the mean household wage income of couples in the same industry is higher than the mean household wage income of couples in different industries. This is true for the entire time period (2004 – 2014). For the regions in the second group, the mean household wage income of couples in the same industry is higher than the mean household wage income of couples in different industries for the entire time period. Yet, the gap increases. This is probably caused by levels of modernization and industrialization. Better developed sectors, such as tourism and agriculture in the southern and seaside regions also play a role, in addition to cultural differentiation. In other words, these regions are either on the verge of structural change or their structural change started earlier than the third group.

For the regions in the third group, there is an intersection point. Note that those reasons of the structural change in terms of wage differentiation patterns of Turkey can be questioned in further studies However, before intersecting, the mean household wage income of couples in the same industry are lower than the mean household wage income of couples in different industries. The gap first decreases and then increases again. The shape becomes similar to regions in group 2. This change may be caused by changes in the composition of marriages. The within-family-competition hypothesis might be relevant before the intersection point. In a marriage where the spouses work in the same occupation/industry, a wife might drop out of the labor force or move to a downward position, so that she moves to an occupational position that is of the same status or lower than her spouse. On the other hand, after 2008 and especially in the eastern regions, being in the same industry or in the same occupation, and so having a broader network might have enhanced couple's achievements. In other words, the network effect, the status-similarity hypothesis strengthens its role in the household.

Moreover, with the help of computing the variances of the patterns showing the order of clusters, it can be seen that some of the regions change their clusters several times during the time period 2004 – 2014, while some regions, such as Istanbul never change. The higher variation in a region can be explained by economic and social transformation, i.e. structural change.

As a conclusion, it can be said that factors such as socio-economic change, industrialization, and opening of new universities might have changed the structure of marriages' composition in the eastern, landlocked and northern parts of Turkey. Moreover, the traditional role of the elderly over marriage decisions has eroded in the eastern regions of Turkey. Couples choose their partners according to their similarities (socio-economic status, religion, ethnicity and spatial proximity), rational decisions and their carriers (being in the same industry, sharing social and economic networks).

The reasons behind the changes in wage differentiations are also tried to be clarified from the labor market context . Firstly, the minimum wage has increased in the span of 2004-2014. In 2004, minimum wage has been increased significantly. This increase corresponds to a welfare increase in terms of wage

inequality (Bakış and Polat, 2013). It also leads to a slight decrease in wage inequality. Therefore, it may be one of the reasons for the increasing trend for the mean of the hourly wages. This is valid in both for spouses working in the same industry and the ones working in different industries.

However, there are some regions, in which the mean of the hourly wages for the spouses working in different industries almost stays the same or even decreases. Gaziantep and Mardin subregions have a negative slope for the average wage for households, male and female partners working in different industries. The decrease might have been caused by the negative effect of the minimum wage increase. As the minimum wage increases, informality increases in Turkey (Yüncüler and Yüncüler, 2016). The increase in minimum wage might have led to increase in informality in these regions or it might have decreased the working hours of the spouses who work in a different industry. Yet, the question is why there is a a negative impact on spouses who work in different industries. This may be due to the spouses working in different industries are more likely to work in industries with smaller sized firms, that are more likely to disobey the laws. There may be yet another reason for the decreasing or the constant trend. Forced migration and refugee waves coming to Turkey from Iraq and Syria led to an increase in labor supply, and, thus triggered a decrease in average wage in informal sectors. This has influenced the households in which spouses work in different industries, in low-skilled and lower wage jobs. Women are more likely to be hired and paid equally (such as administrative, executive and managerial workers and scientific and technical professionals and more female appropriate jobs or equally appropriate)[11] Thus, there is a higher chance for a woman to work at the same industry with her spouse in the private sector. When a woman works at the same industry, it will lead to an increase in their total wages. The wage gap between the ones who work at the same industry and the ones who work at different industries will also grow. To sum up, those explanations stated above in this paragraph are valid for both second and third group.

A deeper inferences for third group in which the wage gap first decreases and then it increases again is stated below. At the beginning of this period examined, there might be fewer 'female appropriate' job opportunities in the private sector in the regions that belong to third group. Women might have found it impossible to work at the same industry with their spouses. An alternative might have been the public sector. Therefore, the mean wage household income turns out higher for the ones who work at different industries, since payments in industries in which offer appropriate jobs for males are higher, while payments in industries in which offer appropriate jobs for females lower due to jobs at different industries are more likely to be determined as gender specific. However, there has been in the recent years more female appropriate and at least equally appropriate job opportunities in those regions. Better payments have increased the mean of wage income of the households, in which the spouses work in the same industry. Therefore, mean wage income of the households in which the spouses work in different industries is constant or in decrease.

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11 Note that, female appropriate jobs are more likely to safe, highly paid, legal work places and so on.

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Appendix 1

K-MEANS* Clusters	Year	Mean	Std. Err.	[95% Conf. Interval]		Mean	Std. Err.	[95% Conf. Interval]		Mean	Std. Err.	[95% Conf. Interval]	
1	2004	0.0277	0.0059	0.016	0.0393	0.035	0.0119	0.0116	0.0584	0.0493	0.0156	0.0186	0.0801
2	2004	0.1434	0.0167	0.1105	0.1762	0.1249	0.0216	0.0825	0.1674	0.2655	0.0906	0.0873	0.4438
3	2004	0.4751	0.1069	0.2647	0.6854	0.4011	0.0499	0.3029	0.4993	0.6374	0.0839	0.4723	0.8026
1	2005	0.0294	0.0052	0.0191	0.0396	0.0404	0.0078	0.025	0.0558	0.0355	0.0088	0.018	0.0529
2	2005	0.1492	0.012	0.1256	0.1729	0.094	0.0149	0.0647	0.1232	0.1765	0.0244	0.1284	0.2245
3	2005	0.6971	0.0121	0.7213	0.6729	0.3374	0.0125	0.3624	0.3124	0.4377	0.0841	0.6059	0.2695
1	2006	0.0236	0.0061	0.0116	0.0356	0.0269	0.0064	0.0142	0.0395	0.0455	0.0122	0.0215	0.0696
2	2006	0.1317	0.0189	0.0945	0.169	0.0953	0.0302	0.0358	0.1548	0.1691	0.0192	0.1314	0.2069
3	2006	0.47	0.0733	0.3256	0.6143	0.3759	0.0489	0.2795	0.4722	0.5931	0.165	0.2684	0.9178
1	2007	0.0328	0.0063	0.0204	0.0451	0.0366	0.0089	0.0191	0.054	0.0653	0.0137	0.0383	0.0924
2	2007	0.1583	0.0182	0.1224	0.1942	0.1149	0.0273	0.0612	0.1686	0.2518	0.0398	0.1735	0.3301
3	2007	0.5247	0.0394	0.4471	0.6023	0.3486	0.0464	0.2572	0.4399	0.4967	0.0436	0.4109	0.5825
1	2008	0.0405	0.0071	0.0265	0.0546	0.0642	0.0185	0.0278	0.1006	0.0779	0.0181	0.0422	0.1135
2	2008	0.1496	0.0143	0.1215	0.1778	0.1313	0.0208	0.0904	0.1722	0.2174	0.0364	0.1458	0.2891
3	2008	0.3492	0.0389	0.2726	0.4257	0.2258	0.0186	0.1891	0.2624	0.4939	0.1099	0.2776	0.7102
1	2009	0.022	0.0044	0.0134	0.0306	0.018	0.0029	0.0123	0.0236	0.0635	0.0193	0.0256	0.1014
2	2009	0.1047	0.0175	0.0702	0.1392	0.0818	0.0181	0.0461	0.1175	0.1487	0.0302	0.0892	0.2081
3	2009	0.3876	0.0154	0.3573	0.4178	0.2778	0.0326	0.2137	0.3419	0.5253	0.164	0.2025	0.8481
1	2010	0.0454	0.0092	0.0273	0.0635	0.0465	0.0107	0.0256	0.0675	0.0686	0.0153	0.0384	0.0988
2	2010	0.1997	0.0177	0.1649	0.2346	0.1479	0.0182	0.112	0.1838	0.2204	0.0283	0.1647	0.2762
3	2010	0.5944	0.105	0.3879	0.801	0.48	0.0403	0.4007	0.5593	0.9689	0.2247	0.5266	1.4113
1	2011	0.0453	0.0083	0.029	0.0617	0.0442	0.0115	0.0217	0.0668	0.1031	0.0279	0.0482	0.1581
2	2011	0.1739	0.0158	0.1429	0.2049	0.1049	0.0111	0.0829	0.1268	0.2693	0.044	0.1828	0.3559
3	2011	0.437	0.0279	0.3821	0.4918	0.2906	0.0574	0.1777	0.4035	0.7254	0.1102	0.5084	0.9423
1	2012	0.0267	0.0067	0.0135	0.0399	0.0122	0.0042	0.0039	0.0206	0.0642	0.0248	0.0154	0.113
2	2012	0.0948	0.008	0.079	0.1107	0.1009	0.0116	0.0781	0.1237	0.1677	0.0206	0.1271	0.2083
3	2012	0.206	0.0124	0.1816	0.2304	0.1505	0.0209	0.1093	0.1917	0.2997	0.0296	0.2414	0.3579
1	2013	0.0361	0.0072	0.022	0.0503	0.0389	0.0116	0.016	0.0617	0.1113	0.0203	0.0713	0.1512
2	2013	0.1257	0.012	0.1021	0.1493	0.1089	0.0171	0.0753	0.1425	0.1917	0.0215	0.1493	0.2341
3	2013	0.3288	0.0373	0.2554	0.4022	0.2486	0.026	0.1973	0.2998	0.5176	0.0831	0.354	0.6811
1	2014	0.0487	0.0074	0.0341	0.0633	0.0344	0.0061	0.0224	0.0464	0.0862	0.0113	0.064	0.1084
2	2014	0.1861	0.0141	0.1583	0.2138	0.1635	0.0187	0.1268	0.2003	0.3336	0.0529	0.2294	0.4378
3	2014	0.4121	0.0227	0.3674	0.4567	0.2962	0.0248	0.2474	0.345	0.4995	0.0527	0.3958	0.6032

*Based on Euclidean Distances.

Appendix 2

(HH: Households, F: Females, M:Males)

YEAR	NUTS1 (İstanbul)																		
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	541	1.49	0.62	1.50	0.62	1.56	0.60	226	1.58	0.59	1.28	0.65	1.52	0.79	0.29	-0.09	(-1.8)	**-0.107***	(-2.12)	-0.08	(-1.5)
2005	615	1.56	0.62	1.64	0.61	1.74	0.61	233	1.63	0.62	1.56	0.72	1.83	0.68	0.27	-0.08	(-1.64)	**-0.117***	(-2.43)	-0.06	(-1.18)
2006	635	1.58	0.62	1.78	0.68	1.76	0.67	225	1.71	0.66	1.54	0.69	1.78	0.76	0.26	**-0.124***	(-2.53)	**-0.168*****	(-3.35)	-0.10	(-1.77)
2007	679	1.63	0.59	1.90	0.70	2.05	0.70	217	1.76	0.60	1.60	0.61	1.77	0.71	0.24	**-0.128****	(-2.77)	**-0.199*****	(-4.09)	-0.09	(-1.78)
2008	808	1.65	0.63	1.51	0.65	1.62	0.68	230	1.86	0.70	1.73	0.69	1.83	0.73	0.22	**-0.210*****	(-4.39)	**-0.216*****	(-4.37)	**-0.210*****	(-4.05)
2009	664	1.79	0.67	1.63	0.66	1.78	0.70	252	1.91	0.83	1.77	0.82	1.90	0.84	0.28	**-0.119***	(-2.29)	**-0.136****	(-2.59)	**-0.116***	(-2.1)
2010	685	1.79	0.68	1.64	0.68	1.78	0.71	234	1.76	0.67	1.62	0.71	1.74	0.66	0.25	0.05	(-0.94)	0.02	(-0.44)	0.04	(-0.84)
2011	744	1.79	0.67	1.63	0.67	1.79	0.70	262	1.93	0.74	1.78	0.74	1.90	0.76	0.26	**-0.111***	(-2.31)	**-0.135****	(-2.73)	**-0.107***	(-2.08)
2012	1019	1.82	0.67	1.65	0.67	1.83	0.72	297	2.07	0.73	1.91	0.73	2.07	0.73	0.23	**-0.258*****	(-5.83)	**-0.264*****	(-5.82)	**-0.245*****	(-5.09)
2013	1097	1.86	0.69	1.67	0.69	1.87	0.72	314	2.05	0.70	1.90	0.68	2.03	0.73	0.22	**-0.179*****	(-4.16)	**-0.231*****	(-5.23)	**-0.155*****	(-3.32)
2014	941	1.85	0.67	1.66	0.68	1.88	0.70	278	2.06	0.70	1.93	0.71	2.04	0.72	0.23	**-0.189*****	(-4.2)	**-0.261*****	(-5.52)	**-0.153****	(-3.15)
YEAR	NUTS2 Tekirdağ (Edirne-Tekirdağ-Kırklareli)																		
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	173	1.21	0.54	1.20	0.58	1.38	0.73	68	1.52	0.79	1.15	0.73	1.12	0.83	0.28	**-0.310*****	(-3.49)	**-0.391*****	(-3.86)	**-0.279****	(-2.83)
2005	149	1.36	0.62	1.64	0.66	1.61	0.76	62	1.69	0.62	1.46	0.71	1.70	0.78	0.29	**-0.330*****	(-3.54)	**-0.361*****	(-3.42)	**-0.307****	(-3.08)
2006	162	1.38	0.56	1.78	0.68	1.92	0.73	55	1.69	0.60	1.50	0.70	1.78	0.75	0.25	**-0.309*****	(-3.47)	**-0.449*****	(-3.88)	**-0.261****	(-2.7)
2007	144	1.52	0.67	1.69	0.68	1.86	0.69	56	1.83	0.68	1.58	0.67	1.81	0.84	0.28	**-0.306****	(-2.9)	**-0.370****	(-3.2)	**-0.292***	(-2.54)
2008	192	1.49	0.66	1.30	0.68	1.49	0.78	74	1.75	0.71	1.58	0.68	1.75	0.78	0.28	**-0.231***	(-2.54)	**-0.257****	(-2.73)	**-0.259***	(-2.41)
2009	182	1.46	0.65	1.26	0.74	1.48	0.69	96	1.64	0.65	1.52	0.69	1.59	0.66	0.35	-0.16	(-1.94)	**-0.262****	(-2.86)	-0.11	(-1.28)
2010	240	1.44	0.63	1.25	0.70	1.50	0.62	101	1.78	0.76	1.67	0.83	1.75	0.71	0.30	**-0.306*****	(-4.05)	**-0.423*****	(-4.76)	**-0.254****	(-3.27)
2011	299	1.41	0.52	1.18	0.68	1.42	0.56	77	1.84	0.67	1.70	0.76	1.78	0.66	0.20	**-0.404*****	(-5.89)	**-0.520*****	(-5.77)	**-0.364*****	(-4.9)
2012	332	1.46	0.54	1.20	0.67	1.49	0.63	101	1.80	0.64	1.69	0.70	1.73	0.68	0.23	**-0.329*****	(-5.09)	**-0.493*****	(-6.38)	**-0.239****	(-3.29)
2013	317	1.53	0.55	1.35	0.65	1.51	0.72	130	1.77	0.71	1.62	0.77	1.72	0.74	0.29	**-0.226*****	(-3.64)	**-0.276*****	(-3.87)	**-0.211****	(-2.77)
2014	446	1.52	0.53	1.33	0.56	1.57	0.58	135	1.66	0.57	1.52	0.60	1.64	0.62	0.23	-0.10	(-1.87)	**-0.172****	(-3.04)	-0.07	(-1.18)
YEAR	NUTS3 Balıkesir (Balıkesir-Çanakkale)																		
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	95	1.18	0.68	1.02	0.71	1.25	0.77	52	1.70	0.73	1.53	0.58	1.76	0.43	0.35	**-0.520*****	(-4.34)	**-0.926*****	(-4.85)	**-0.434*****	(-3.66)
2005	107	1.28	0.72	1.31	0.63	1.53	0.69	48	1.55	0.87	1.61	0.64	1.96	0.62	0.31	**-0.274***	(-2.06)	-0.28	(-1.87)	**-0.309***	(-2.24)
2006	105	1.42	0.69	1.45	0.67	1.57	0.65	49	1.44	0.89	1.71	0.70	2.05	0.66	0.32	-0.02	(-0.15)	-0.01	(-0.05)	-0.04	(-0.3)
2007	141	1.38	0.62	1.70	0.59	2.02	0.66	65	1.72	0.78	1.75	0.64	1.99	0.68	0.32	**-0.346*****	(-3.41)	**-0.412*****	(-3.74)	**-0.309****	(-2.95)
2008	157	1.23	0.59	0.99	0.68	1.26	0.63	76	1.57	0.86	1.38	0.99	1.59	0.83	0.33	**-0.352*****	(-3.69)	**-0.390*****	(-3.48)	**-0.332*****	(-3.36)
2009	178	1.33	0.68	1.13	0.82	1.37	0.69	77	1.50	0.90	1.32	0.92	1.50	0.92	0.30	-0.14	(-1.36)	-0.19	(-1.57)	-0.13	(-1.22)
2010	209	1.54	0.70	1.36	0.75	1.56	0.72	95	1.51	0.71	1.37	0.70	1.49	0.69	0.31	0.05	(-0.63)	0.00	(-0.02)	0.07	(-0.76)
2011	279	1.52	0.69	1.36	0.73	1.56	0.70	120	1.68	0.75	1.53	0.80	1.67	0.74	0.30	-0.12	(-1.63)	-0.16	(-1.88)	-0.10	(-1.28)
2012	317	1.61	0.66	1.39	0.71	1.68	0.67	137	1.89	0.76	1.76	0.81	1.86	0.75	0.30	**-0.254*****	(-3.72)	**-0.371*****	(-4.86)	**-0.180***	(-2.53)
2013	279	1.57	0.64	1.37	0.72	1.62	0.68	123	1.93	0.75	1.79	0.79	1.91	0.75	0.31	**-0.319*****	(-4.47)	**-0.407*****	(-5)	**-0.292*****	(-3.8)
2014	272	1.72	0.71	1.57	0.75	1.78	0.67	143	2.15	0.77	2.04	0.77	2.14	0.76	0.34	**-0.391*****	(-5.53)	**-0.462*****	(-5.96)	**-0.365*****	(-4.97)

NUTS4 (Izmir)

YEAR	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	236	1.16	0.51	1.64	0.76	1.78	0.77	79	1.38	0.73	1.36	0.82	1.55	0.90	0.25	**-0.227****	(-3.04)	**-0.287****	(-3.36)	**-0.193***	(-2.43)
2005	242	1.37	0.59	1.59	0.87	1.68	1.01	112	1.57	0.69	1.52	0.63	1.67	0.65	0.32	**-0.204****	(-2.85)	**-0.237****	(-2.83)	**-0.228****	(-2.99)
2006	271	1.43	0.57	1.70	0.94	2.25	0.78	126	1.59	0.73	1.63	0.73	1.84	0.73	0.32	**-0.161***	(-2.39)	**-0.179***	(-2.41)	**-0.157***	(-2.13)
2007	401	1.66	0.61	1.75	0.82	2.20	0.77	136	1.62	0.76	1.70	0.67	1.85	0.72	0.25	0.04	(-0.64)	-0.02	(-0.36)	0.08	(-1.15)
2008	412	1.68	0.60	1.50	0.62	1.67	0.66	142	1.81	0.72	1.67	0.73	1.78	0.72	0.26	**-0.133***	(-2.18)	**-0.178****	(-2.79)	-0.11	(-1.68)
2009	370	1.67	0.62	1.53	0.67	1.67	0.60	173	1.98	0.62	1.83	0.65	1.98	0.60	0.32	**-0.297*****	(-5.62)	**-0.311*****	(-5.19)	**-0.309*****	(-5.53)
2010	436	1.71	0.65	1.52	0.65	1.73	0.68	199	1.92	0.73	1.74	0.72	1.90	0.78	0.31	**-0.186*****	(-3.34)	**-0.221*****	(-3.8)	**-0.164****	(-2.66)
2011	510	1.62	0.65	1.43	0.66	1.64	0.69	192	1.89	0.67	1.73	0.61	1.91	0.68	0.27	**-0.265*****	(-5.08)	**-0.297*****	(-5.48)	**-0.267*****	(-4.52)
2012	516	1.61	0.67	1.40	0.70	1.68	0.66	179	1.96	0.67	1.81	0.68	1.95	0.71	0.26	**-0.309*****	(-5.64)	**-0.398*****	(-6.5)	**-0.266*****	(-4.49)
2013	556	1.64	0.67	1.46	0.73	1.67	0.66	161	1.86	0.69	1.77	0.73	1.82	0.66	0.22	**-0.200*****	(-3.6)	**-0.302*****	(-4.7)	**-0.147***	(-2.46)
2014	441	1.74	0.71	1.56	0.77	1.77	0.70	175	2.18	0.74	2.02	0.73	2.18	0.76	0.28	**-0.419*****	(-6.78)	**-0.462*****	(-6.74)	**-0.406*****	(-6.24)

NUTS5 (Denizli-Aydın-Muğla)

YEAR	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	207	1.18	0.65	1.68	0.78	1.75	0.79	135	1.16	0.79	1.75	0.60	1.69	0.65	0.39	0.02	(0.26)	-0.18	(-1.86)	0.10	(-1.18)
2005	172	1.27	0.58	1.75	0.75	1.99	0.68	126	1.43	0.76	1.90	0.71	2.05	0.68	0.42	**-0.163***	(-2.11)	**-0.179***	(-2.11)	**-0.170***	(-2.06)
2006	167	1.29	0.61	1.67	1.02	2.00	1.05	109	1.58	0.73	1.90	0.78	2.11	0.72	0.39	**-0.290*****	(-3.57)	**-0.328*****	(-3.57)	**-0.312*****	(-3.58)
2007	169	1.37	0.58	1.69	0.84	2.03	0.93	93	1.72	0.77	1.96	0.72	2.31	0.63	0.35	**-0.355*****	(-4.22)	**-0.410*****	(-3.99)	**-0.354*****	(-4.11)
2008	211	1.36	0.61	1.21	0.66	1.40	0.58	68	1.81	0.70	1.61	0.65	1.82	0.76	0.24	**-0.386*****	(-4.75)	**-0.360*****	(-3.98)	**-0.422*****	(-4.75)
2009	190	1.34	0.67	1.17	0.73	1.40	0.68	87	1.74	0.68	1.59	0.70	1.73	0.68	0.31	**-0.342*****	(-4.29)	**-0.422*****	(-4.44)	**-0.326*****	(-3.64)
2010	227	1.36	0.63	1.20	0.70	1.41	0.66	106	1.78	0.75	1.69	0.70	1.74	0.77	0.32	**-0.385*****	(-5.08)	**-0.486*****	(-5.74)	**-0.333*****	(-3.99)
2011	236	1.39	0.74	1.24	0.78	1.46	0.75	96	1.82	0.83	1.72	0.83	1.84	0.71	0.29	**-0.405*****	(-4.68)	**-0.503*****	(-5.12)	**-0.377*****	(-4.14)
2012	224	1.39	0.72	1.16	0.77	1.51	0.65	105	1.81	0.80	1.72	0.86	1.73	0.80	0.32	**-0.339*****	(-4.21)	**-0.520*****	(-5.51)	**-0.219****	(-2.59)
2013	263	1.48	0.56	1.27	0.64	1.49	0.64	110	1.81	0.84	1.68	0.89	1.79	0.82	0.29	**-0.320*****	(-4.37)	**-0.409*****	(-4.91)	**-0.301*****	(-3.79)
2014	381	1.55	0.68	1.34	0.74	1.60	0.71	175	1.83	0.83	1.66	0.90	1.81	0.83	0.31	**-0.224*****	(-3.44)	**-0.296*****	(-4.04)	**-0.207****	(-3)

NUTS6 (Manisa-Afyonkarahisar-Kütahya-Uşak)

YEAR	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	162	1.12	0.63	1.59	0.64	1.91	0.49	148	1.27	0.86	1.56	0.62	1.51	0.64	0.48	-0.14	(-1.7)	**-0.321****	(-2.85)	-0.15	(-1.71)
2005	166	1.29	0.66	1.91	0.63	2.08	0.61	125	1.51	0.76	1.75	0.61	1.93	0.56	0.43	**-0.223****	(-2.67)	**-0.344****	(-3.3)	**-0.190***	(-2.33)
2006	241	1.25	0.72	1.81	0.72	2.00	0.78	138	1.52	0.93	1.64	0.69	1.79	0.75	0.36	**-0.275****	(-3.21)	**-0.480*****	(-4.27)	**-0.188***	(-2.23)
2007	263	1.41	0.69	1.69	0.63	1.98	0.75	121	1.69	0.85	1.75	0.65	2.08	0.53	0.32	**-0.281*****	(-3.43)	**-0.404*****	(-4.19)	**-0.224****	(-2.68)
2008	226	1.49	0.70	1.35	0.72	1.54	0.66	129	1.82	0.64	1.71	0.69	1.78	0.62	0.36	**-0.271*****	(-3.9)	**-0.327*****	(-4.19)	**-0.238****	(-3.31)
2009	196	1.43	0.61	1.24	0.69	1.47	0.61	127	1.88	0.68	1.73	0.69	1.84	0.69	0.39	**-0.406*****	(-5.67)	**-0.488*****	(-6.12)	**-0.372*****	(-5.05)
2010	172	1.51	0.59	1.33	0.69	1.53	0.62	136	1.79	0.77	1.65	0.78	1.75	0.78	0.44	**-0.248****	(-3.24)	**-0.314*****	(-3.73)	**-0.213****	(-2.66)
2011	206	1.41	0.59	1.21	0.69	1.46	0.61	155	1.70	0.74	1.58	0.76	1.66	0.75	0.43	**-0.264*****	(-3.78)	**-0.374*****	(-4.81)	**-0.201****	(-2.78)
2012	224	1.43	0.60	1.26	0.66	1.43	0.65	141	1.54	0.79	1.41	0.83	1.51	0.78	0.39	-0.10	(-1.4)	-0.16	(-1.96)	-0.08	(-1.05)
2013	262	1.43	0.58	1.22	0.69	1.45	0.58	128	1.71	0.74	1.53	0.75	1.69	0.77	0.33	**-0.258*****	(-3.84)	**-0.303*****	(-3.97)	**-0.246*****	(-3.52)
2014	301	1.60	0.56	1.39	0.60	1.62	0.58	136	1.85	0.72	1.71	0.74	1.83	0.74	0.31	**-0.257*****	(-4.11)	**-0.319*****	(-4.74)	**-0.211****	(-3.18)

YEAR	NUTS7 (Bursa-Eskişehir-Bilecik)																				
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	345	1.04	0.58	1.66	0.60	1.77	0.59	93	1.30	0.71	1.90	0.53	1.97	0.58	0.21	**-0.266*****	(-3.74)	**-0.449*****	(-3.83)	**-0.238****	(-3.19)
2005	388	1.25	0.54	1.82	0.65	2.07	0.48	114	1.55	0.76	2.13	0.42	2.25	0.24	0.23	**-0.303*****	(-4.78)	**-0.493*****	(-5.35)	**-0.263*****	(-3.97)
2006	399	1.30	0.54	1.85	0.67	2.05	0.63	111	1.59	0.77	2.16	0.67	2.22	0.67	0.22	**-0.294*****	(-4.58)	**-0.349*****	(-4.82)	**-0.280*****	(-3.94)
2007	397	1.33	0.52	1.89	0.65	2.20	0.58	126	1.54	0.68	2.13	0.69	2.45	0.52	0.24	**-0.215*****	(-3.76)	**-0.349*****	(-4.79)	**-0.160****	(-2.65)
2008	384	1.40	0.54	1.18	0.67	1.43	0.54	104	1.59	0.58	1.47	0.62	1.52	0.61	0.21	**-0.160****	(-2.77)	**-0.282*****	(-3.86)	-0.09	(-1.5)
2009	306	1.44	0.56	1.23	0.74	1.43	0.56	105	1.61	0.67	1.46	0.74	1.58	0.67	0.26	**-0.151***	(-2.38)	**-0.236****	(-2.8)	**-0.145***	(-2.16)
2010	362	1.41	0.67	1.25	0.73	1.45	0.63	120	1.57	0.65	1.42	0.72	1.56	0.64	0.25	-0.11	(-1.65)	**-0.151***	(-1.97)	-0.11	(-1.66)
2011	464	1.49	0.63	1.30	0.66	1.56	0.64	142	1.77	0.71	1.63	0.77	1.74	0.71	0.23	**-0.218*****	(-3.68)	**-0.312*****	(-4.65)	**-0.178****	(-2.82)
2012	557	1.52	0.54	1.33	0.60	1.54	0.56	158	2.01	0.68	1.84	0.79	1.98	0.67	0.22	**-0.453*****	(-9.05)	**-0.495*****	(-8.45)	**-0.438*****	(-8.21)
2013	575	1.61	0.54	1.41	0.59	1.65	0.54	159	2.02	0.66	1.85	0.70	1.99	0.69	0.22	**-0.372*****	(-7.6)	**-0.434*****	(-7.8)	**-0.336*****	(-6.44)
2014	522	1.66	0.63	1.42	0.68	1.74	0.59	170	1.92	0.63	1.76	0.68	1.93	0.60	0.25	**-0.233*****	(-4.56)	**-0.318*****	(-5.24)	**-0.195*****	(-3.66)
YEAR	NUTS8 (Kocaeli-Sakarya-Düzce-Bolu-Yalova)																				
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	153	1.40	0.62	1.53	0.74	1.44	0.90	92	1.78	0.43	1.98	0.36	1.97	0.33	0.38	**-0.378*****	(-5.18)	**-0.496*****	(-6.01)	**-0.300*****	(-3.84)
2005	186	1.43	0.56	1.84	0.61	1.93	0.61	89	1.83	0.55	2.24	0.23	2.32	0.23	0.32	**-0.397*****	(-5.54)	**-0.481*****	(-6.21)	**-0.347*****	(-4.42)
2006	190	1.38	0.53	2.21	0.64	2.40	0.49	74	1.73	0.54	2.39	0.48	2.33	0.33	0.28	**-0.347*****	(-4.75)	**-0.450*****	(-5.12)	**-0.269****	(-3.25)
2007	187	1.50	0.59	1.89	0.65	2.18	0.75	64	2.00	0.56	2.19	0.43	2.38	0.25	0.25	**-0.496*****	(-5.89)	**-0.624*****	(-6.6)	**-0.417*****	(-4.62)
2008	222	1.53	0.62	1.30	0.71	1.58	0.65	69	2.07	0.53	1.90	0.56	2.04	0.55	0.24	**-0.488*****	(-6.26)	**-0.604*****	(-6.47)	**-0.458*****	(-5.28)
2009	172	1.54	0.55	1.30	0.74	1.56	0.59	64	2.14	0.55	2.02	0.59	2.13	0.56	0.27	**-0.627*****	(-7.75)	**-0.758*****	(-7.23)	**-0.575*****	(-6.61)
2010	221	1.59	0.67	1.43	0.75	1.64	0.61	77	2.05	0.66	1.93	0.64	2.11	0.60	0.26	**-0.471*****	(-6.03)	**-0.524*****	(-5.42)	**-0.465*****	(-5.64)
2011	265	1.53	0.57	1.29	0.62	1.62	0.60	94	1.86	0.70	1.72	0.67	1.90	0.60	0.26	**-0.359*****	(-5.54)	**-0.463*****	(-6.07)	**-0.286*****	(-3.92)
2012	311	1.59	0.55	1.38	0.59	1.62	0.59	105	1.95	0.60	1.81	0.62	1.91	0.62	0.25	**-0.342*****	(-5.52)	**-0.423*****	(-6.24)	**-0.295*****	(-4.37)
2013	389	1.68	0.61	1.45	0.68	1.73	0.64	110	1.99	0.68	1.81	0.75	1.98	0.67	0.22	**-0.300*****	(-4.51)	**-0.368*****	(-4.91)	**-0.252*****	(-3.6)
2014	400	1.72	0.65	1.49	0.75	1.78	0.69	88	2.20	0.66	2.06	0.72	2.16	0.65	0.18	**-0.433*****	(-5.94)	**-0.568*****	(-6.44)	**-0.383*****	(-4.71)
YEAR	NUTS9 (Ankara)																				
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	214	1.63	0.65	1.36	0.69	1.19	0.68	123	1.82	0.63	1.81	0.20	1.79	0.25	0.36	**-0.189****	(-2.61)	**-0.214****	(-2.73)	**-0.163***	(-2.02)
2005	309	1.82	0.65	2.04	0.75	2.08	0.80	101	1.98	0.69	2.14	0.37	2.25	0.30	0.25	**-0.164***	(-2.18)	**-0.220****	(-2.74)	-0.15	(-1.83)
2006	350	1.81	0.66	1.98	0.71	1.89	0.85	106	1.97	0.67	2.27	0.40	2.32	0.37	0.23	**-0.164***	(-2.24)	-0.11	(-1.39)	**-0.225****	(-2.72)
2007	327	1.84	0.61	1.93	0.71	2.13	0.57	123	2.02	0.56	2.08	0.70	2.31	0.50	0.27	**-0.176****	(-2.79)	**-0.201****	(-2.88)	**-0.175***	(-2.44)
2008	401	1.72	0.69	1.61	0.69	1.71	0.69	139	2.12	0.58	1.96	0.61	2.09	0.61	0.26	**-0.360*****	(-6.09)	**-0.336*****	(-5.19)	**-0.380*****	(-5.78)
2009	449	1.99	0.66	1.85	0.69	1.96	0.74	191	2.09	0.65	1.96	0.62	2.07	0.70	0.30	-0.10	(-1.71)	**-0.116***	(-1.98)	-0.11	(-1.81)
2010	577	2.01	0.65	1.86	0.70	1.98	0.69	228	2.20	0.59	2.08	0.56	2.16	0.65	0.28	**-0.178*****	(-3.7)	**-0.219*****	(-4.19)	**-0.177*****	(-3.35)
2011	638	1.97	0.68	1.80	0.69	1.98	0.72	250	2.21	0.55	2.07	0.59	2.17	0.57	0.28	**-0.226*****	(-4.84)	**-0.274*****	(-5.53)	**-0.188*****	(-3.68)
2012	716	2.02	0.68	1.86	0.69	2.01	0.74	292	2.42	0.55	2.27	0.60	2.40	0.58	0.29	**-0.387*****	(-8.76)	**-0.404*****	(-8.74)	**-0.384*****	(-7.89)
2013	782	2.01	0.66	1.84	0.67	2.00	0.71	271	2.35	0.59	2.19	0.60	2.33	0.62	0.26	**-0.325*****	(-7.44)	**-0.344*****	(-7.55)	**-0.331*****	(-6.81)
2014	731	2.01	0.67	1.82	0.70	2.04	0.69	231	2.22	0.60	2.09	0.61	2.22	0.61	0.24	**-0.203*****	(-4.33)	**-0.268*****	(-5.15)	**-0.176*****	(-3.45)

NUTS10 (Konya-Karaman)

YEAR	NOT SAME						SAME						RATIO of SAME	t-test (two-tail)					
	HH		F		M		HH		F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	62	1.60	0.70	1.44	0.65	1.69	0.62	38	1.78	0.77	1.27	0.87	1.46	0.93	0.38	-0.19	(-1.23)	-0.31	(-1.75)	-0.19	(-1.1)
2005	58	1.55	0.71	1.56	0.69	1.75	0.71	42	1.50	0.86	1.34	0.71	1.57	0.86	0.42	0.05	(+0.33)	-0.03	(+0.14)	0.07	(+0.44)
2006	56	1.48	0.69	1.50	0.58	1.84	0.67	46	1.81	0.80	1.57	0.71	1.68	0.75	0.45	**-0.333***	(-2.26)	**-0.454****	(-2.69)	-0.27	(-1.8)
2007	70	1.52	0.73	1.56	0.54	1.66	0.57	60	1.72	0.95	1.87	0.76	2.15	0.77	0.46	-0.20	(-1.37)	-0.29	(-1.76)	-0.14	(-0.93)
2008	109	1.34	0.92	1.11	1.10	1.36	0.89	59	1.70	0.91	1.60	0.96	1.73	0.79	0.35	**-0.367****	(-2.71)	**-0.523****	(-3.04)	**-0.372****	(-2.65)
2009	158	1.46	0.87	0.95	1.24	1.60	0.78	97	2.15	0.75	2.02	0.72	2.16	0.75	0.38	**-0.635*****	(-6.46)	**-1.061*****	(-7.59)	**-0.564*****	(-5.62)
2010	259	1.40	0.88	1.01	1.15	1.51	0.80	142	2.25	0.78	2.10	0.79	2.23	0.80	0.35	**-0.792*****	(-9.77)	**-1.088*****	(-9.95)	**-0.725*****	(-8.63)
2011	301	1.39	0.89	1.02	1.15	1.52	0.71	150	2.17	0.78	2.03	0.83	2.15	0.75	0.33	**-0.695*****	(-9.53)	**-0.985*****	(-9.47)	**-0.635*****	(-8.66)
2012	418	1.62	0.88	1.32	1.13	1.69	0.78	183	2.10	0.76	1.96	0.80	2.09	0.75	0.30	**-0.435*****	(-6.41)	**-0.635*****	(-6.91)	**-0.403*****	(-5.84)
2013	478	1.56	0.76	1.23	1.03	1.63	0.72	205	2.20	0.77	2.06	0.79	2.16	0.80	0.30	**-0.589*****	(+9.79)	**-0.811*****	(-9.94)	**-0.532*****	(-8.47)
2014	380	1.57	0.73	1.22	1.05	1.62	0.68	129	2.01	0.80	1.96	0.85	1.95	0.77	0.25	**-0.428*****	(-6)	**-0.735*****	(-7.13)	**-0.335*****	(-4.64)

NUTS11 (Antalya-Isparta-Burdur)

YEAR	NOT SAME						SAME						RATIO of SAME	t-test (two-tail)					
	HH		F		M		HH		F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	200	1.31	0.77	1.33	0.68	1.42	0.76	73	1.60	0.86	1.36	0.76	1.51	0.76	0.27	**-0.291*****	(-2.69)	**-0.540*****	(-3.9)	**-0.223***	(-1.98)
2005	148	1.53	0.70	1.47	0.66	1.81	0.70	56	1.77	0.68	1.61	0.70	1.82	0.64	0.27	**-0.234***	(-2.16)	**-0.243***	(-1.98)	**-0.264***	(-2.31)
2006	162	1.48	0.67	1.51	0.79	1.82	0.83	67	1.73	0.78	1.54	0.67	1.70	0.74	0.29	**-0.242***	(-2.37)	**-0.355****	(-2.83)	-0.21	(-1.93)
2007	200	1.48	0.60	1.64	0.74	1.83	0.83	81	1.67	0.65	1.68	0.62	1.85	0.72	0.29	**-0.183***	(-2.27)	**-0.306****	(-3.12)	-0.13	(-1.45)
2008	216	1.43	0.64	1.22	0.77	1.49	0.59	86	1.74	0.69	1.57	0.69	1.77	0.68	0.28	**-0.280*****	(-3.66)	**-0.350*****	(-3.64)	**-0.278*****	(-3.5)
2009	179	1.46	0.61	1.11	0.80	1.53	0.66	102	1.71	0.79	1.56	0.87	1.70	0.77	0.36	**-0.238****	(-2.9)	**-0.446*****	(-4.25)	-0.17	(-1.94)
2010	215	1.51	0.70	1.33	0.86	1.56	0.62	112	1.84	0.73	1.74	0.75	1.82	0.73	0.34	**-0.281*****	(-3.7)	**-0.396*****	(-4.12)	**-0.259****	(-3.31)
2011	258	1.61	0.64	1.37	0.80	1.68	0.63	123	1.67	0.79	1.54	0.85	1.65	0.79	0.32	-0.03	(-0.42)	-0.16	(-1.73)	0.03	(-0.35)
2012	278	1.68	0.66	1.50	0.74	1.72	0.68	93	1.72	0.78	1.59	0.90	1.66	0.75	0.25	0.02	(-0.24)	-0.08	(-0.88)	0.06	(-0.68)
2013	299	1.64	0.63	1.45	0.73	1.67	0.63	138	1.85	0.72	1.72	0.78	1.83	0.73	0.32	**-0.185*****	(-2.82)	**-0.262*****	(-3.37)	**-0.157***	(-2.27)
2014	356	1.67	0.66	1.48	0.76	1.70	0.65	156	1.90	0.73	1.74	0.75	1.92	0.72	0.30	**-0.203*****	(-3.25)	**-0.244*****	(-3.3)	**-0.214*****	(-3.27)

NUTS12 (Adana-Mersin)

YEAR	NOT SAME						SAME						RATIO of SAME	t-test (two-tail)					
	HH		F		M		HH		F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	91	1.19	0.70	1.54	0.61	1.83	0.55	72	1.33	1.07	1.82	0.72	1.98	0.69	0.44	-0.14	(-0.99)	-0.22	(-1.46)	-0.13	(-0.86)
2005	117	1.44	0.75	1.66	0.64	2.07	0.53	92	1.65	0.86	1.83	0.69	2.12	0.58	0.44	-0.21	(-1.87)	-0.21	(-1.73)	**-0.241***	(-2.11)
2006	132	1.40	0.77	1.62	0.62	1.86	0.70	107	1.48	0.96	2.04	0.65	2.21	0.55	0.45	-0.08	(-0.72)	-0.14	(-1.11)	-0.08	(-0.69)
2007	121	1.53	0.79	1.81	0.67	2.20	0.66	89	1.70	0.92	2.06	0.66	2.22	0.60	0.42	-0.17	(-1.45)	-0.26	(-1.9)	-0.15	(-1.23)
2008	127	1.31	0.75	1.09	1.01	1.28	0.72	81	1.63	1.00	1.49	1.02	1.62	0.99	0.39	**-0.324*****	(-2.73)	**-0.409****	(-2.82)	**-0.338****	(-2.81)
2009	125	1.32	0.95	1.16	0.91	1.47	0.79	91	1.52	1.02	1.36	1.05	1.53	1.05	0.42	-0.06	(-0.51)	-0.13	(-0.94)	-0.06	(-0.49)
2010	188	1.56	0.73	1.35	0.78	1.60	0.75	126	1.88	0.85	1.76	0.92	1.82	0.89	0.40	**-0.281*****	(-3.15)	**-0.395*****	(-4.02)	**-0.212***	(-2.25)
2011	296	1.43	0.77	1.25	0.79	1.56	0.70	159	1.92	0.77	1.81	0.80	1.86	0.79	0.35	**-0.365*****	(-5.16)	**-0.500*****	(-6.29)	**-0.300*****	(-4.1)
2012	331	1.52	0.71	1.33	0.81	1.55	0.71	164	1.93	0.74	1.77	0.76	1.93	0.74	0.33	**-0.367*****	(-5.53)	**-0.430*****	(-5.6)	**-0.378*****	(-5.46)
2013	319	1.56	0.75	1.39	0.80	1.63	0.72	165	2.11	0.77	1.97	0.71	2.13	0.72	0.34	**-0.521*****	(-8.08)	**-0.567*****	(-7.87)	**-0.505*****	(-7.25)
2014	276	1.63	0.77	1.46	0.81	1.72	0.73	156	2.13	0.78	2.01	0.82	2.11	0.77	0.36	**-0.435*****	(-5.9)	**-0.517*****	(-6.24)	**-0.393*****	(-5.16)

YEAR	NUTS13 (Hatay-Kahramanmaraş-Osmaniye)																					
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	51	1.63	0.78	1.54	0.77	1.72	0.77	52	1.75	0.79	1.49	0.87	1.60	0.96	0.50	-0.12	(-0.78)	-0.10	(-0.61)	-0.15	(-0.9)
2005	65	1.60	0.73	1.52	0.66	1.74	0.69	65	1.90	0.90	1.43	0.87	1.63	1.00	0.50	**-0.301***	(-2.1)	**-0.468****	(-2.85)	-0.17	(-1.07)
2006	67	1.67	0.74	1.63	0.69	1.67	0.79	70	1.90	0.85	1.60	0.81	1.92	0.77	0.51	-0.23	(-1.72)	-0.28	(-1.88)	-0.19	(-1.33)
2007	63	1.58	0.69	1.74	0.69	1.90	0.73	63	1.99	0.68	1.81	0.81	2.13	0.78	0.50	**-0.406****	(-3.31)	**-0.573*****	(-3.53)	**-0.291***	(-2.39)
2008	69	1.42	0.70	1.18	0.88	1.43	0.70	59	1.78	0.79	1.64	0.89	1.72	0.78	0.46	**-0.336***	(-2.58)	**-0.445****	(-2.84)	**-0.291***	(-2.21)
2009	72	1.49	0.98	1.42	0.95	1.60	0.65	56	1.84	0.87	1.68	1.01	1.83	0.84	0.44	-0.19	(-1.39)	-0.15	(-0.91)	-0.23	(-1.7)
2010	86	1.46	0.95	1.33	0.97	1.55	0.89	54	2.00	1.05	1.90	1.03	1.92	1.12	0.39	**-0.422***	(-2.56)	**-0.541****	(-3.12)	**-0.375***	(-2.15)
2011	106	1.61	0.80	1.41	0.82	1.69	0.78	62	2.02	0.91	1.91	0.91	1.94	0.93	0.37	**-0.349****	(-2.74)	**-0.461*****	(-3.42)	-0.25	(-1.88)
2012	115	1.61	0.78	1.49	0.84	1.61	0.79	65	1.98	0.88	1.90	0.90	1.92	0.88	0.36	**-0.315***	(-2.56)	**-0.384****	(-2.85)	**-0.308***	(-2.39)
2013	119	1.53	0.75	1.29	0.84	1.62	0.71	55	2.03	0.93	1.94	0.95	1.96	0.94	0.32	**-0.465*****	(-3.58)	**-0.639*****	(-4.44)	**-0.340****	(-2.63)
2014	105	1.57	0.78	1.44	0.85	1.65	0.73	51	2.21	0.72	2.09	0.79	2.16	0.73	0.33	**-0.547*****	(-4.45)	**-0.623*****	(-4.31)	**-0.513*****	(-4.07)
YEAR	NUTS14 (Nevşehir-Aksaray-Niğde-Kırıkkale-Kırşehir)																					
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	40	1.82	0.55	1.88	0.60	2.05	0.47	42	1.69	0.65	1.95	0.66	2.07	0.47	0.51	0.12	(-0.93)	-0.05	(-0.35)	0.19	(-1.32)
2005	64	1.73	0.67	2.01	0.58	2.16	0.48	61	2.05	0.47	1.88	0.60	2.15	0.41	0.49	**-0.318****	(-3.08)	-0.23	(-1.93)	**-0.372*****	(-3.56)
2006	74	1.62	0.78	1.83	0.72	2.13	0.65	54	2.02	0.65	1.75	0.73	2.11	0.52	0.42	**-0.409****	(-3.14)	**-0.516*****	(-3.48)	**-0.343***	(-2.57)
2007	54	1.85	0.60	1.87	0.71	2.23	0.61	47	2.05	0.68	2.00	0.71	2.40	0.56	0.47	-0.21	(-1.63)	**-0.336***	(-2.26)	-0.16	(-1.18)
2008	60	1.84	0.63	1.59	0.68	1.86	0.70	69	2.16	0.48	2.10	0.52	2.07	0.48	0.53	**-0.321****	(-3.28)	**-0.506*****	(-4.78)	-0.21	(-1.98)
2009	89	1.90	0.66	1.68	0.69	1.93	0.73	87	2.15	0.61	2.06	0.64	2.10	0.58	0.49	**-0.249****	(-2.72)	**-0.387*****	(-3.87)	-0.17	(-1.7)
2010	124	1.72	0.79	1.56	0.80	1.74	0.84	110	2.11	0.72	1.97	0.74	2.06	0.75	0.47	**-0.332*****	(-3.45)	**-0.381*****	(-3.8)	**-0.330****	(-3.12)
2011	166	1.62	0.70	1.43	0.79	1.66	0.72	117	2.13	0.65	2.02	0.69	2.07	0.65	0.41	**-0.466*****	(-5.86)	**-0.576*****	(-6.31)	**-0.414*****	(-4.94)
2012	214	1.79	0.66	1.66	0.70	1.77	0.69	111	2.16	0.67	2.08	0.74	2.09	0.67	0.34	**-0.355*****	(-4.67)	**-0.414*****	(-4.95)	**-0.315*****	(-3.92)
2013	208	1.74	0.68	1.57	0.77	1.74	0.74	128	2.31	0.63	2.20	0.66	2.24	0.68	0.38	**-0.545*****	(-7.44)	**-0.624*****	(-7.63)	**-0.508*****	(-6.29)
2014	188	1.69	0.68	1.51	0.75	1.70	0.72	94	2.23	0.61	2.10	0.66	2.19	0.61	0.33	**-0.517*****	(-6.32)	**-0.578*****	(-6.32)	**-0.492*****	(-5.63)
YEAR	NUTS15 (Kayseri-Sivas-Yozgat)																					
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	35	1.51	0.62	1.78	0.60	1.80	0.66	36	1.97	0.52	1.26	0.91	1.48	0.98	0.51	**-0.458****	(-3.37)	**-0.506****	(-3.3)	**-0.474****	(-3.25)
2005	40	1.85	0.78	1.57	0.65	1.64	0.62	34	2.07	0.47	1.85	0.79	2.23	0.55	0.46	-0.22	(-1.44)	-0.24	(-1.31)	-0.28	(-1.64)
2006	34	1.49	0.61	1.66	0.67	1.91	0.68	38	2.13	0.41	1.72	0.77	2.14	0.64	0.53	**-0.637*****	(-5.26)	**-0.792*****	(-4.92)	**-0.616*****	(-4.81)
2007	28	1.58	0.65	1.81	0.69	2.23	0.63	27	2.19	0.46	1.96	0.74	2.34	0.59	0.49	**-0.617*****	(-4.05)	**-0.735*****	(-4.42)	**-0.574*****	(-3.71)
2008	39	1.68	0.65	1.43	0.78	1.71	0.65	29	2.15	0.41	2.02	0.45	2.11	0.43	0.43	**-0.476*****	(-3.46)	**-0.599*****	(-3.7)	**-0.401****	(-2.86)
2009	50	1.91	0.64	1.58	0.91	1.88	0.71	40	2.12	0.60	2.07	0.63	2.03	0.65	0.44	-0.21	(-1.62)	**-0.491****	(-2.89)	-0.15	(-1.02)
2010	63	1.90	0.68	1.62	0.93	1.88	0.72	48	2.29	0.44	2.17	0.49	2.25	0.46	0.43	**-0.398*****	(-3.51)	**-0.550*****	(-3.72)	**-0.371****	(-3.11)
2011	63	1.46	0.75	1.31	0.87	1.57	0.63	51	2.11	0.52	2.03	0.55	2.03	0.55	0.45	**-0.554*****	(-4.81)	**-0.674*****	(-4.75)	**-0.460*****	(-4.06)
2012	97	1.66	0.69	1.43	0.80	1.72	0.69	55	2.15	0.55	2.10	0.58	2.05	0.58	0.36	**-0.449*****	(-4.41)	**-0.685*****	(-5.58)	**-0.329****	(-2.98)
2013	137	1.80	0.65	1.59	0.77	1.83	0.61	102	2.27	0.53	2.13	0.56	2.26	0.55	0.43	**-0.436*****	(-5.81)	**-0.520*****	(-5.72)	**-0.424*****	(-5.51)
2014	137	1.78	0.69	1.69	0.75	1.75	0.66	78	2.40	0.56	2.29	0.60	2.38	0.53	0.36	**-0.614*****	(-6.98)	**-0.602*****	(-5.96)	**-0.632*****	(-7.11)

NUTS16 (Zonguldak-Karabük-Bartın)

YEAR	NOT SAME						SAME						RATIO of SAME	t-test (two-tail)						
	HH			F		M	HH			F		M		HH		F		M		
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	39	1.30	0.63	2.08	0.32	2.14	0.26	35	1.92	0.49	2.02	0.44	2.06	0.40	0.47	**-0.618*** **	(-4.69)	**-0.730*** **	(-4.89)	**-0.593*** **	(-3.78)
2005	32	1.60	0.70	2.24	0.42	2.26	0.32	45	1.88	0.64	1.85	0.83	2.19	0.33	0.58	-0.28	(-1.79)	**-0.393***	(-2.3)	-0.21	(-1.3)
2006	56	1.65	0.65	1.96	0.81	2.32	0.62	29	1.89	0.64	2.10	0.54	2.29	0.34	0.34	-0.24	(-1.62)	-0.33	(-1.94)	-0.19	(-1.2)
2007	56	1.85	0.64	2.04	0.74	2.42	0.49	22	2.08	0.61	2.09	0.63	2.31	0.48	0.28	-0.23	(-1.43)	-0.37	(-1.74)	-0.20	(-1.16)
2008	57	1.69	0.78	1.32	0.73	1.77	0.87	39	2.09	0.59	1.96	0.59	2.10	0.52	0.41	**-0.421*** **	(-2.95)	**-0.654*** **	(-4.6)	**-0.323***	(-2.05)
2009	86	1.59	0.73	1.42	0.76	1.61	0.78	50	2.21	0.54	2.06	0.61	2.18	0.55	0.37	**-0.595*** **	(-5.06)	**-0.638*** **	(-5.01)	**-0.565*** **	(-4.48)
2010	74	1.69	0.66	1.51	0.66	1.68	0.78	45	2.00	0.78	1.89	0.84	1.94	0.79	0.38	**-0.285***	(-2.14)	**-0.370*** **	(-2.64)	-0.27	(-1.78)
2011	79	1.66	0.75	1.53	0.71	1.74	0.71	39	2.14	0.41	2.04	0.44	2.07	0.45	0.33	**-0.389*** **	(-3.51)	**-0.472*** **	(-3.88)	**-0.338*** **	(-2.72)
2012	100	1.60	0.65	1.47	0.79	1.54	0.68	33	2.11	0.64	2.00	0.68	2.04	0.67	0.25	**-0.512*** **	(-3.92)	**-0.531*** **	(-3.48)	**-0.500*** **	(-3.66)
2013	94	1.61	0.57	1.43	0.73	1.59	0.61	24	1.98	0.75	1.89	0.74	1.91	0.77	0.20	**-0.358***	(-2.59)	**-0.447*** **	(-2.66)	**-0.318***	(-2.15)
2014	128	1.74	0.64	1.52	0.77	1.74	0.68	48	2.30	0.55	2.24	0.58	2.21	0.57	0.27	**-0.531*** **	(-5.27)	**-0.701*** **	(-5.77)	**-0.472*** **	(-4.3)

NUTS17 (Kastamonu-Çankırı-Sinop)

YEAR	NOT SAME						SAME						RATIO of SAME	t-test (two-tail)						
	HH			F		M	HH			F		M		HH		F		M		
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	43	1.59	0.61	2.07	0.50	1.97	0.75	31	1.51	0.64	1.85	0.60	1.79	0.63	0.42	0.08	(+0.52)	0.12	(+0.77)	0.03	(+0.19)
2005	41	1.78	0.52	2.16	0.40	2.23	0.35	49	1.80	0.66	1.25	0.97	1.35	1.14	0.54	-0.02	(+0.18)	-0.07	(+0.55)	-0.03	(+0.2)
2006	72	1.73	0.58	2.17	0.45	2.17	0.41	43	1.96	0.64	1.53	0.83	1.82	0.82	0.37	-0.23	(-1.96)	**-0.249***	(-2.03)	-0.24	(-1.8)
2007	68	1.66	0.63	1.93	0.73	2.42	0.53	34	1.93	0.56	1.83	0.84	2.29	0.59	0.33	**-0.268***	(-2.11)	**-0.369***	(-2.47)	-0.22	(-1.7)
2008	79	1.51	0.68	1.27	0.89	1.51	0.75	60	1.64	0.62	1.50	0.64	1.58	0.66	0.43	-0.12	(-1.03)	-0.23	(-1.68)	-0.07	(+0.6)
2009	100	1.75	0.64	1.50	0.72	1.79	0.64	67	1.84	0.57	1.71	0.62	1.79	0.56	0.40	-0.06	(+0.69)	-0.19	(-1.78)	0.00	(+0.01)
2010	106	1.54	0.63	1.38	0.72	1.55	0.71	68	1.79	0.75	1.69	0.83	1.73	0.78	0.39	-0.19	(-1.88)	**-0.291***	(-2.4)	-0.18	(-1.55)
2011	95	1.48	0.60	1.19	0.72	1.55	0.67	69	1.91	0.68	1.86	0.67	1.80	0.85	0.42	**-0.423*** **	(-4.17)	**-0.668*** **	(-5.98)	**-0.247***	(-2.07)
2012	112	1.59	0.61	1.30	0.69	1.65	0.68	63	2.02	0.58	1.94	0.63	1.96	0.53	0.36	**-0.427*** **	(-4.68)	**-0.653*** **	(-6.1)	**-0.311*** **	(-3.11)
2013	124	1.60	0.65	1.46	0.73	1.58	0.70	57	2.08	0.53	1.97	0.66	2.02	0.49	0.31	**-0.480*** **	(-4.9)	**-0.516*** **	(-4.56)	**-0.444*** **	(-4.33)
2014	188	1.60	0.62	1.38	0.72	1.64	0.66	100	2.23	0.63	2.09	0.69	2.18	0.64	0.35	**-0.600*** **	(-7.96)	**-0.708*** **	(-8.02)	**-0.546*** **	(-6.74)

NUTS18 (Samsun-Tokat-Çorum-Amasya)

YEAR	NOT SAME						SAME						RATIO of SAME	t-test (two-tail)						
	HH			F		M	HH			F		M		HH		F		M		
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	97	1.19	0.78	2.19	0.29	1.99	0.39	75	1.54	0.90	1.59	0.65	1.69	0.67	0.44	**-0.342*** **	(-2.67)	**-0.362***	(-2.41)	**-0.340*** **	(-2.74)
2005	111	1.17	0.80	1.74	0.97	1.72	1.01	64	1.48	0.98	1.82	0.72	1.91	0.83	0.37	**-0.310***	(-2.27)	**-0.469*** **	(-2.65)	**-0.291***	(-2.15)
2006	138	1.31	0.78	2.10	0.49	2.19	0.51	61	2.05	0.65	1.88	0.69	2.07	0.73	0.31	**-0.742*** **	(-6.52)	**-0.863*** **	(-6.42)	**-0.708*** **	(-6)
2007	143	1.73	0.74	2.05	0.89	2.39	0.64	114	2.22	0.59	2.10	0.64	2.18	0.60	0.44	**-0.490*** **	(-5.74)	**-0.622*** **	(-6.06)	**-0.437*** **	(-5.03)
2008	151	1.63	0.83	1.43	0.89	1.71	0.74	84	2.23	0.55	2.09	0.63	2.21	0.54	0.36	**-0.511*** **	(-5.69)	**-0.621*** **	(-5.64)	**-0.498*** **	(-5.39)
2009	165	1.76	0.80	1.51	0.95	1.84	0.67	79	2.26	0.59	2.10	0.59	2.28	0.54	0.32	**-0.455*** **	(-5.39)	**-0.581*** **	(-5.15)	**-0.435*** **	(-5)
2010	149	1.77	0.77	1.58	0.98	1.77	0.74	94	2.26	0.66	2.11	0.79	2.23	0.63	0.39	**-0.415*** **	(-4.55)	**-0.492*** **	(-4.04)	**-0.460*** **	(-4.96)
2011	177	1.49	0.74	1.22	0.87	1.59	0.69	94	2.14	0.64	2.00	0.65	2.11	0.69	0.35	**-0.582*** **	(-6.89)	**-0.760*** **	(-7.37)	**-0.524*** **	(-5.92)
2012	167	1.60	0.71	1.35	0.84	1.65	0.71	67	1.96	0.82	1.82	0.84	1.97	0.81	0.29	**-0.343*** **	(-3.37)	**-0.468*** **	(-3.84)	**-0.318***	(-2.95)
2013	180	1.49	0.69	1.19	0.87	1.55	0.67	77	2.13	0.68	2.03	0.72	2.07	0.69	0.30	**-0.561*** **	(-6.36)	**-0.804*** **	(-7.01)	**-0.511*** **	(-5.5)
2014	197	1.75	0.74	1.54	0.88	1.79	0.74	109	2.34	0.59	2.21	0.58	2.31	0.60	0.36	**-0.562*** **	(-7.13)	**-0.665*** **	(-7.04)	**-0.523*** **	(-6.29)

YEAR	NUTS19 (Trabzon-Ordu-Giresun-Rize-Artvin-Gümüşhane)																			
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	71	1.60	0.59	1.40	0.77	1.44	0.89	62	1.77	0.59	1.46	0.66	1.59	0.73	0.47	-0.18	(-1.7)	**-0.232***	(-2.17)	-0.17	(-1.41)
2005	123	1.74	0.66	1.38	0.76	1.50	0.90	65	2.00	0.56	1.77	0.64	1.98	0.62	0.35	**-0.265****	(-2.74)	**-0.347****	(-3.23)	**-0.248***	(-2.43)
2006	176	1.72	0.62	1.69	0.70	1.89	0.76	81	1.99	0.59	1.70	0.69	1.96	0.67	0.32	**-0.272****	(-3.31)	**-0.376*****	(-3.74)	**-0.228****	(-2.67)
2007	140	1.72	0.68	1.56	0.70	1.74	0.67	58	2.07	0.48	1.98	0.48	2.00	0.55	0.29	**-0.290****	(-3.32)	**-0.377*****	(-3.84)	**-0.267****	(-2.69)
2008	98	1.58	0.65	1.47	0.70	1.54	0.67	43	1.91	0.56	1.84	0.59	1.79	0.61	0.30	**-0.292****	(-2.67)	**-0.365****	(-2.95)	**-0.254***	(-2.12)
2009	117	1.57	0.73	1.44	0.73	1.65	0.64	68	2.07	0.53	1.89	0.61	2.07	0.51	0.37	**-0.410*****	(-4.67)	**-0.424*****	(-4.08)	**-0.427*****	(-4.69)
2010	188	1.74	0.67	1.55	0.74	1.77	0.67	103	2.05	0.63	1.90	0.68	2.02	0.65	0.35	**-0.268*****	(-3.46)	**-0.337*****	(-3.81)	**-0.253****	(-3.1)
2011	259	1.69	0.67	1.52	0.63	1.72	0.72	138	2.05	0.66	1.92	0.72	2.01	0.65	0.35	**-0.320*****	(-4.76)	**-0.386*****	(-5.58)	**-0.291*****	(-3.95)
2012	284	1.72	0.69	1.57	0.73	1.73	0.70	170	2.19	0.59	2.05	0.67	2.14	0.58	0.37	**-0.430*****	(-7.08)	**-0.469*****	(-6.84)	**-0.418*****	(-6.5)
2013	289	1.72	0.63	1.56	0.70	1.70	0.65	163	2.20	0.58	2.10	0.58	2.17	0.57	0.36	**-0.494*****	(-8.45)	**-0.549*****	(-8.51)	**-0.473*****	(-7.68)
2014	259	1.69	0.67	1.53	0.68	1.73	0.68	105	2.36	0.59	2.19	0.65	2.35	0.58	0.29	**-0.605*****	(-8.55)	**-0.634*****	(-8.11)	**-0.616*****	(-8.07)
YEAR	NUTS20 (Erzurum-Erzincan-Bayburt)																			
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	43	1.86	0.47	1.32	0.85	1.52	0.93	31	2.02	0.52	1.29	0.67	1.56	0.80	0.42	-0.15	(-1.29)	**-0.314***	(-2.23)	-0.06	(-0.46)
2005	36	2.03	0.35	1.61	0.67	1.88	0.68	25	2.14	0.26	1.48	0.59	1.61	0.67	0.41	-0.12	(-1.41)	-0.11	(-1.03)	-0.12	(-1.23)
2006	29	1.98	0.41	1.47	0.68	1.54	0.79	18	2.05	0.36	1.63	0.61	2.01	0.68	0.38	-0.07	(-0.56)	-0.06	(-0.45)	-0.05	(-0.43)
2007	29	2.07	0.48	1.86	0.57	2.05	0.55	17	2.25	0.24	2.07	0.38	2.25	0.25	0.37	-0.18	(-1.47)	-0.21	(-1.34)	-0.19	(-1.35)
2008	17	2.20	0.58	2.03	0.58	2.18	0.68	33	2.26	0.32	2.13	0.41	2.19	0.37	0.66	-0.06	(-0.45)	-0.10	(-0.71)	-0.01	(-0.08)
2009	38	2.05	0.70	1.89	0.70	2.16	0.50	23	2.33	0.54	2.17	0.53	2.28	0.63	0.38	-0.16	(-1.24)	-0.21	(-1.31)	-0.11	(-0.77)
2010	57	2.12	0.68	1.94	0.67	2.06	0.82	37	2.22	0.67	2.09	0.67	2.19	0.76	0.39	-0.11	(-0.75)	-0.15	(-1.04)	-0.13	(-0.79)
2011	85	1.71	0.84	1.36	0.99	1.79	0.71	57	2.32	0.62	2.23	0.67	2.24	0.64	0.40	**-0.530*****	(-4.87)	**-0.840*****	(-5.72)	**-0.445*****	(-3.8)
2012	98	1.95	0.71	1.69	1.05	1.91	0.75	82	2.41	0.57	2.29	0.67	2.38	0.52	0.46	**-0.488*****	(-5.12)	**-0.616*****	(-4.58)	**-0.472*****	(-4.79)
2013	113	1.93	0.71	1.54	1.16	1.91	0.74	73	2.45	0.52	2.33	0.59	2.40	0.55	0.39	**-0.515*****	(-5.35)	**-0.785*****	(-5.36)	**-0.497*****	(-4.95)
2014	114	1.86	0.77	1.65	1.05	1.86	0.71	52	2.42	0.49	2.32	0.63	2.32	0.51	0.31	**-0.517*****	(-4.58)	**-0.664*****	(-4.16)	**-0.451*****	(-4.09)
YEAR	NUTS21 (Kars-Ağrı-Iğdır-Ardahan)																			
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	15	1.65	0.49	1.83	0.68	1.94	0.72	20	1.88	0.80	1.63	0.75	1.81	0.80	0.57	-0.23	(-0.99)	0.01	(-0.05)	-0.46	(-1.48)
2005	19	1.97	0.50	2.02	0.66	2.09	0.65	23	2.06	0.40	1.72	0.89	2.15	0.75	0.55	-0.09	(-0.64)	-0.12	(-0.9)	-0.10	(-0.62)
2006	45	1.94	0.40	2.13	0.67	2.42	0.55	19	2.06	0.47	1.76	0.87	2.10	0.76	0.30	-0.12	(-1.05)	-0.17	(-1.2)	-0.12	(-0.93)
2007	29	2.06	0.52	1.97	0.59	2.05	0.39	22	2.17	0.35	2.08	0.39	2.09	0.35	0.43	-0.04	(-0.37)	-0.08	(-0.53)	-0.05	(-0.45)
2008	13	1.42	1.07	1.15	1.30	1.68	0.47	16	2.19	0.33	2.05	0.43	2.15	0.32	0.55	**-0.526***	(-2.77)	**-0.816***	(-2.32)	**-0.470****	(-3.15)
2009	28	1.81	0.83	1.75	0.69	1.90	0.52	18	2.26	0.50	2.18	0.49	2.18	0.51	0.39	-0.27	(-1.86)	-0.36	(-1.97)	-0.28	(-1.75)
2010	35	1.80	0.85	1.69	0.78	1.90	0.59	25	2.30	0.27	2.14	0.34	2.26	0.30	0.42	**-0.331****	(-2.99)	**-0.344***	(-2.36)	**-0.363****	(-2.81)
2011	37	1.96	0.61	1.89	0.59	1.92	0.63	27	2.29	0.34	2.24	0.37	2.19	0.35	0.42	**-0.291***	(-2.34)	**-0.333***	(-2.57)	**-0.273***	(-2.02)
2012	49	2.02	0.84	1.83	0.98	2.12	0.51	31	2.19	0.67	2.13	0.58	2.19	0.62	0.39	-0.11	(-0.87)	-0.25	(-1.43)	-0.07	(-0.55)
2013	49	2.07	0.62	1.93	0.78	2.03	0.64	25	2.49	0.48	2.41	0.40	2.47	0.55	0.34	**-0.464****	(-3.27)	**-0.505****	(-2.99)	**-0.438****	(-2.87)
2014	66	1.96	0.68	1.81	0.84	1.96	0.72	39	2.31	0.48	2.16	0.55	2.27	0.51	0.37	**-0.317***	(-2.54)	**-0.354***	(-2.29)	**-0.309***	(-2.34)

NUTS22 (Malatya-Elazığ-Bingöl-Tunceli)

YEAR	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	32	1.61	0.63	1.43	0.86	1.48	0.96	20	1.47	0.91	1.74	0.85	1.90	0.85	0.38	0.14	(-0.67)	0.20	(-0.87)	0.05	(-0.21)
2005	24	1.72	0.53	1.41	0.98	1.52	1.02	17	1.87	0.61	1.65	0.95	1.84	0.87	0.41	-0.16	(-0.88)	-0.08	(-0.41)	-0.22	(-1.14)
2006	33	1.80	0.58	1.66	0.75	1.93	0.74	17	1.66	0.78	1.74	0.84	1.98	0.88	0.34	0.14	(-0.73)	0.07	(-0.33)	0.20	(-0.92)
2007	27	1.75	0.61	1.66	0.61	1.65	0.71	27	1.93	0.61	1.78	0.63	1.90	0.62	0.50	-0.18	(-1.07)	-0.12	(-0.69)	-0.24	(-1.34)
2008	31	1.59	0.64	1.40	0.76	1.55	0.78	37	1.88	0.61	1.78	0.59	1.81	0.65	0.54	-0.29	(-1.9)	**-0.378***	(-2.31)	-0.25	(-1.45)
2009	38	1.97	0.71	1.84	0.68	2.07	0.68	39	2.21	0.66	2.06	0.71	2.17	0.68	0.51	-0.15	(-1.03)	-0.23	(-1.45)	-0.10	(-0.64)
2010	53	2.07	0.71	1.99	0.66	1.98	0.83	42	2.40	0.49	2.22	0.57	2.41	0.51	0.44	**-0.334***	(-2.58)	-0.23	(-1.74)	**-0.432****	(-2.92)
2011	61	1.92	0.63	1.80	0.64	1.92	0.67	56	2.25	0.60	2.17	0.54	2.25	0.53	0.48	**-0.328****	(-3.38)	**-0.373*****	(-3.53)	**-0.331****	(-2.91)
2012	67	1.85	0.72	1.72	0.79	1.77	0.75	46	2.17	0.62	2.06	0.65	2.12	0.65	0.41	**-0.327***	(-2.51)	**-0.340***	(-2.4)	**-0.344***	(-2.53)
2013	79	1.76	0.57	1.56	0.71	1.76	0.62	36	2.18	0.75	2.07	0.74	2.11	0.81	0.31	**-0.419****	(-3.33)	**-0.508*****	(-3.49)	**-0.357***	(-2.59)
2014	135	2.00	0.73	1.85	0.84	1.97	0.78	73	2.58	0.44	2.49	0.46	2.50	0.50	0.35	**-0.562*****	(-6.08)	**-0.634*****	(-5.92)	**-0.535*****	(-5.28)

NUTS23 (Van-Muş-Bitlis-Hakkari)

YEAR	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	21	2.05	0.18	1.76	0.68	2.13	0.41	22	2.00	0.30	1.70	0.68	1.87	0.64	0.51	0.05	(+0.66)	0.00	(-0.05)	0.08	(-0.77)
2005	27	2.12	0.27	2.00	0.63	2.12	0.60	15	2.13	0.40	1.82	0.73	2.21	0.54	0.36	-0.01	(+0.06)	-0.05	(-0.55)	0.03	(-0.2)
2006	28	2.02	0.42	1.84	0.69	2.15	0.55	10	2.17	0.19	1.73	0.68	2.11	0.64	0.26	-0.15	(-1.07)	-0.23	(-1.19)	-0.14	(-0.94)
2007	18	2.20	0.22	2.11	0.27	2.12	0.26	10	2.32	0.23	2.12	0.25	2.32	0.29	0.36	-0.12	(-1.36)	-0.01	(-0.13)	-0.20	(-1.87)
2008	20	2.10	0.43	2.00	0.47	1.99	0.65	15	2.23	0.35	2.01	0.44	2.23	0.36	0.43	-0.10	(+0.75)	-0.03	(-0.16)	-0.23	(-1.24)
2009	33	2.20	0.60	1.90	0.54	2.14	0.88	26	2.33	0.43	2.15	0.51	2.31	0.45	0.44	-0.13	(-0.94)	-0.24	(-1.76)	-0.17	(-0.89)
2010	35	2.44	0.57	2.19	0.62	2.37	0.64	26	2.33	0.33	2.23	0.35	2.31	0.42	0.43	0.08	(+0.63)	-0.02	(-0.16)	0.06	(-0.39)
2011	35	2.16	0.48	1.93	0.33	2.18	0.64	18	2.17	0.41	2.01	0.45	2.17	0.46	0.34	-0.01	(-0.1)	-0.08	(-0.77)	0.01	(-0.04)
2012	33	2.03	0.50	1.85	0.46	2.01	0.61	19	2.23	0.53	2.20	0.53	2.10	0.56	0.37	-0.20	(-1.36)	**-0.346***	(-2.49)	-0.09	(-0.54)
2013	40	2.09	0.47	1.88	0.58	2.08	0.51	20	2.38	0.25	2.31	0.24	2.30	0.34	0.33	**-0.292***	(-2.6)	**-0.430****	(-3.15)	-0.22	(-1.77)
2014	61	1.73	0.71	1.54	0.87	1.79	0.64	25	2.42	0.53	2.23	0.57	2.39	0.61	0.29	**-0.646*****	(-4.27)	**-0.678*****	(-3.54)	**-0.600*****	(-3.99)

NUTS24 (Gaziantep-Adıyaman-Kilis)

YEAR	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)						
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	30	1.99	0.20	1.43	0.97	2.02	0.69	30	1.65	0.62	1.79	0.65	1.99	0.59	0.50	**0.342****	(-2.88)	**0.302***	(-2.49)	**0.366****	(-2.94)
2005	21	2.00	0.48	1.92	0.78	2.26	0.59	40	1.79	0.63	1.75	0.71	2.07	0.53	0.66	0.21	(-1.36)	0.15	(-0.86)	0.25	(-1.5)
2006	21	1.96	0.30	1.70	0.76	1.96	0.82	25	1.47	0.81	1.89	0.69	2.19	0.59	0.54	**0.498***	(-2.68)	**0.520***	(-2.27)	**0.502****	(-2.86)
2007	20	1.47	0.78	1.34	0.94	1.47	0.76	19	0.91	1.10	0.73	1.20	0.88	1.10	0.49	0.61	(-1.98)	0.62	(-1.75)	0.59	(-1.91)
2008	18	1.14	0.76	1.00	0.86	1.16	0.83	20	1.35	1.14	1.18	1.09	1.33	1.18	0.53	-0.13	(-0.42)	-0.18	(-0.53)	-0.17	(-0.51)
2009	32	1.35	0.70	1.18	0.99	1.25	0.76	22	1.77	0.96	1.71	0.99	1.67	0.94	0.41	-0.42	(-1.83)	-0.53	(-1.92)	-0.42	(-1.81)
2010	59	1.38	0.80	1.01	1.27	1.43	0.71	42	2.04	0.75	1.87	0.94	1.99	0.76	0.42	**-0.586*****	(-3.97)	**-0.830*****	(-3.57)	**-0.557*****	(-3.75)
2011	61	1.33	0.79	1.02	1.03	1.40	0.73	41	1.82	0.82	1.71	0.83	1.75	0.85	0.40	**-0.467****	(-2.9)	**-0.682*****	(-3.51)	**-0.357***	(-2.26)
2012	85	1.61	0.94	1.41	1.15	1.75	0.73	41	2.03	0.81	1.93	0.89	1.96	0.83	0.33	-0.28	(-1.83)	**-0.460***	(-2.25)	-0.20	(-1.38)
2013	128	1.49	0.82	0.99	1.29	1.58	0.72	85	2.22	0.68	1.99	0.98	2.21	0.66	0.40	**-0.678*****	(-6.57)	**-0.999*****	(-5.99)	**-0.626*****	(-6.39)
2014	134	1.61	0.86	1.24	1.06	1.71	0.85	62	2.29	0.59	2.20	0.64	2.22	0.58	0.32	**-0.622*****	(-5.35)	**-0.949*****	(-6.43)	**-0.507*****	(-4.23)

YEAR	NUTS25 (Diyarbakır-Şanlıurfa)																				
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	7	1.96	0.33	1.98	0.42	2.06	0.47	25	1.19	0.68	1.74	0.65	1.66	0.78	0.78	**0.763****	(-2.86)	**0.849****	(-3.15)	**0.672***	(-2.42)
2005	16	1.73	0.79	1.98	0.75	2.26	0.50	47	1.00	1.01	2.09	0.69	2.21	0.66	0.75	**0.726***	(-2.6)	**0.662***	(-2.42)	**0.754***	(-2.63)
2006	13	1.80	0.66	2.09	0.78	2.19	0.67	48	1.63	0.80	1.98	0.69	2.17	0.62	0.79	0.16	(-0.67)	0.27	(-1.12)	0.08	(-0.29)
2007	12	1.92	0.55	1.79	0.64	1.89	0.54	38	2.08	0.80	1.93	0.82	2.04	0.80	0.76	-0.15	(-0.62)	-0.14	(-0.54)	-0.15	(-0.61)
2008	14	1.92	0.75	1.75	0.71	1.91	0.79	36	1.26	0.88	1.13	0.85	1.21	0.92	0.72	**0.664***	(-2.48)	**0.616***	(-2.39)	**0.694***	(-2.48)
2009	21	1.85	0.70	1.62	0.81	1.85	0.72	37	1.86	0.76	1.69	0.76	1.82	0.79	0.64	-0.01	(-0.05)	-0.08	(-0.37)	0.02	(-0.11)
2010	30	2.13	0.33	1.98	0.40	2.13	0.37	49	1.89	0.85	1.76	0.86	1.82	0.88	0.62	0.27	(-1.61)	0.21	(-1.22)	0.31	(-1.8)
2011	33	2.04	0.44	1.80	0.53	2.08	0.41	39	1.96	0.72	1.90	0.69	1.95	0.58	0.54	0.01	(-0.07)	-0.15	(-1.1)	0.13	(-1.1)
2012	29	2.20	0.46	2.03	0.57	2.16	0.44	29	2.17	0.51	2.05	0.50	2.11	0.55	0.50	0.04	(-0.27)	-0.01	(-0.11)	0.05	(-0.38)
2013	32	1.77	0.79	1.60	0.79	1.76	0.89	27	2.13	0.57	1.96	0.57	2.07	0.63	0.46	-0.29	(-1.65)	-0.34	(-1.84)	-0.31	(-1.5)
2014	55	1.56	0.96	1.40	0.94	1.69	0.90	53	1.90	1.04	1.76	1.04	1.85	1.06	0.49	-0.23	(-1.22)	-0.31	(-1.57)	-0.16	(-0.85)
YEAR	NUTS26 (Siirt-Mardin-Batman-Şırnak)																				
	NOT SAME							SAME							RATIO of SAME	t-test (two-tail)					
	HH			F		M		HH			F		M			HH		F		M	
	COUNT	MEAN	SD	MEAN	SD	MEAN	SD	COUNT	MEAN	SD	MEAN	SD	MEAN	SD		diff	t-value	diff	t-value	diff	t-value
2004	5	1.85	0.07	1.69	0.67	1.47	0.81	8	1.79	0.25	1.67	0.77	1.63	0.80	0.62	0.06	(-0.55)	-0.10	(-0.77)	0.19	(-1.6)
2005	46	2.26	0.20	1.52	0.84	1.77	0.96	15	2.05	0.34	1.85	0.73	1.86	0.76	0.25	**0.208****	(-2.88)	0.09	(-1.13)	**0.307****	(-2.92)
2006	41	2.35	0.26	1.75	0.92	2.03	0.81	22	1.84	0.74	2.19	0.48	2.17	0.51	0.35	**0.509*****	(-4)	**0.371****	(-2.78)	**0.591*****	(-4.21)
2007	10	2.00	0.42	2.00	0.37	1.85	0.51	12	2.25	0.30	2.12	0.34	2.22	0.29	0.55	-0.25	(-1.59)	-0.12	(-0.8)	**-0.366***	(-2.12)
2008	1	1.99	.	1.40	.	2.18	.	15	1.72	1.01	1.58	1.17	1.67	0.96	0.94	0.27	(.)	-0.18	(.)	0.51	(.)
2009	9	2.41	0.65	2.32	0.74	2.20	0.79	19	2.42	0.39	2.34	0.37	2.34	0.42	0.68	0.00	(-0.01)	-0.02	(-0.08)	-0.14	(-0.63)
2010	19	2.20	0.45	2.07	0.53	2.08	0.62	28	2.32	0.37	2.24	0.41	2.24	0.36	0.60	-0.12	(-0.97)	-0.17	(-1.22)	-0.16	(-1.1)
2011	24	2.00	0.45	1.90	0.43	1.90	0.64	31	2.19	0.51	2.11	0.58	2.09	0.53	0.56	-0.19	(-1.44)	-0.21	(-1.48)	-0.20	(-1.27)
2012	27	1.94	0.64	1.89	0.73	1.82	0.74	29	2.30	0.40	2.23	0.45	2.20	0.54	0.52	**-0.360***	(-2.56)	**-0.346***	(-2.15)	**-0.383***	(-2.24)
2013	22	1.93	0.78	1.80	0.75	2.01	0.74	14	2.31	0.50	2.24	0.52	2.18	0.65	0.39	-0.28	(-1.35)	-0.39	(-1.73)	-0.16	(-0.67)
2014	29	1.67	0.98	1.54	0.91	1.89	0.77	33	2.39	0.64	2.32	0.60	2.30	0.72	0.53	**-0.520****	(-2.93)	**-0.669*****	(-3.61)	**-0.406***	(-2.09)