

FINANCIAL CRISES OF TURKEY and GENDERED EMPLOYMENT OUTCOMES

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DRAFT 1

Introduction

The outcomes of economic crises for women workers and gender composition of employment is a controversial and highly debated topic given the complex nature of women's participation in economic activity. The discussions with regard to the relationship between gendered patterns of employment and economic crises can be summarized under three basic hypotheses: a) *the segmentation hypothesis* argues that there is a rigid sex typing of occupations hence it is the changes the composition of output that bring about changes in the gender composition of labor; b) *the buffer hypothesis* implies that gender specific characteristics of proletarianization make women more disposable in times of crises; and c) *the substitution hypothesis* suggests that the disadvantaged position of women as laborers functions as a competitive advantage for them vis-à-vis their male counterparts during economic crises. The central question of the paper is to analyze which of these hypotheses explains or co-explain the gendered employment patterns in crises periods in the Turkish economy between 1989 and 2008. The current global economic crisis, which has been compared to the Great Depression, makes this discussion timely, and relevant.

In 1980, Turkey incurred a dramatic shift from import substitution industrialization (ISI) to export oriented industrialization (EOI). The structural adjustment and macroeconomic stabilization policies adopted included trade liberalization, export promotion, cut-backs in agricultural subsidies, privatization and repression of trade unions that led to increasing insecurity for workers and lower labor standards, deterioration in real wages, persistent and high rates of unemployment. There are two stages of structural adjustment: a) the first phase (1980-1989) was characterized by, trade liberalization, smaller government, cutbacks in subsidies and social security , b) the second phase of structural adjustment, 1989 to the present begins with full financial liberalization. In this study we focus on the second phase. With full financial liberalization, Turkey has been trapped in the speculative growth cycle and has gone through four consecutive financial crisis between 1988 and 2006 (i.e. 1991 contraction, 1994,1999 and 2001 crises). The increasing insecurity in the labor market has led

households, especially poor households to search for new coping mechanisms, which had implications in terms of women's paid and unpaid labor burden.

The downward pressure on the labor share of value added that results from increased price competition under trade liberalization since 1980, intensified even more during economic downturns. Gender inequality in the labor market has been an important instrument for achieving international "competitiveness" and promotion of exports.

Gender and employment patterns during economic recessions should be studied with the recognition of the interplay between secular and cyclical trends. The literature on gender and employment patterns in Turkey has emphasized the secular trends under the rubric of feminization of employment under EOI policies and the feminization U-curve hypothesis literature¹. The literature on feminization-U curve shows that, the female labor force participation has significantly declined with urbanization (from %72 in 1955 to 24% in 2006) and there has been only a mild increase in women's participation in the urban sector in the 1990s. The reason of low recovery and stagnant behavior in female labor force participation does not seem to be related with the skill and education level of women but more so with the gendered ideological context and low employment creation of the EOI strategy.

Even though feminization of employment and EOI literature suggests that export orientation has led to an increase in female employment, there is also an agreement that women are clustered into several low skill, low-pay, labor-intensive, export-oriented sectors in a highly gender-segmented employment structure. Turkey's experience resembles a typical low-road industrialization scenario, which failed in meeting expectations in terms of creating employment opportunities in labor-intensive exporting sectors. Due to low employment creation performance in exporting sectors and the existence of dominant patriarchal social norms, increases in women's labor force participation and employment have been modest.

The research on secular trends has dominated this literature and the analyses of cyclical trends have been relatively limited. Moreover, studies on the impact of economic crises on female employment in Turkey have adopted a microeconomic approach rather than a macro-economic level of analysis. They have focused on either the labor supply decision of

¹ See for ex. Çağatay and Berik (1990), Özler (2000), Başlevent and Onaran (2004), Şenesen and Özar (1998), Tansel (2000), Bulutay (2000)

women within the added and discouraged worker effect framework, or the relative instability and displacement of women workers within sectors (Onaran and Baslevent 2003, 2004, Ozler, 2000).

The need for macroeconomic analysis of cyclical trends in the gender composition of labor is frequently addressed in the literature. Even though there are some studies on developed countries, empirical studies on developing countries are very limited. This study aims to fill this gap for the case of Turkey.

Theoretical Background

The literature that we aim to contribute to is the analysis of the impact of economic recessions on women's employment in developing countries that apply EOI strategy with SAPs. Disentangling the effects of economic recessions from those of structural adjustment on female employment is not straight-forward: Some studies in the literature have analyzed this under the rubric of labor supply decision of women under economic contraction and used the "added worker" and "discouraged worker" framework. In this context, women either enter the labor force as added workers in order to compensate for loss of income of the family due to deteriorating employment prospects of the primary earner, or they may become discouraged given the reduction of employment opportunities under contractionary EOI regimes and during recessions.

Here we aim to focus on employment outcomes of recessions in a broader context than what discouraged and added worker effect can promise. The arguments on women's employment and recession can be categorized in three main hypotheses: (i) *the buffer hypothesis*, (ii) *the segmentation hypothesis* and (iii) *the substitution hypothesis*.² Whether women's employment behaves pro- or counter-cyclically, leads us to conclusions about how female labor functions during recessions.

The **buffer hypothesis** argues that women function as a flexible reserve, because they are less incorporated to the workforce compared to men. Their employment is pro-cyclical, and they have greater disposability. Hence they are disproportionately laid off during

² See Humpheries (1988), Bouillaguet and Gauvin (1988), Bettio (1988), Rubery and Tarling (1988), Baden (1993), Van Wagner (1993)

recessions. There are two main approaches to explain this phenomenon. The first approach is based on human capital labor market theories and dual labor market theories. The buffer role of women comes from their human capital endowments, which lowers the incentive for firms to hoard women workers in a downturn³. The second approach, the Marxist one argues that women constitute a *reserve army of labor*, whose size fluctuates with the business cycle because they are not fully integrated to the workforce. However, the reserve army concept is used with a caution that addresses the peculiarities female LFP. It is argued that the descriptive strength of the reserve army concept arises from the fact that women have been available as a reserve army in ways that men have not yet, they consider this “pseudo-reserve army” existence of women as a form that is subject to multiple dynamics.⁴

The substitution hypothesis suggests that female labor is substituted for male labor during economic recessions and that female labor is used more intensively in both traditionally male and female industries and occupations during recessions. The Marxist framework argues that women become especially more attractive as workers during economic contractions as they constitute a cheaper, less organized and more controllable labor force. Hence, they consider this phenomenon as “ongoing primitive accumulation under modern capitalism” and describe this feminization process as capital’s unwillingness to afford a proletarian workforce.⁵ The neo-classical framework argues that recession periods create incentives for employers to break down the labor market barriers, and correct the imperfections of the market, which exclude women from certain jobs and crowd them into some others (Becker, 1971). Thus, there is also a neo-classical argument that is consistent with the substitution hypothesis.

The segmentation hypothesis argues that there is a rigid sex-typing of occupations. Hence, it is the changes in the composition of output that bring about changes in the gender composition of labor. If women are concentrated in sectors or occupations that are less vulnerable to economic cycles, women are going to be sheltered from cyclical fluctuations (Milkman, 1976). If they are concentrated in more vulnerable positions, they will be hit harder

³ See Mac Kay et al (1971) and Jennes et al. (1975)

⁴ Please see Milkman (1976), Bruno (1979), Bruegel (1979), Enloe (1980), Barone (1998), Goldthorpe (1983), Wright (2000) for a discussion on the peculiarities of women’s proletarianization and its relation to economic development.

⁵ Mies (1998), Milkman (1976)

by the economic recession. This hypothesis argues that it is the secular trends rather than cyclical trends that determine female labor force participation.⁶

The gender segmentation of labor markets has also been of interest due to its relationship to the gender gap in wages. The direct effect of segregation on wages is analyzed by measuring the wage gap between male and female dominated occupations or sectors with similar education and skill requirements (Sorensen 1989, Treiman and Hartmann,1981, Blau and Ferber 1986, Jacobs and Lim 1992)⁷. The typical finding is that earnings are lower in female dominated sectors or occupations. Concentration of women into labor-intensive export-oriented sectors in low skill jobs is conceptualized as “housewifization of labor” by international capital. This is considered as an effort to break the dominance of trade unions and flexibilize labor, which eventually will “housewifize” male labor as well. (Mies, 1998)

The three hypotheses above are not necessarily competing with each other, and they are potentially compatible and complementary. Moreover, one effect may dominate over the others during different recessions. This framework not only provides, an intuition on gendered employment patterns during economic recessions, but it also tells us a story about the gendered structure of employment in general, which can be pursued to analyze the distribution of income within classes as well as between classes.

Empirical Analysis on Gendered Employment Patterns Across Financial Crises of Turkey after Financial Liberalization:

The framework developed by Rubery and Tarling (1988) allows us to evaluate the three possibilities mentioned above in a macroeconomic setting. Their method offers a step by step investigation of buffer, segmentation and substitution hypothesis for long-term analysis of gendered employment outcomes of economic cycles.

What is expected to happen to female labor market indicators during recessions and booms according to the three hypothesis reviewed here can be discussed by the help of predictions table below (Table 1). According to the (favorable) segmentation hypothesis

⁶ For example current discussions argue that the segmentation hypothesis captures the gendered outcomes of the current crisis.

⁷ Please see Grimshaw and Rubery (2002) for a detailed discussion on gender pay gap standard decomposition techniques.

presented in the literature, due to their concentration in somewhat recession-proof industries, enterprises or occupations women are relatively protected from cyclical variation of total employment, hence we expect women's employment to be relatively stable. On the other hand women's unemployment rate is expected to be lower when compared to male counterparts. Hence, overall women's share in employment is expected to increase and the changing composition of total employment is expected to decrease the segmentation in the labor market since the weights of predominantly male occupations are supposed to decline. However, as discussed above this depends on what type of segmentation we talk about. If the segmentation is an unfavorable segmentation case, meaning women mostly hold jobs in cyclically vulnerable sectors, firms and positions; labor market indicators are expected to move similarly with the buffer hypothesis.

Secondly, if the buffer hypothesis applies, it is argued that women are disproportionately represented in the lay-offs and they function as a reserve army of labor. They are the first to be fired in the recessions and first to be hired during the booms. During downswings women's LFPR is likely to fall as women on the borders of production and reproduction spheres have additional reasons to become discouraged workers. Moreover we expect women's relative share of employment to increase during the booms and to decline in slumps. Consequently we expect gender segmentation to increase during the recessions as a result of the declining representation of women across sectors and occupations.

Finally, in the case of the substitution hypothesis, women's employment is anticipated to be relatively stable and may even increase in the times of contraction. If women replace laid off men, and this occurs by the reallocation of female labor across sectors, women's employment may remain stagnant. On the other hand if substitution takes place without reallocation of labor or only partially by reallocation of female labor then female employment maybe increasing. The reverse of this trend is expected to be seen in the unemployment rates of women. However, the decline female unemployment can be partly offset if women's labor force participation increases as a result of the survival strategy of the family to compensate for the loss in male breadwinner's income. In this case, the female share of employment is assumed to increase and if substitution possibilities vary inversely with women's share, the segmentation is expected to decrease as well.

In our empirical analysis we study the changes in gender composition of employment during economic crises by analyzing the crises of Turkey individually (i.e. 1991 contraction, 1994, 1999 and 2001 crises) after financial liberalization. In this respect we first evaluate the labor market indicators under the matrix of expectations (table 1) which is discussed above. The linkage between economic cycles and employment cycles have not been one to one in Turkey, especially for 1994 economic crisis. Hence, to investigate the employment patterns across cycles despite this problem, we defined cycles in three different ways: a) by using GNP growth to identify peaks and troughs, b) by using GNP growth to identify troughs and lowest unemployment before the crisis to identify the peak, c) by using unemployment cycles to determine the peaks and troughs. Given the significance of the discouraged worker phenomena which is not reflected in the official unemployment numbers we re-calculated the unemployment rates with a broader approach that includes ‘discouraged workers’ and ‘workers willing to work but not looking for a job’ and determined cycles also based on this broad definition of unemployment.

Table 1.: Predictions on Employment Indicators for Women across Economic Cycles

Predictions on Hypotheses	Women's Participation Rates	Women's unemployment Rates	Women's employment	Women's Relative Share of Employment	Employment Segmentation
Segmentation	BUST: No prediction	BUST: Decreases relative to men's unemployment rates if women are protected or vice versa	BUST: Relatively stable if concentration of women in less cyclically sensitive sectors or vice versa	BUST: Rises or falls depending on the type of segmentation in aggregate due to changing composition of total employment ; stable within the sectors	BUST: Declines due to declining weights of predominantly male dominant occupations or vice versa
	BOOM: No prediction	BOOM: No prediction	BOOM: same with the bust case	BOOM: same with the bust case	BOOM: same with the bust case
Buffer	BUST: May fall as the 'discouraged' women worker's may leave the LF	Rises relative to men's: but the increase in the unemployment may be smaller than the fall in the employment rates since discouraged workers' leave the LF.	BUST: Relatively unstable; women are disproportionately shed	Declines in slump across all industries	Relative rise in segmentation due to declining relative numbers of women in one or more occupations as women workers are disproportionately shed
	BOOM: Increases relative to men's	BOOM: Decreases more than men's	BOOM: Increases relative to men's.	BOOM: rises across all industries	BOOM: Relative fall is segmentation as women's employment disproportionately increases.
Substitution	BUST: May rise as households respond by 'adding' female workers	BUST: Reduced relative to men's though may be partly offset by rise in participation rate	BUST: Relatively stable or increases as women are disproportionately retained	BUST: Increases in the downturn, especially in the recession	BUST: If substitution possibilities vary inversely with the proportion of women, segmentation will fall due to sex composition change
	BOOM: No prediction	BOOM: No prediction	BOOM: No prediction	BOOM: No prediction	BOOM: No prediction

Source: Based on Humpheries , J. (1988), p.16 and Authors Predictions.

The secular trends in labor market indicators by gender reveal some important factors regarding the interpretation of cyclical analysis, hence before analyzing the cyclicity, it will be helpful to briefly review the gender disaggregated trends. Table 5.2 summarizes labor market indicators for the time frame of the analysis, 1988-2006. It demonstrates three important trends. Firstly, the increase in female share of LFP and the declining trend in LFP of men in the disaggregated LFP series show that the share of female labor force grows slowly starting from mid 1990s in the urban labor market. Secondly, despite very low labor force participation rates for females, the trends in unemployment shows that female unemployment has always been 2-2.5 times greater than male unemployment, ranging from 28% to 13%, between 1988 and 2006.

Table 2

Labor Market Indicators by Gender (Official Definition) 1988-2006

Years	GNP (growth rate)	male LFPR (urban)	female LFPR (urban)	share of FLF (urban)	official unemp. (urban)	official male unemp % (urban)	official female unemp % (urban)	Share of Female Unemp. (urban)	employed men (urban)	employed women (urban)
1988	1.50	78.12	17.72	18.13	13.1	9.7	28.3	39.25	6,154	1,081
1989	1.60	76.82	17.78	18.54	13.1	10.1	26.2	37.16	6,201	1,159
1990	9.40	76.83	17.04	17.93	12	9.5	23.4	35.01	6,511	1,204
1991	0.30	76.97	15.64	16.93	12.7	10.6	22.6	30.19	6,839	1,208
1992	6.40	76.82	16.99	18.26	12.6	10.7	20.9	30.44	7,161	1,416
1993	8.10	75.17	15.67	17.43	12.6	10.5	22.8	31.58	7,235	1,316
1994	-6.10	75.34	17.40	18.89	12.4	10.5	20.4	31.09	7,567	1,567
1995	8	74.07	16.81	18.77	10.8	9	18.3	31.98	7,778	1,613
1996	7.10	73.21	15.98	18.04	9.9	8.7	15.4	28.01	8,044	1,641
1997	8.30	72.94	16.92	19.01	10	8.2	17.5	33.51	8,331	1,756
1998	3.90	72.78	16.77	18.79	10.5	9.1	16.5	29.47	8,608	1,831
1999	-6.10	72.16	17.76	19.77	11.4	9.9	17.4	30.14	8,709	1,968
2000	6.30	70.93	17.22	19.54	8.8	7.8	13	28.82	9,034	2,070
2001	-9.50	70.60	17.44	19.87	11.6	10.3	16.6	28.61	9,002	2,074
2002	7.90	69.77	19.07	21.51	14.2	13	18.7	28.20	8,844	2,267
2003	5.90	68.93	18.52	21.14	13.8	12.6	18.3	28.05	9,025	2,262
2004	9.90	70.83	18.33	20.65	13.6	12.5	17.9	27.11	9,519	2,325
2005	7.60	71.53	19.26	21.13	12.7	11.6	17	28.28	10,041	2,525
2006	6.10	70.77	19.93	21.79	12.1	10.9	16.4	29.41	10,368	2,712

Source: Household Labor Force Survey (HLFS) Data, <http://www.turkstat.gov.tr>

Table 3

Labor Market Indicators by Gender (Broad Definitions) 1988-2006

Years	GNP (growth rate)	male Broad LFPR (urban)	female Broad LFPR (urban)	share of FLF (broad) (urban)	broad unemp.% (urban)	male broad unemp % (urban)	female broad unemp % (urban)	Share of Female Unemp. (broad) (urban)	employed men (urban)	employed women (urban)
1988	1.50	82.43	36.74	20.20	16.62	11.12	38.28	46.53	6,154	1,081
1989	1.60	81.01	37.05	19.22	14.24	10.55	29.78	40.18	6,201	1,159
1990	9.40	80.31	34.92	18.44	13.03	10.02	26.41	37.37	6,511	1,204
1991	0.30	80.87	34.86	17.59	14.06	11.34	26.65	33.33	6,839	1,208
1992	6.40	80.28	33.44	18.88	13.87	11.35	24.68	33.60	7,161	1,416
1993	8.10	78.60	27.39	17.96	13.86	11.16	26.19	33.94	7,235	1,316
1994	-6.10	79.09	32.09	19.64	13.87	11.22	24.72	35.01	7,567	1,567
1995	8.00	78.44	31.53	19.23	12.14	9.92	21.51	34.05	7,778	1,613
1996	7.10	77.96	31.21	18.59	11.38	9.59	19.24	31.43	8,044	1,641
1997	8.30	77.49	29.69	19.66	11.67	9.20	21.78	36.68	8,331	1,756
1998	3.90	77.63	30.22	19.60	12.53	10.28	21.72	33.98	8,608	1,831
1999	-6.10	76.81	31.28	20.79	13.85	11.28	23.63	35.49	8,709	1,968
2000	6.30	74.76	27.51	20.20	10.80	9.06	17.69	33.09	9,034	2,070
2001	-9.50	73.72	27.82	20.24	12.84	11.19	19.36	30.51	9,002	2,074
2002	7.90	72.39	28.62	21.90	15.38	13.74	21.18	30.16	8,844	2,267
2003	5.90	71.32	27.14	21.44	14.72	13.21	20.30	29.55	9,025	2,262
2004	9.90	74.87	27.75	22.23	17.79	15.05	27.41	34.24	9,519	2,325
2005	7.60	75.43	28.36	23.47	18.35	14.76	30.09	38.48	10,041	2,525
2006	6.10	75.31	29.10	24.41	18.66	14.72	30.90	40.41	10,368	2,712

Source: Calculated from Household Labor Force Survey (HLFS) Data,
<http://www.turkstat.gov.tr/>

Thirdly, very high and persistent urban unemployment of women leads to a significant discouraged worker phenomena for women. Disaggregated trends demonstrate that the discouraged worker effect has historically been an important component of labor market decision of women when compared to men. This can be traced in either in the comparison of the official LFP rates and constructed (by including discouraged workers) broad LFP rates, or in unemployment rates. Similarly with the official labor force participation rate, broad LFP rate of male workers is in a steady decline, whereas differently from the official LFP rates broad female LFP is more volatile in the urban sector. The average difference between official LFP rates for males and broad LFP rates is 3.9%, whereas this number is 13.4% for females, which indicates that there is a significantly large group of women that functions as the latent reserve who is ready to step in depending on the employment prospects in the labor market.

Fourthly, according to the official unemployment numbers the share of women in unemployment is in a declining trend. However, when we consider the broad definition of female unemployment in urban areas, we see that the decline in the share of women in the broad unemployment rate is slower than is the case for official unemployment rates. Once again this reflects the importance of discouraged workers among the unemployed females. The difference in average between the two definitions of unemployment for female workers is as high as 5.46%, whereas the difference is significantly smaller for male workers (1.2%).

Nevertheless, discouraged worker phenomena and hence the broad definition of unemployment is crucial in assessing the actual unemployment level for both genders. The gap between official rate and broadly defined rate of unemployment shows that the discouraged worker phenomenon has a key role not only in terms of determining the size of the unemployment problem but also in terms of determining the direction of the trend. Post 2001 crisis unemployment trends demonstrates the growing importance of a broader unemployment definition, due to the changing structure of unemployment.

After this brief summary of gendered employment trends in the labor market for the specified period, next we focus on the cyclical behavior. Analyzing the official and broad employment indicators (Table 2 and 3) for 1991 (contraction), 1994, 1999 and 2001 economic crises years with the preceding years we see can evaluate which hypothesis/hypotheses dominate each crisis. First, we determine downswings based on economic cycles by comparing these years of low GNP growth with the nearest high GNP years. The second way of identifying cycles is by combining the low economic growth years with the nearest low unemployment year to pinpoint the downswing. And finally the cycles are determined by comparing the high unemployment years that represent trough years with the nearest low unemployment years that represents the peak of the cycle. Tables 4 and 5 below are constructed according to these three versions of cycles based on official labor market indicators and broadly defined indicators respectively. The tables provide the absolute and relative changes in indicators for each downswing.

Table 4 CHANGES IN LABOR MARKET INDICATORS ACROSS ECONOMIC CYCLES (based on official definitions)

ECONOMIC GROWTH CYCLES: Peak and Trough Years Are Determined According to GNP Growth

Official Unemployment	Absolute change in Official Unemp. Rate				Absolute change in numbers employed				Absolute change in LFPR			
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women

Table 5 CHANGES IN LABOR MARKET INDICATORS ACROSS ECONOMIC CYCLES (based on broad definitions)

Peak Year	Trough Year	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1990	1991	1.10%	-0.80%	11.57%	-3.41%	328	4	5.03%	0.33%	0.14%	-1.41%	0.18%	-8.27%
1993	1994	0%	-2.40%	0	-10.52%	332	251	4.58%	19.07%	0.17%	1.73%	0.22%	11.04%
1997	1999	1.70%	-0.10%	20.73%	-0.57%	378	212	4.53%	12.07%	-0.78%	0.84%	-1.06%	4.96%
2000	2001	2.50%	3.60%	32.05%	27.69%	-32	4	-0.35%	0.19%	-0.34%	0.22%	-0.47%	1.27%

HYBRID CYCLES: Trough Years Are Determined According to the GNP Growth, Peaks Are Determined By The Unemployment Rate

Official Unemployment URBAN	Absolute change in Official Unemp. Rate				Absolute change in numbers employed (in thousands)				Absolute change in LFPR				
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
Peak Year	Trough Year	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1990	1991	1.10%	-0.80%	11.57%	-3.41%	328	4	5.03%	0.33%	0.14%	-1.41%	0.18%	-8.27%
1990	1994	1.00%	-3.00%	10.52%	-12.82%	1056	363	16.21%	30.14%	-1.49%	0.35%	-1.93%	2.05%
1996	1999	1.20%	2.00%	13.79%	12.98%	665	327	8.26%	19.92%	-1.05%	1.77%	-1.43%	11.07%
2000	2001	2.50%	3.60%	32.05%	27.69%	-32	4	-0.35%	0.19%	-0.34%	0.22%	-0.47%	1.27%

unemployment numbers do not reflect growth cycles

UNEMPLOYMENT CYCLES: Peak and Trough Years Are Determined According Unemployment Cycles.

Official Unemployment URBAN	Absolute change in Official Unemp. Rate				Absolute change in numbers employed (in thousands)				Absolute change in LFPR				
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
Peak Year	Trough Year	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1990	1991	1.10%	-0.80%	11.57%	-3.41%	328	4	5.03%	0.33%	0.14%	-1.41%	0.18%	-8.27%
1996	1999	1.20%	2.00%	13.79%	12.98%	665	327	8.26%	19.92%	-1.05%	1.77%	-1.43%	11.07%
2000	2002	5.20%	5.70%	66.66%	43.84%	-190	197	-2.10%	9.51%	-1.16%	1.85%	-1.63%	10.74%

Source: Authors calculations based on HLFS data. www.turstat.gov.tr

ECONOMIC GROWTH CYCLES: Peak and Trough Years Are Determined According to GNP Growth													
Unemployment Broad definition URBAN		Absolute change in Unemployment Rate		% change in unemployment rate		Absolute change in numbers employed (in thousands)		% change in numbers employed		Absolute change in participation rate		% change in participation rate	
Peak Year	Trough Year	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1990	1991	1.32%	0.25%	13.17%	0.94%	328	4	5.03%	0.33%	0.56%	-0.06%	0.69%	-0.17%
1993	1994	1.01%	-1.47%	9.05%	-5.61%	332	251	4.58%	19.07%	0.50%	4.70%	0.63%	17.15%
1997	1999	2.10%	1.85%	22.85%	8.49%	378	212	4.53%	12.07%	-0.67%	1.59%	-0.86%	5.35%
2000	2001	2.13%	1.67%	23.53%	9.44%	-32	4	-0.35%	0.19%	-1.04%	0.31%	-1.39%	1.12%
HYBRID CYCLES: Trough Years Are Determined According to the GNP Growth, Peaks Are Determined By The Unemployment Rate													
Unemployment Broad definition URBAN		Absolute change in Unemployment Rate		% change in unemployment rate		Absolute change in numbers employed (in thousands)		% change in numbers employed		Absolute change in participation		% change in participation rate	
Peak Year	Trough Year	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1990	1991	1.32%	0.25%	13.17%	0.94%	328	4	5.03%	0.33%	0.56%	-0.06%	0.69%	-0.17%
1990	1994	1.20%	-1.68%	11.98%	-6.36%	1056	363	16.21%	30.14%	-1.22%	-2.83%	-1.51%	-8.10%
1996	1999	1.69%	4.39%	17.64%	22.81%	665	327	8.26%	19.92%	-1.15%	0.06%	-1.47%	0.19%
2000	2001	2.13%	1.67%	23.53%	9.44%	-32	4	-0.35%	0.19%	-1.04%	0.31%	-1.39%	1.12%
unemployment numbers do not reflect growth cycles													
UNEMPLOYMENT CYCLES: Peak and Trough Years Are Determined According Unemployment Cycles													
Unemployment Broad definition URBAN		Absolute change in Unemployment Rate		% change in unemployment rate		Absolute change in numbers employed (in thousands)		% change in numbers employed		Absolute change in participation rate		% change in participation rate	
Peak Year	Trough Year	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1990	1991	1.32%	0.25%	13.17%	0.94%	328	4	5.03%	0.33%	0.56%	-0.06%	0.69%	-0.17%
1996	1999	1.69%	4.39%	17.64%	22.81%	665	327	8.26%	19.92%	-1.15%	0.06%	-1.47%	0.19%
2000	2002	4.69%	3.48%	51.68%	19.67%	-190	197	-2.10%	9.51%	-2.37%	1.11%	-3.17%	4.03%
2003	2006	1.50%	10.60%	11.35%	52.24%	1343	450	14.88%	19.89%	4.00%	1.96%	5.60%	7.22%

Reflections on 3 Hypotheses for 1991 Economic Downturn:

In all three versions of economic cycles based on official definitions we identify the peak as 1990 however, when the trough is determined according to growth cycle and peak is determined according to the official unemployment numbers we see that due to high economic growth rates accompanied by high unemployment rates in 1992 and 1993, 1990 represents the peak year for both 1991 and 1994 economic downturns. In table 4 we see that the relative changes depict a picture supporting the *buffer hypothesis*. Male unemployment increases by 11.57% as female unemployment decreases by 3.41% from 1990 to 1991. The relative change in employment rates show that employment increases by 5% for men and there is no significant increase in women's employment. Hence we see that the decrease in female unemployment is not due to employment gains but is due to the relative decrease in women's LFPR which is as high as 8.27%.

Using broad definitions gives us the same peak and trough years as the official unemployment numbers. The relative changes with the broad unemployment cycles are in the same direction with the official rates and by using broad definitions we also see that 97% of the contraction in the female labor force is due discouraged workers, hence as the buffer hypothesis suggests the primary reason of falling out of the labor force is low employment prospects in the market (Table 5).

Reflections on 3 Hypotheses for 1994 Crisis:

When we use official labor market indicators, only the first approach of determining economic cycles allows us to discuss the 1994 economic crisis (Table 4). Looking at relative and absolute changes we see stronger evidence supporting the interpretation in the previous section. Female unemployment declined by 10.5%, employment increased by 19% and female LFP increased by 11%. Thus, it seems that employment opportunities for women flourished during the 1994 economic crisis compared to that of men; and women also responded positively to increasing demand for female labor. Increasing labor force participation during a recession especially under deteriorating or stagnant employment opportunities for men suggests the added worker effect. The overall relative changes of employment opportunities of women vis-à-vis men during 1994 recession reflect a mild substitution effect as well. This description is in accordance with the findings of Onaran and Başlevent (2003). Onaran and Başlevent focus on the 1994 economic crisis, they use microeconomic data and study the

determinants of LFP decision of married women. They conclude that women whose husbands lost their jobs tended to participate in economic activity as “added workers” of the family.

When we analyze the indicators using broad definitions, we see that the change in female LFPR is 17%. This reflects the true size of the female population who is willing to work. Hence we see that during 1994 crisis, “added worker effect” coexisted with the “discouraged worker effect” which limits the growth of the official female labor force participation rate. This is reflected in the difference in between the relative change of the two LFP definitions (17%-11%). When we compare the growth change in official unemployment rate which is -10.52% with the change in broad unemployment rate, -5.61%, we see that once we include the discouraged workers the fall in female unemployment is only half of the very positive picture depicted by the official unemployment rates. These findings by broad definitions do not challenge the overall interpretation but rather provide additional information to modify our prior observations.

Reflections on the 3 Hypotheses for the 1999 Crisis:

When we use official unemployment rates and look at the first version of economic cycles based on GNP growth, we see that unemployment of men increased by 20%, whereas there was a slight decrease in female unemployment. Female employment and LFPR also mirrors unemployment changes. They increase by 12% and, 5% respectively. Similarly with 1994 economic crisis we see that women have been in a relatively favorable position during 1997-1999 downturn which can be interpreted as evidence for added worker effect that indicates the substitution or the segmentation hypothesis.

On the other hand when we determine cycles according to broad unemployment rates, the percentage change in unemployment for both genders is significantly greater, and even more so for women. This suggests the role of the discouraged worker phenomena and indicates that the added worker argument is not as significant as official numbers suggests. Hence the synthesis of six different ways of constructing cycles reflects the relatively favorable position of women during the 1999 economic crisis. This relatively stable and advantageous position can be interpreted as both segmentation and substitution hypothesis, in order to decide which of the two describes the changes in 1999 we need further investigate the change in female employment by decomposing the source of change in female employment in the following sections.

Reflections on 3 Hypotheses for 2001 Crisis:

The absolute and relative changes demonstrate the unemployment cost of 2001 economic crisis for both genders. If the economic cycle is determined according to economic growth cycles (Table 4) we see that both genders' unemployment increases by 1/3, and the % change in employment and LFP participation shows that the burden of the 2001 crisis is mainly born by men. However, indicators for female workers' are not positive enough to conclude for positive segmentation or substitution hypothesis either.

The unemployment cycles based on broad definitions, gives 2000-2002 and 2003-2006 downturns that reflect the labor market conditions and jobless growth phenomena which became very hurtful especially after the 2001 economic crisis. The percentage change in broad unemployment across 2000-2002 downturn is as high as 51.68% for men and 19% for women, which shows that the first round of the burden that comes with 2001 crisis is mostly carried by men. Women are relatively protected from the first round of the negative effects of 2001 crisis on labor market. However, very high unemployment rates make it difficult to argue for a *substitution* or (*favorable*) *segmentation hypothesis*. Moreover, 2002 reflects the second round of the effects of 2001 crisis on labor market indicators and we see that this second round hits primarily women, the change in unemployment is 52.24% for women and 11.35% for men, the indicators for this second round effect support *buffer hypothesis*.

Decomposition Analysis

Increasing female employment during the downswing of the economy or relatively protected positions of female workers' can be due to either female workers' concentration in less volatile jobs, or due to substitution of cheaper female workers for male workers, or may be due to a combination of the two options above. Similarly buffer outcome maybe the result of unfavorable segmentation. In order to distinguish segmentation from the substitution and the buffer cases, following Rubery and Tarling (1988)'s methodology, we decompose the source of change in female employment.

Decomposing the changes in female employment has three components. The first is the **growth effect**, which measures the contribution of employment growth to employment change, given the distribution of women across occupations. The second is the **share effect**, which measures the changes in the distribution of women across sectors, given total

employment in each sector. In other words, the share effect shows to what extent women are gaining (or losing) employment vis-à-vis men's employment. Thus, the behavior of the share effect tests for substitution and buffer hypotheses. The third component is the **interaction effect** between growth and share effects.

Accordingly,

If total female employment is $F_t = \sum T_{it} p_{it}$

Where

p_{it} = proportion of female to total employment in industry i in time t , and

T_{it} = Total employment in industry i in time t

Then,

$$\Delta F_t = F_t - F_{t-1} = (T_{it} - T_{it-1}) p_{it-1} + \sum (p_{it} - p_{it-1}) T_{it-1} + \sum (p_{it} - p_{it-1}) (T_{it} - T_{it-1}), \quad (1)$$

$$\sum (T_{it} - T_{it-1}) p_{it-1} = \text{Growth effect} \quad (2)$$

$$\sum (p_{it} - p_{it-1}) T_{it-1} = \text{Share effect} \quad (3)$$

$$\text{and } \sum (p_{it} - p_{it-1}) (T_{it} - T_{it-1}) = \text{Interaction effect} \quad (4)$$

The growth effect can further be broken into three components: scale effect, weight effect and a residual. **Scale effect** measures the effect of changes in total employment, given both the distribution of women across sectors and the weight of each sector. Secondly, given the total employment and distribution of women across sectors, the **weight effect** shows the effect of changes in the overall distribution of employment across sectors. It shows the effect of structural changes in occupational composition and the following outcomes in terms of women's employment. Since women's distribution across sectors is considered to be given, the weight effect provides a test of the segmentation hypothesis (Rubery and Tarling, 1988).

The Growth Effect can be rewritten and decomposed as follows,

The Growth Effect:

$$\begin{aligned} \sum (W_{it} T_{it} - W_{it-1} T_{it-1}) p_{it-1} &= (T_t - T_{t-1}) W_{it-1} p_{it-1} + \sum (W_{it} - W_{it-1}) T_{t-1} p_{it-1} + \\ &\quad \sum (W_{it} - W_{it-1}) (T_t - T_{t-1}) p_{it-1} \end{aligned} \quad (5)$$

where,

W_{it} = the weight of employment in group i in year t or $T_{it} / \sum T_{it}$

$T_{it} = W_{it} T_t$ where T_t = total employment in year t

$$\sum (T_t - T_{t-1})W_{it-1} p_{it-1} = \text{scale effect}; \quad (6)$$

$$\sum (W_{it} - W_{it-1}) T_{t-1} p_{it-1} = \text{weight effect} \quad (7)$$

$$\sum (W_{it} - W_{it-1}) (T_t - T_{t-1}) p_{it-1} = \text{residual} \quad (8)$$

Table 6 presents the interpretations/predictions of the decomposition analysis in terms of the buffer, the segmentation and the substitution hypotheses. The favorable segmentation hypothesis argues that women are concentrated in the sectors and occupations that are less sensitive to short-term labor demand fluctuations resulting from economic cycles. Since those female dominated sectors are expected to be more protected from the contractionary effects of the recession than the other sectors have to face, we expect the weight effect to be positive and significant during a recession. On the other hand, in a boom period, we expect the change in the weight of those industries to be relatively small or even negative as those sectors are unresponsive to short run demand changes. Contrarily, if it is unfavorable segmentation case the weight effect is expected to be negative. If women are substituting men in recessionary periods, we expect the share of the women to increase which will be reflected in a positive share effect. If the share effect is negative in the downswings and positive in the upswings, or if the share effect is relatively strong in booms compared to slumps we conclude in favor of the buffer hypothesis. (Humphries, 1988:29)

Table 6
Predictions on Decomposition of Female Employment Growth

Predictions	Buffer Hypothesis	Segmentation Hypothesis	Substitution Hypothesis
Upswing	<ul style="list-style-type: none"> Positive share effect 	<ul style="list-style-type: none"> Favorable segmentation: Minor even Negative Weight Effect 	<ul style="list-style-type: none"> Positive relative minor share effect compared to the downswing
Downswing	<ul style="list-style-type: none"> Negative Share Effect 	<ul style="list-style-type: none"> Favorable Segmentation: Positive even Substantial Weight Effect Unfavorable Segmentation: Negative weight effect-buffer 	<ul style="list-style-type: none"> Positive significant share effect

Source: Constructed by the Author

Findings of the Decomposition Analysis⁸:

The decomposition of employment change for female workers by its reasons shows that the growth effect is important in 1988-1990 and 1994-1997 booms and has been significantly more influential in the recession periods. Within the growth effect scale effect dominates in both booms and slumps except for 2000-2001 slump. The scale effect is more significant in the upswings than it is in the downswings. On the other hand we see that the weight effect is either negative or very small except for 2001 crisis. Having negative weight effect shows that the argument of women's being employed in relatively sheltered sectors is not credible and it is rather an *unfavorable segmentation* case. On the other hand for 2000 and 2001 slump the high positive weight effect should be considered together with the extremely high negative share effect which shows that women's share of employment has decreased and women that preserved their jobs and the small employment gains were in those less cyclically sensitive sectors, or occupations.

When we turn to the share effect we see that as predicted in the table above the numbers support the buffer hypothesis for 1991 economic recession and 2001 crisis. In the 1991 crisis the negative share effect indicating buffer hypothesis is accompanied by a negative weight effect which shows that women loose out as a result of *unfavorable segmentation*. On the other hand positive share effect in the slumps and negative weight effect in the booms for second (1994 crisis) and third (1999 recession) economic cycles supports substitution hypothesis. As we argued before, the negative share effect shows that women were not sheltered in downturns, or in other words the segmentation argument associated with women being concentrated in sheltered sectors or positions is not supported. However, this is not to say that there is no support for segmentation argument. On the contrary women may very well be concentrated in the sectors and positions that are very vulnerable to economic cycles; this can be going hand in hand with the buffer hypothesis and negative weight effect.

Looking over the four cycles we can see that women had a very vulnerable position in the labor market in the beginning of 1990's (1991 contraction-buffer hypothesis coexist with unfavorable segmentation scenario) and had relative gains with urbanization and increasing female employment in urban during 1990's (1994 and 1999 crises-substitution hypothesis) in accordance with the Bulutay (2000)'s and Tansel (2000)'s expectation based U curve. However, as a result of the severity of 2001 economic crisis, and the substantial changes in

⁸ See the decomposition tables that lead to these conclusions in the appendix.

the labor market and unemployment structure in the 2000s, we see that women are once again thrown out of the labor market (2001-buffer hypothesis) .

Conclusion

In terms of the three hypotheses, our analysis showed that, the change in the gender composition during the 1991 contraction can be explained by the buffer hypothesis which is due to unfavorable segmentation. On the other hand, the response in terms of gender composition of labor market indicators during the 1994 and 1999 crises reflect the relative gains in female employment in the 1990s and support a modest substitution hypothesis. The 2001 economic crisis represents a threshold in terms of persistent and very high unemployment in the labor market. The jobless growth phenomenon became persistent after the 2001 economic crises, hence using two different definitions of unemployment gave critically different outcomes. The broad definition gives us a 2000-2002 cycle accompanied by another round of unemployment fluctuation of 2003-2006. According to the decomposition analysis in the first round of the unemployment cycle following 2001 crisis, the burden of the crisis have fallen on male workers. However persistent and high unemployment disproportionately affected women workers in the second round of the unemployment cycle that started with 2003. In the overall in 2001 crisis, women's share of employment has decreased (buffer hypothesis) and women that preserved their jobs and the small employment gains were in those less cyclically sensitive sectors, or occupations (favorable segmentation).

The results show that different hypothesis have dominated the crises over time. This can either be due to the changing structure of the crisis or it can be due to the changing demographic structure. The literature on secular trends in gender and employment addresses a demographic transformation in the urban setting, during the 1990s. The increasing female employment in the urban in the 1990s, is addressed in the feminization U-curve literature (Tansel, 2000; Tunali, 1997; Bulutay, 2000) which is in accordance with our findings. Hence the relatively better off position of women during the crises of 1994 and 1999 can be partially related with the positive secular trends.

In terms of the nature of the crisis, even though all crises in the post-financial liberalization era were financial crises which began with capital outflows, the responses to those crises in the labor market has changed over time. Tasci (2005), Gursel and Ulusoy

(1999) and Ansal et al. (2000) argue that the effect of crises in the 1990s are reflected in the underemployment rates, whereas crises after 1999 are reflected in unemployment and long-term unemployment rates which led to increasing discouraged worker phenomena (Tasci, 2007). Hence, combining this information with the secular trends it is possible to argue that the relative gains of women in the 1990s are lost as the way to cope with the crises for employers have changed in the 2000s. Increasing unemployment, and long term unemployment trends has hit women harder who has a higher probability of staying long-term unemployed compared to men (Tasci and Tansel, 2005).

Using different ways of determining cycles and different definitions of unemployment helped us at multiple levels. The replication of the analysis with broad LFPR and unemployment rate clarified the contribution of the added worker effect and discouraged worker effect in the crises. Especially after 2000, we saw that broad unemployment cycles were substantially different which addressed the structural change in unemployment in the jobless growth era.

Very low and further decreasing female labor force participation in Turkey is interpreted as a deteriorating development indicator and hence has been a concern of scholars, and international circles for a long time. The gendered patterns of employment during economic crises clearly showed that crises contribute to the problem of low female labor force participation. Moreover, once we consider the highly vulnerable macroeconomic structure that went through four consecutive severe contractions since 1989 and is facing a global economic crisis today, the effect of crises on long term trends cannot be overlooked furthermore should be considered as informative about the gendered structure in the labor market.

This study clearly demonstrated that labor force participation of women cannot be isolated from the high unemployment problem and jobless growth phenomenon that became unbearable in 2000s. Hence we do not think that policies towards increasing female labor force participation such as provision of child-care services, increasing education and skill level of women can alone help to solve the problem of under-representation of women in the paid economy. Unless the high female unemployment and unemployment are the addressed as the core of the problem, the policies towards increasing female labor force participation are unlikely to achieve the goal of greater representation of women in the labor market.

In the context defined above we believe that the right policy approach should address the unemployment and jobless growth phenomenon with a gender perspective and with the objective of creating decent jobs. Increasing insecurity and the increasing gender inequality as a result of women's intensifying double burden in times of crises has been well documented in the development literature. Moreover the problem of low employment prospects and reflection of gendered social structures on deterioration of the working conditions is not a problem specific to Turkey. The consequences of contractionary macroeconomic policies and financial liberalization reveal themselves as increasing instability and joblessness which translate into increasing informal employment and care crises in many parts of the world. All those developments call for a general shift in the macroeconomic policy paradigm at the international level. The current global crisis clearly shows the urgency of a shift towards employment centered, demand-driven growth models that consider the gendered structure as a fundamental component of the policy making.

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APPENDIX –DECOMPOSITION TABLES

Table A.1.Female Employment Change According Official Unemployment Rates
(Economic Cycles Determined According to GNP Growth)

Economic Cycles Determined According to GNP Growth	booms				slumps			
years	88-90	91-93	94-97	99-00	90-91	93-94	97-99	00-01
Ft-Ft-1 (thousands)	123	109	189	102	4	252	212	4
%								
Contribution of the share effect	43.12	69.11	16.75	99.08	-1054.89	41.35	35.27	-1051.86
Contribution of the growth effect	54.23	23.75	77.32	16.61	1071.61	48.84	61.09	976.10
Contribution of the scale effect	107.75	293.19	112.06	474.33	160.17	72.55	78.82	-26.74
Contribution of the weight effect	-7.26	-181.76	-10.92	-359.93	-57.71	25.49	20.00	127.06
Contribution of the interaction effect	2.65	7.14	5.93	-15.69	83.28	9.81	3.63	175.75
Contribution of the residual	-0.48	-11.43	-1.14	-14.39	-2.47	1.73	1.17	-0.32

Source: Authors of own calculations

Table A.2.

Decomposition of Female Employment Change According to Official Unemployment Rates
(Economic Cycles are Determined According to GNP Cycles and Unemployment Cycles)

Economic Cycles Determined According to GNP Growth and Official Unemployment Rates	booms				slumps			
	88-90	?	94-96	99-00	90-91	?-94	96-99	00-01
Ft-Ft-1	123		74	102	4		327	4
%								
Contribution of the share effect	43.12		-40.22	99.08	-1054.89		42.32	-1051.86
Contribution of the growth effect	54.23		143.41	16.61	1071.61		52.55	976.11
Contribution of the scale effect	107.75		92.72	474.32	160.17		96.61	-26.73
Contribution of the weight effect	-7.26		6.86	-359.93	-57.70		3.07	127.06
Contribution of the interaction effect	2.65		-3.20	-15.69	83.28		5.13	175.75
Contribution of the residual	-0.48		0.41	-14.39	-2.47		0.31	-0.32

Source: Author's Own Calculations

Table A.3

Decomposition of Female Employment Change According Official Unemployment Rates

(Economic Cycles Determined According to Official Unemployment Rates)

Economic Cycles Determined According to Official Unemployment Rates	booms			slumps		
	88-90	91-96	99-00	90-91	96-99	00-02
Ft-Ft-1	123	433	102	4	327	197
%						
Contribution of the share effect	43.12	36.22	99.08	-1054.89	42.32	71.34
Contribution of the growth effect	54.23	55.10	16.61	1071.61	52.55	26.10
Contribution of the scale effect	107.75	103.23	474.33	160.17	96.61	2.54
Contribution of the weight effect	-7.26	-2.69	-359.93	-57.71	3.07	97.40
Contribution of the interaction effect	2.65	8.69	-15.69	83.28	5.13	2.55
Contribution of the residual	-0.48	-0.55	-14.39	-2.47	0.31	0.06

Source: Author's Own Calculations

Table A.4

Decomposition of Female Employment Change According Broad Unemployment Rates

(Economic Cycles Determined According to Broad Unemployment Rates)

Economic Cycles Determined According to Broad Unemployment Rates	booms				slumps			
	88-90	94-96	99-00	02-03	90-94	96-99	00-02	03-06
Ft-Ft-1	123	74	102	-5	363	327	197	450
%								
Contribution of the share effect	43.11	-40.21	99.07	1079.34	39.36	42.31	71.34	17.92
Contribution of the growth effect	54.22	143.41	16.60	-998.75	53.70	52.55	26.10	80.36
Contribution of the scale effect	107.74	92.72	474.32	89.89	112.87	96.61	2.54	99.69
Contribution of the weight effect	-7.26	6.86	-359.93	9.95	-10.87	3.07	97.40	0.27
Contribution of the interaction effect	2.65	-3.19	-15.69	19.41	6.93	5.13	2.55	1.72
Contribution of the residual	-0.48	0.41	-14.39	0.16	-1.99	0.31	0.06	0.04

Source: Authors Own Calculations