

## **OCCUPATIONAL SEGREGATION AND LABOUR FORCE PARTICIPATION OF WOMEN: CASE OF NORTH CYPRUS**

**Demet Beton KALMAZ\***

**Fatma GÜVEN-LİSANİLER\*\***

### **Abstarct**

Previous studies on North Cyprus labour market argued that occupational gender segregation is one of the major cause of low female labour force participation. We aim to shed light on this argument by investigating the extent, patterns and the sources of occupational gender segregation in North Cyprus labour market for 11 years (2004-2014). Segregation measured by D-Index for 9 broad occupational categories for total, and across rural and urban regions employing Household Employment Surveys data. Results show that total occupational gender segregation is high and persistent in North Cyprus. Decomposition of the index show that the main reason for the increase in segregation level is net segregation; the increase in the gender composition of individual occupations. We conclude that high and persistent occupational gender segregation leads to the segmentation of labour market as male and female occupations limiting the mobility of women between occupations affecting women's labour force participation negatively.

**Keywords:** Occupational Segregation, Gender, North Cyprus, Female Labour Force Participation, D-Index

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\* Assist. Prof. Demet Beton Kalmaz, PhD in Economics, European University of Lefke, Faculty of Business and Economics, Department of Economics, Lefke-North Cyprus. E-mail: demetkalmaz@eul.edu.tr

\*\* Prof. Dr. Fatma Güven-Lisaniler, Professor in Economics, Eastern Mediterranean University, Faculty of Business and Economics, Department of Economics, Famagusta-North Cyprus. E-mail: fatma.guven@emu.edu.tr

## Mesleki Ayrışma ve Kadının İşgücüne Katılımı: Kuzey Kıbrıs Örneği

### Öz

Kuzey Kıbrıs emek piyasası üzerine yapılan çalışmalar, toplumsal cinsiyet temelli mesleki ayrışmayı, kadının işgücüne düşük katılımını etkileyen en önemli sebeplerden biri olarak tespit etmiştir. Bu çalışma, 11 yıl içerisinde bu tespitten yola çıkarak Kuzey Kıbrıs emek piyasasındaki mesleki ayrışmanın büyüklüğünü, zaman içerisindeki değişimini ve bu değişimin kaynaklarını araştırmayı amaçlamaktadır. Ayrışma, Hanehalkı İşgücü Anketi verileri kullanılarak, 9 ana mesleki grup için genel, kırsal ve kentsel bölgelerde ölçülmüştür. Çalışma bulguları, tüm bölgelerde toplumsal cinsiyete dayalı mesleki ayrışmanın yüksek ve yaygın olduğunu göstermiştir. İndeksin ayrıştırılması, artan ayrışmanın temel sebebinin net ayrışmadan, yani bireysel meslekler içindeki kadın erkek oranında meydana gelen değişmeden kaynaklandığını göstermiştir. Yüksek ve yaygın olan mesleki toplumsal cinsiyet ayrışmasının, emek piyasasının kadın ve erkek meslekleri olarak katmanlaşmasına sebep olduğu, bunun da kadının meslek grupları arasında hareketinin kısıtlanmasına yol açarak, işgücüne katılımını olumsuz etkilediği sonucuna varılmıştır.

**Anahtar Kelimeler:** Mesleki Ayrışma, Toplumsal Cinsiyet, Kuzey Kıbrıs

### Introduction

Occupational gender segregation is an ever phenomenon that exists in all societies with varying extends regardless the differences in economic, political and social conditions (Anker, 1997, 315; Blackburn et. al., 2009, 1). It is a persistent characteristic of labour markets leading to labour market rigidity and inefficiency (Anker, 1997, 315). Occupational gender segregation generates a decrease in female wage rates which leads to a decrease in labour force participation rate of women (Zellner, 1972, 157; Swanson, 2005, 43) and hinders the attainment of economic equality for women (Blau - Jusenius, 1976, 183-184; Blau - Hendricks, 1979, 197). Decreased wage gap between male and female workers, increased labour force

participation rate, improved economic and social equity between men and women can be achieved only by lowering the occupational gender segregation (Fuchs, 1975, 105). Thus, finding the sources of occupational segregation is crucial to be able to generate policies to overcome the problems generated by high levels of occupational gender segregation.

The motive of this study is the continued low labour force participation of women in North Cyprus. The low labour force participation of women in North Cyprus is an interesting and controversial issue. Since the *de facto* partition of the island as North and South Cyprus in 1974, North Cyprus economy has been suffering shortage of labour. However, women who make up half of the population stay or are held out of the labour force. Although the governments came up with policies of overcoming the shortage by inviting labour to migrate from abroad, specifically from Turkey, they never came up with policies to increase women's participation. Increasing participation of women may not bring an ultimate solution to the labour shortage problem due to the small size of the population but it is definite that it would help. Besides its possible positive effect on labour shortage problem it would also help to decrease gender inequality, not only on the labour market but also increase the position of women in public and private sphere.

Women's participation in the labour force became visible during the Turkish Cypriot Community's economic and socio-spatial re-structuring process. After 1974, Turkish Cypriots resettled in the north, either by leaving the enclaves that they had been living in the period 1963-74 and going back to their own villages which were now safe or moving into houses and villages abandoned by Greek Cypriots. Citizens who originally were from the south of the Island evacuated their homes and moved to the north into houses and villages abandoned by Greek Cypriots. This spatial change has caused the breakdown of production relations and social division of labour,

which brought the need for re-formation. Women's massive participation to the labour force happens in this period. Turkish Cypriot Community's perception about women working has partly changed during the restructuring period. With the high demand for labour, the period where very small numbers of women were working in paid work has come to an end. Urban women who have no experience in a paid job started working in factories and governmental institutions. Working in a paid job of women, especially the women who have a certain level of education has become acceptable by the community while the previous perception was negative. However, the social division of labour has not developed at the same pace with this period to take over the house works and traditional responsibilities of women who were newly getting involved in the communal life. Those who had no help from the women in their families or, the ability to pay for help had difficulties in getting involved in the labour market. Then again, women in rural areas who used to work as unpaid family workers or in seasonal jobs, started to take responsibilities in farming, agriculture and managerial roles of family business as job opportunities for men become available in the cities. Even though women working in urban or rural areas were accepted by the community, this was not an unconditional acceptance. Women can work however; they are also expected to fulfill their duties such as taking care of the kids, elderly, and the house. In other words, the acceptance of the community was a conditional one, where women could work as long as they continued to fulfill their traditional responsibilities (Güven-Lisaniler, 2004, 57-74).

Despite all efforts of women's organizations, and growing demand for labour, women's employment and average income stayed far below men's employment and average income (Uğural - Güven-Lisaniler, 2009, 419-425). In addition, until now gender equality rarely became an issue either as a public concern or a predominant

academic research area. In 2014, still around 65 percent of working age women population is out of the labour force being higher than the world average (60.4 percent).

Although there have been several recent studies aiming to investigate the extent, determinants and sources of gender inequalities in labour market of different countries (He - Wu, 2017, 96-111; Grönlund - Magnusson, 2016, 91-113, Banerjee, 2014, 1-26; Levanon - Grusky, 2016, 573-619), there are only limited number of studies on characteristics of female employment (Güven-Lisaniler - Uğural, 2001, 117-131; Aldemir, 2002; Bhatti, 2004), determinants of female labour force participation (Güven-Lisaniler - Bhatti, 2005, 209-226), education and labour force participation of women (Usman-Sanusi, 2016, 1-17), and gender wage gap (Uğural - Güven-Lisaniler, 2009, 51-56) shedding valuable insight into low labour force participation of women for the case of North Cyprus.

The major conclusion drawn from the review of the previous studies is that, the North Cyprus labour market offer different types of jobs for men and women. Jobs those are available for women are the jobs providing relatively flexible working hours like professional occupations and public employment with generous paid leave and shorter working hours or occupations in the private sector that there is low or no entry or exit penalty. These jobs are low paying, low productive jobs. However men's jobs are this high status, more productive and high wage jobs, which are more demanding, requiring longer working hours and having exit penalty. As a result labour market segregated as 'female' and 'male' occupations. Studies were also emphasizing the role of limited labour mobility between occupations as a cause of occupational gender segregation which is mostly due to social relationships, gender stereotypes, and unjust distribution of unpaid work.

Although the previous studies emphasizing gender-based occupational segregation as one of the main causes of low labour market position and low labour force participation of women; except Aldemir's (2002) work on vertical and horizontal gender segregation in the public sector and Güven-Lisaniler and Uğural (2001) on the position of women in the North Cyprus labour market, none of them actually measures the presence and extent of gender based occupational segregation. This is mostly due to the difficulty of reaching of data since Households Labour Force Survey data became available after 2004.

The purpose of this study is to investigate the presence, extent and patterns of gender based occupational segregation in North Cyprus labour market and to analyze the trend and sources of changes in the segregation indices through time and across rural and urban regions.

## **Method and Data**

There are several methods that can be used as a measure of segregation such as index of dissimilarity (D-Index), the WE index, the sex ratio, standardized sex ratio  $SR^*$ , the IP index, marginal matching measure and the Gini coefficient. The most widely used method to measure the occupational gender segregation is the Duncan index of dissimilarity (Duncan - Duncan, 1955, 207-217). It is the most unproblematic measure and it is straightforwardly understood (Blau and Hendricks, 1979, 198; Blackburn, 2012, 6). In this paper we used the D-index to investigate the presence and extent of gender based occupational segregation in North Cyprus. It is computed for nationwide, and urban and rural regions for the time period covering the years between 2004 and 2014. Data employed in the study is from Household Employment Survey (2004-2014) which is conducted and published annually by State Planning Organization of North Cyprus since 2004.

The index is computed as:

$$S_t = \frac{1}{2} \sum_i |m_{it} - f_{it}| \quad (1)$$

where  $m_{it}$  represents the percentage of the male labour force employed in occupation  $i$  in year  $t$ , while  $f_{it}$  denotes the percentage of the female labour force employed in occupation  $i$  in year  $t$ . The index value varies between 0 and 1. Index value being equal to 0 indicates identical distribution of men and women across occupations and index value being equal to 1 indicates complete occupational gender segregation. In other words, estimating a value equal to 1 tells us that women employed in completely *female* occupations and men employed completely in *male* occupations. As the estimated value gets closer to 0 the distribution of women across occupations gets closer to the share of men in the same occupation, while a value getting closer to 1 is a sign for increasing occupational gender segregation.

The index value can change over time due to changes in the gender composition of specific occupational categories or due to the changes in the occupational structure of the economy (Fuchs, 1975, 108). To be able to determine the effect of changes in the occupational structure of the labour force or the effects of changes in the gender composition within occupations, the decomposition of the observed changes in the index of segregation is used which is the standardization procedure suggested by Blau and Hendricks (1979, 199-200). The equation (1) can be rewritten as:

$$S_t = \frac{1}{2} \sum_i \left| \frac{q_{it} T_{it}}{\sum_i q_{it} T_{it}} - \frac{p_{it} T_{it}}{\sum_i p_{it} T_{it}} \right| \quad (2)$$

where  $p_{it} = F_{it} / T_{it}$  and  $q_{it} = (1 - p_{it}) M_{it} / T_{it}$ .

The D-index for the overall, urban and rural regions is computed respectively by applying equation (2).

Based on equation (2), the change in index between the considered years (2004 and 2014) is decomposed into two sources as the mix effect and the composition effect and computed by the use of the equations (3a) and (3b).

$$MIX_{2004-2014} = \frac{1}{2} \left[ \sum_i \left| \frac{q_{i2004}T_{i2014}}{\sum_i q_{i2004}T_{i2014}} - \frac{p_{i2004}T_{i2014}}{\sum_i p_{i2004}T_{i2014}} \right| - S_{2004} \right] \quad (3a)$$

$$COMP_{2004-2014} = \frac{1}{2} \left[ \sum_i \left| \frac{q_{i2014}T_{i2004}}{\sum_i q_{i2014}T_{i2004}} - \frac{p_{i2014}T_{i2004}}{\sum_i p_{i2014}T_{i2004}} \right| - S_{2004} \right] \quad (3b)$$

The mix effect reflects the changes in the index value arising from the changes in the occupational structure where the employment share of males and females within each occupation is held constant. On the other hand composition effect reflects the changes arising due to the changes of the gender composition within each occupation where the size of the occupational structure is held constant. Since the female and male employment growth rate and changes in the occupational structure of employment are interrelated Blau and Hendricks (1979, 199-200) suggested the calculation of interaction effect. To do so a consistent set of weights is used for both the mix and composition effects. Subtracting the sum of mix and composition effects from the segregation index between two periods gives the interaction effect. In other words, interaction effect is the residual which reflects the changes in the segregation index arising from the interaction of composition and mix effects.



## **Background Information on North Cyprus Labour Market by Data**

According to the recent HLFS (2014), overall, there are 231,424 people in the working age population in which 48.3 percent are women. The overall labour force participation rate was 48.6 percent; it was 35.4 percent for women and 61 percent for men all three of which were far below the world averages which was 63.5 percent, 51.4 percent and 76.7 percent respectively (Worldbank Database, 2016). In urban 129,431 people are counted in working age population, 48.24 percent being women while in rural there were 101,993 people in working age population 48.83 percent being women. The participation rate of urban was 48.2 being 37 percent for women and 58.6 percent for men. In the rural it is slightly higher; 49.1 percent, 33.2 percent for women and 64 percent for men.

At aggregate level almost 80 percent of the employed people were in the services industry and work as salaried workers (78.6% in overall, 80.7% in urban and 76% in rural). Those, who were employers or working for their own accounts were around 17 percent in all regions. Unemployment rate was 8.3 percent for overall, 8.9 in urban and 7.5 in rural. Women's unemployment rate (12.8, 14.1 and 11 percent for overall, in urban and rural respectively) was more than two times of men's rate (5.8, 5.9 and 5.8 percent for overall, in urban and rural respectively) for all regions.

Both women and men labour force participation rates in North Cyprus have fallen over the years between 2004 and 2014 in total and in both regions. Although labour force participation rates of both women and men have fallen the difference between participation rates of women and men is striking. Women's participation rates are almost half of the men's rates. This decline in both male and female labour force attachment can be explained by massive migration of cheap labour and favorable retirement schemes in the public sector.

The labour force share of migrant workers increases from 18 percent to 34 percent over the period. Over the same time period, while women's employment rates almost half of men's rates their unemployment rates are twice or more than men's rates. That might indicate a labour demand constraint since there is high occupational segregation with limited or no gender mobility between occupations. The continued persistent low participation and high unemployment of women are worth to be investigated. Figure 1 below illustrates the distribution of total, female and male labour force participation rates of North Cyprus while unemployment rates of man and woman are compared by Figure 2 below.

**Figure 1. Labour Force Participation Rates**



**Source:** Household Employment Survey (2004-2014), State Planning Organization.

**Figure 2. Unemployment Rates of Men and Women**



**Source:** Household Employment Survey (2004-2014), State Planning Organization.

Table 1 reveals female representation (as female to male ratios) for major 9 occupational categories. Women's representation varies significantly across the occupational groups. Although over the period women representation in employment experienced a small increase as for every 100 employed men there were 49.6 employed women in 2004, it move to 51.9 in 2014 (in urban it increased from 53.3 to 55.3 and in rural from 46.5 to 47.9), however the representation of women across different occupations shows different trends. For instances; there is a significant increase in female/male ratio in professional, associate professionals and elementary occupations. Specifically the increase in the female to male ratio in professional occupation is striking in all regions. The number of women for 100 men experienced an increase from 79 to 118 for overall, from 89 to 126 in urban and from 67 to 109 in rural. On the other hand women's representation in clerical in all regions and skilled agricultural workers in overall and rural region decreased significantly. These changes in female to male ratio might indicate increasing gender segregation.

**Table 1. Size and sex composition of occupational categories of North Cyprus**

Occupational Categories	Overall				Urban				Rural			
	Share in total percent		Female/male ratio		Share in total percent		Female/male ratio		Share in total percent		Female/male ratio	
	2004	2014	2004	2014	2004	2014	2004	2014	2004	2014	2004	2014
Total	33,2	34,2	49,6	51,9	34,77	35,59	53,3	55,3	31,73	32,40	46,5	47,9
Legislators, senior officials and managers	7,7	4,7	27,7	28,5	15,3	7,7	25,5	23,6	8,5	6,7	31,4	36,4
Professionals	17,4	22,7	79,4	117,8	16,5	14,0	89,0	126,4	10,0	14,8	66,9	108,5
Associate Professionals (Technicians)	8,3	8,5	41,5	56,7	10,4	8,5	54,3	64,1	8,5	7,4	29,7	47,1
Clerks	25,8	22,6	195,7	136,6	14,5	14,5	207,3	126,1	11,6	12,0	183,8	154,3
Services, shop and market sales workers	12	19,6	58,1	60,8	11,6	18,8	59,6	67,9	10,1	16,4	56,6	51,5
Skilled agricultural and fishery workers	9,0	2,3	70,5	26,1	1,6	2,8	20,1	24,9	12,3	5,1	79,2	26,9
Craft workers	3,8	2,2	9,1	6,0	13,8	12,5	6,8	4,0	16,5	14,1	10,9	8,3
Plant and machine assemblers	0,6	1	3,1	3,9	6,3	7,3	2,5	3,0	7,3	11,0	3,5	4,6
Elementary Occupations	15,3	16,4	65,8	72,8	10,0	13,9	92,7	77,5	15,2	12,6	53,2	66,6

**Source:** Household Employment Survey (2004-2014), State Planning Organization.

To analyze whether the change in the representation of women across different occupations is a sign for a more segregated market or not Table 2 displays the major occupational categories where men and women were most concentrated in 2004 and 2014. It shows that, women and men are concentrated almost totally in different occupations. The occupational categories that men and women concentrated in 2004 and 2014 have changed as can be seen from

Table 2. In 2004 the shared categories by both genders were professionals and elementary occupations while in 2014 professionals replaced by services, shop and sales workers indicating that while women moved into professionals and associate professionals men moved into services, shop and elementary occupations and plant and machinery assemblers categories. It seems gender composition of occupational categories became more segregated in 2014. However without computing segregation index it is hard to say whether the extent of segregation increase or decrease especially considering changes in the mostly concentrated occupational categories of men and increasing concentration ratio of men in the services, shop and market sales workers jobs and increasing women's concentration in professionals jobs.

On the other hand, the high representation of women in the first three of the four mostly concentrated major occupational categories, except professionals category, can be easily associated with low paid low productive and low ranked jobs.

**Table 2. Men and Women's mostly concentrated 4 major occupational categories, 2004-2014**

<b>Overall</b>			
2004		2014	
Occupational Categories	% of total female employment	Occupational Categories	% of total female employment
<b>Women</b>			
1. Clerks	25.8	1. Professionals	22.7
2. Professionals	17.4	2. Clerks	22.6
3. Elementary Occupations	15.3	3. Services, shop and market sales workers	19.6
4. Services, shop and market sales workers	12.0	4. Elementary Occupations	16.4
<b>Total</b>	<b>69.5</b>	<b>Total</b>	<b>81.3</b>
<b>Men</b>			
1. Craft workers	20.9	1. Craft workers	18.9
2. Legislators, senior officials and managers	13.7	2. Services, shop and market sales workers	16.8

3. Elementary Occupations	11.5	3. Plant and machine assemblers	13.1
4. Professionals	10.9	4.Elementary Occupations	11.7
<b>Total</b>	<b>57.0</b>	<b>Total</b>	<b>60.5</b>
<b>Urban</b>			
<b>Women</b>			
1. Clerks	28.1	1. Clerks	22.7
2. Professionals	22.3	2. Professionals	22.0
3. Elementary Occupations	13.9	3. Services, shop and market sales workers	21.3
4. Services, shop and market sales workers	12.5	4.Elementary Occupations	17.0
<b>Total</b>	<b>76.8</b>	<b>Total</b>	<b>83.0</b>
<b>Men</b>			
1. Craft workers	19.7	1. Craft workers	18.7
2. Legislators, senior officials and managers	18.7	2.Services, shop and market sales workers	17.3
3. Professionals	13.4	3.Plant and machine assemblers	12.1
4. Services, shop and market sales workers	11.2	4.Elementary Occupations	11.1
<b>Total</b>	<b>63.0</b>	<b>Total</b>	<b>59.2</b>
<b>Rural</b>			
<b>Women</b>			
1. Clerks	23.6	1. Professionals	23.8
2.Skilled agricultural and fishery workers	17.1	2. Clerks	22.5
3. Elementary Occupations	16.7	3.Services, shop and market sales workers	17.2
4. Professionals	12.7	4.Elementary Occupations	15.5
<b>Total</b>	<b>70.1</b>	<b>Total</b>	<b>79.0</b>
<b>Men</b>			
1. Craft workers	21.8	1. Craft workers	19.2
2. Elementary Occupations	14.6	2.Services, shop and market sales workers	16.0
3. Plant and machine assemblers	10.3	3.Plant and machine assemblers	15.5
4. Skilled agricultural and fishery workers	10.1	4.Elementary Occupations	11.2
<b>Total</b>	<b>56.7</b>	<b>Total</b>	<b>61.9</b>

**Source:** Household Employment Survey (2004-2014), State Planning Organization. Available at

## **Computation of Occupational Gender Segregation in North Cyprus between Years 2004-2010**

The high representation of men and women in different occupational categories give an idea about what occupations men and women mostly engaged but to indicate whether North Cyprus labour market segregated by gender or not segregation index has to be computed.

The computation results displayed in Table 5 show that, the North Cyprus labour market experienced high and quite stable occupational gender segregation over the whole period (2004-2010). Also the results show that there is a slight increase in occupational segregation for the 9 broad occupational categories over the period analyzed. 33.9 percent of people needed to relocate jobs to achieve equal distribution of women and men in the same occupation in 2004, as compared to 35 percent in 2014.

The figures in Table 3 also reveal that there is an improvement in the occupational integration of men and women in the urban regions and on the contrary occupational segregation by gender for rural regions shows an increase over the whole period. The percentage of people who needed to relocate jobs to achieve zero segregation in the rural regions was 32.3 percent in 2004, as compared to 34.3 percent in 2014. However, in the urban regions it was 37.2 percent in 2004 and decreased to 35.27 percent in 2014.

**Table 3. Occupational segregation index (2004-2014)**

Years	Segregation index		
	Overall	Urban	Rural
2004	0.3400	0.3723	0.3235
2005	0.3765	0.3681	0.3797
2006	0.3213	0.3275	0.3208
2007	0.3361	0.3089	0.3598
2008	0.3348	0.3257	0.3518
2009	0.3346	0.3232	0.3929
2010	0.3520	0.3401	0.3639
2011	0.3081	0.2919	0.3332
2012	0.3259	0.3207	0.3303
2013	0.3314	0.3133	0.3170
2014	0.3500	0.3527	0.3435
Actual change	0.0101	-0.0196	0.0020
% change	2.96	-5.26	6.18

In 2004 occupational gender segregation in urban regions was much higher than rural regions but in 2014 the gap between indexes of the two regions closed as a result of the dramatic increase in segregation in rural regions relative to the slight decrease in urban regions. There has been an increase in the overall occupational gender segregation. Blau and Hendricks argued that the occupational segregation changes might be the result of the structural changes in economy. It is possible also for the case of North Cyprus for the changes in occupational segregation to be due to the changes in occupational mix, since eleven years is a long time enough for an economy to experience structural changes. Before going further, it is highly important to mention that the eleven years under consideration covers the period that the highest economic growth experienced in North Cyprus, as a result of serious changes in politics leading to a dramatic increase both in construction and trade sector (Mehmet - Yorucu, 2008, 79; Yorucu - Keles, 2007, 77-78), leading to a change in occupational mix as represented by Table 4 below. As it can be seen from Table 4, in overall, craft workers were ranked in the first place as an occupational category including 15.2% of the total



employment in 2004.

**Table 4. Shares of 4 major occupational categories in 2004 and 2014 across Overall, Urban and Rural**

<b>Overall</b>			
<b>2004</b>		<b>2014</b>	
<b>Occupational Categories</b>	<b>% of total employment</b>	<b>Occupational Categories</b>	<b>% of total employment</b>
<b>1. Craft workers</b>	15.2	1. Services, shop and market sales workers	17.7
<b>2. Professionals</b>	13.1	2. Professionals	14.4
<b>3. Clerks</b>	12.9	3. Clerks	13.4
<b>4. Elementary Occupations</b>	12.8	4. Elementary Occupations	13.3
<b>Total</b>	<b>54.0</b>	<b>Total</b>	<b>58.8</b>
<b>Urban</b>			
<b>1. Professionals</b>	16.5	1. Services, shop and market sales workers	18.8
<b>2. Legislators, senior officials and managers</b>	15.3	2. Clerks	14.5
<b>3. Clerks</b>	14.5	3. Professionals	14.0
<b>4. Craft workers</b>	13.8	4. Elementary Occupations	13.9
<b>Total</b>	<b>60.1</b>	<b>Total</b>	<b>61.2</b>
<b>Rural</b>			
<b>1. Craft workers</b>	16.5	1. Services, shop and market sales workers	16.4
<b>2. Elementary Occupations</b>	15.2	2. Professionals	14.8
<b>3. Skilled agricultural and fishery workers</b>	12.3	3. Craft workers	14.1
<b>4. Clerks</b>	11.6	4. Elementary Occupations	12.6
<b>Total</b>	<b>55.6</b>	<b>Total</b>	<b>57.9</b>

**Source:** Household Employment Survey (2004-2014), State Planning Organization.

In 2014, craft workers was left out of the 4 major occupational categories leaving its place to services, shop and market sales workers indicating a change in structure of the economy of North Cyprus. Furthermore, services, shop and market sales workers

turned to have the highest share of employment both in urban and rural in 2014, even this category was not included in the 4 major occupations in 2004. Reported changes in the index through time and across rural and urban regions are decomposed into two as mix and composition effects to analyze if they are due to the changes in the occupational structure of the economy or changes in the gender composition of occupational categories (net segregation) respectively. To do so we applied decomposition method suggested by Blau and Hendriks (Blau - Hendriks, 1979, 199). To distinguish the effect of changes in the size of occupational categories, in other words the effect of the changes due to shifts in the occupation mix of the economy (Mix Effect) the index of segregation computed by holding gender composition at the year 2004 and using the employment distribution of the year 2014. To distinguish the effect of the changes due to shifts in gender composition within occupations (Composition Effect); the index of segregation for 2014 computed by standardizing the size of occupations to the year 2004. Furthermore, the difference between the sum of the mix and composition effect, and the segregation index for the given year gives the interaction of the two previous effects. Mix and composition effects computed for overall, and urban and rural regions.

**Table 5. Occupational segregation in North Cyprus (2004-2014)**

<b>Standardized Segregation index (2004-2014)</b>							
Year	Region	Occup. Seg. Index	Actual change	Mix effects	Composition effects	Interaction effects	percentage Change
2004	Overall	0.33996	0.01007	-	0,0313	0.0227	2.96
2014	Overall	0.35003		0,0235			
2004	Urban	0.37230	-0.0196	-	0,0158	0.1174	-5.26
2014	Urban	0.35270		0,1528			
2004	Rural	0.32345	0.002	-	0,0157	-	6.18
2014	Rural	0.34345		0,0101		0.0036	

The summary of the overall, urban and rural regions' decomposition of the change in the occupational segregation index for the years between 2004 and 2014 are given by Table 5. The results show that composition effect (net segregation) is the main source of the changes in the segregation indices in all regions. The main source of differences in the indices in all regions over the years between 2004 and 2014 is due to shifts in gender composition within occupations indicating women and men are more concentrated in certain occupations. If only mix effect were observed occupational gender segregation would have declined across all regions since mix effect in all regions has a negative impact.

When comparing occupational segregation indices across urban and rural regions urban regions' labour market is still more segregated than the rural regions, even though, segregation index of urban regions compared to rural regions was much higher in 2004. Since then segregation index has decreased in urban regions while rural experienced dramatic increase in segregation. The figures reveal that; the main source of increasing occupational segregation in overall and urban is due to interaction effect; interaction of higher segregation within occupations and more segregated labour market.

### **Concluding Remarks**

According to the results obtained; there is persistent and high occupational gender segregation in North Cyprus labour market over the period (2004-2014). Also it has been increasing. The segregation differs across rural and urban regions. Occupational gender segregation is higher in urban regions than rural regions labour markets. After 1974, participation of women in labour market has increased since there was a high demand for labour both in rural and urban. That was the time when in all regions the participation of women in the labour market dramatically increased reshaping the perception of society about women having a paid job. Women

working outside of the house started to be acceptable by the community conditional on completing their unpaid work at home. This conditional acceptance forced women to work in occupations having flexible or relatively lower working hours which would let them have enough time to complete their traditional duties at home. Furthermore, they prefer to work in such jobs that do not require high skills or experience that would create wage difference when they turn back labour market after taking a time off for pregnancy or marriage etc. reasons, which can explain the high level of concentration in elementary and professionals occupations.

The more detailed picture observed through decomposition of changes due to shifts in the gender composition within occupational categories and/or due to shifts in the occupation mix of the economy reveals that; the main source of the increasing segregation is due to the shifts in gender composition within occupations (net segregation). The concentration of men and women in certain occupation is higher in 2014 compared to 2004. Women and men canalized in different occupations.

Results of the analysis of the differences across urban and rural regions show that urban regions labour markets become more integrated in terms of both gender composition within occupational categories and occupation mix of the economy. Mix effect is the main source of decreasing occupational gender segregation in the urban region indicating that there has been a decline in the size of women and dominated occupations in urban.

However in the same period rural regions labour markets become more segregated. Concentration of men and women in certain occupations increase even occupation mix of the economy become less segregated. But the main source of the change of increasing occupational gender segregation in the rural regions is the interaction effect; the effect due to the interaction of more segregated

occupations and less segregated occupation mix of the economy.

Occupational segregation has been considered throughout the literature as a fact which hinders female labour force participation both in quantity and in quality (Anker, 1998; Anker - Hein, 1986; Anker - Hein, 1985, 74; Blackburn, 2012; Blau - Hendricks, 1979, 197-198). In this study, the interest was mainly on the presence, extent, and patterns of occupational segregation in particular, and labour market conditions in general, may have contributed to the low labour force participation of women in North Cyprus. From the descriptive analysis of the female labour force participation and employment in occupational groups over time and taking into account the findings of the previous studies on female employment in North Cyprus, the expectation was that occupational segregation was an explanation for low labour force participation of women.

From the findings of this particular study we can barely conclude that decreasing labour force participation of women and increasing occupational gender segregation; as a labour demand constraints, over the same period may be considered as a factor which jeopardizes female labour force participation both in quantity and in quality in North Cyprus labour market. However, to be more certain we cannot measure the effect of segregation on female labour force participation since the individual level micro-data is not available.

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