International Labour Organization

CRISIS AND TURKEY: Impact Analysis of Crisis Response Measures

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Foreword

This book is the outcome of the "Impact analysis of the crisis response and lessons learned for the way forward" project implemented by the ILO Ankara Office as part of ILO's "Recovering from the Crisis: Global Jobs Pact" which was adopted unanimously by the governments of member States and delegates from employers and workers organizations at the International Labour Conference held in June 2009. The basic objective of the project was to conduct an impact assessment of measures adopted by Turkey starting from 2008 to mitigate the impact of the crisis and to contribute to future policy deliberations in the light of this assessment. To this end, we examined the effects of the global crisis on Turkey and evaluated the effectiveness of anti-crisis measures in terms of both macroeconomic indicators and their contribution to employment at the sectoral level.

My special thanks go to the Turkish Confederation of Employer Associations (TİSK) for their request to undertake this activity and for their support and contributions. I also have to express my thanks to TÜRK-İŞ, HAK-İŞ, DİSK, İstanbul Chamber of Commerce (ISO) and Chamber of Industry (ITO) for sharing with us their reports reflecting their views on the measures undertaken. During project meetings held on 7 July, 21September and 22 October 2010 the following provided constructive contributions for which I am very thankful: Officials from the Ministry of Labour and Social Security, Ministry of Finance and Ministry of Agriculture and Rural Affairs; experts from the State Planning Organization, Undersecretariat of Foreign Trade, Undersecretariat of Treasury, Turkish Employment Agency, Social Security Institution and Turkish Statistics Institution; representatives from the confederations of trade unions for public employees, T. KAMU-SEN, MEMUR-SEN and KESK, Confederation of Turkish Artisans and Tradesmen (TESK), Turkish Enterprise and Business Confederation (TÜRKONFED), Turkish Association of Industrialists and Businessmen (TÜSİAD), Turkish Exporters Assembly, sister UN organizations, World Bank, International Monetary Fund, EU Delegation to Turkey and distinguished academics.

Most importantly, my deep appreciation is due to our distinguished academics Prof. Dr. Erinç Yeldan from the Department of Economics, Bilkent University; Prof. Dr. Erol Taymaz and Assoc. Prof. Dr. Hakan Ercan from the Department of Economics, Middle East Technical University, who meticulously prepared the reports in this book in a rather short period of time.

Finally, I am grateful to Senior Employment Specialist and Project Coordinator Ümit Efendioğlu for her dedicated and valuable work and ILO-Ankara staff members Özge Berber Ağtaş, Ozan Çakmak and Iraz Öykü Soyalp and intern Çağdaş Özeniş for their time and hard work.

Gülay Aslantepe

Director, ILO-Turkey

Introduction and Overview

Ümit Efendioğlu[1]

The US-originated collapse of the real estate market, which led to a serious turmoil in financial markets, turned into a major global economic crisis in 2007-2008, which rapidly spread first to advanced industrial countries and then to emerging market economies, including Turkey. The International Labour Organization (ILO) addressed the global crisis firstly in the context of the *ILO Declaration on Social Justice for a Fair Globalization* adopted by the International Labour Conference at its 97th session in June 2008, and later on through the policy framework offered by the document *Recovering from the crisis: A Global Jobs Pact*, which was unanimously adopted by the International Labour Conference at its 98th session in 2009, when the effects of the crisis were being felt most intensively.

It is critical to understand the causes of the crisis at the global level in order to underline the significance of discussing its effects and solutions also at the same level. In particular, it is not possible to grasp how we reached our present day without examining the course of the process of globalization during the last four decades. In this context, it is worth noting the following words of ILO Director-General Juan Somavia: "Long before the current financial crisis, we were already in a crisis of massive global poverty and growing social inequality, rising informality and precarious work – a process of globalization that had brought considerable benefits but for many had become unbalanced, unfair and unsustainable."[2]

A detailed analysis of the characteristics of the process of globalization since the 1980s was conducted by the *World Commission on the Social Dimension of Globalization* established in 2002 under the leadership of the ILO, which published its report *A Fair Globalization: Creating Opportunities for All*[3] in 2004. The salient points stressed in this report can be summarized as follows:

• As a result of liberalization of international movements in goods, services and capital, the process of global economic integration gained pace and some sectors and countries enjoyed rather high rates of growth, while some others as well as some groups within countries could not sufficiently reap the benefits of this growth. Consequently, both international and national imbalances and income disparities increased.

• Even in sectors and countries enjoying high rates of economic growth, employment creation capacity of growth fell short of magnitudes sufficient to eliminate unemployment and poverty. Besides technological change, this situation is the result of some other factors including limitations to the mobility of persons and skills they possess, increase in unskilled labour supply and informal employment as a consequence of rural to urban migration and modernization, as well as the mismatch between existing skills and skills that labour markets need.

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1 Senior Employment Specialist, Coordinator of the Project "Impact analysis of the crisis response and lessons learned for the way forward", ILO Ankara Office.

2 "Restoring Trust – Time to rescue the real economy", Opinion piece by Juan Somavia, Director-General of the International Labour Office, 28 October 2008. The full text can be reached through the following link: http://www.ilo.org/public/english/bureau/dgo/speeches/somavia/2008/opedcrisis.pdf

3 The report "A Fair Globalization: Creating Opportunities for All" can be reached through the following link: http://www.ilo.org/public/english/wcsdg/docs/report.pdf

• Perhaps one of the most important reasons for global growth failing to create sufficient employment is the increasing disconnect between the financial and the real economy. Combined with rapid technological change, in particular with many opportunities brought about by the dissemination of information and communication technologies, the global financial system was left uncontrolled to the dynamics of the market economy and short-term speculative capital freely circulated in countries that allow for it. While the role and impact of private financial institutions were rising, the share of the public sector in capital flows shrank. Loans needed for both investment and consumption were now provided by private financial institutions through various innovative methods. Under unregulated and imperfect market conditions, risk analysis and management conducted by these institutions led to an excessive bubble in credit loans. As the reliability of these institutions came into question, the global financial system faced a series of financial crises more frequently and gravely.

• Consequently, the unfair process of globalization "has caused many countries and sectors to face major challenges of income inequality, continuing high levels of unemployment and poverty, vulnerability of economies to external shocks, and the growth of both unprotected work and the informal economy, which impact on the employment relation and the protections it can offer"[4] , which in turn increased decent work deficits.

The adoption of the *ILO Declaration on Social Justice for a Fair Globalization* in 2008 by the International Labour Conference, which is the third declaration on general principles and policies drawing on the *Philadelphia Declaration of 1944* and *Declaration on Fundamental Principles and Rights at Work of 1998*, should be assessed against this background. The 2008 Declaration is the outcome of tripartite negotiations conducted after the report of the *World Commission on the Social Dimension of Globalization* and presents the contemporary vision of the ILO regarding its areas of work in the age of globalization. As such, the vision is the necessity of placing the *Decent Work Agenda,* which the ILO has been developing since 1999, at the centre of economic and social policies in order to attain a fair globalization and social justice.

With the global crisis, the deficit in decent work has reached a level more alarming than ever before. In the light of these developments and at the 98th session of the International Labour Conference (June 2009), the ILO adopted the *Global Jobs Pact*[5] with full support of its government, employer and worker constituents. The Pact seeks to emphasize policy alternatives focusing on decent work in the process of exit from the crisis; minimize the time lapse between economic and social recovery through sound and effective social dialogue mechanisms at national, regional and global levels and with joint will and concerted action of governments, workers and employers; and more importantly, provide the member States with policy measures and suggestions geared towards the elimination of disparities leading to the crisis. In line with the suggestions of the *2008 ILO Declaration on Social Justice for a Fair Globalization*, the *Global Jobs Pact* includes measures and policy alternatives towards achieving a fair globalization by focusing on the four integrated and inseparable components of ILO's *Decent Work Agenda*: investment and employment creation; extending social protection; improvement of working conditions on the basis of ILO Conventions; and implementation of effective mechanisms for social dialogue.

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4 *ILO Declaration on Social Justice for a Fair Globalization* was unanimously adopted by the International Labour Conference in its 97th session on 10 June 2008. For the original text in English: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_099766.pdf

5 ILO (2009), Recovering from the crisis: A Global Jobs Pact, adopted by the International Labour Conference at its 98th session on 10 June 2009, Geneva: http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_115076.pdf

The *Global Jobs Pact* was endorsed in September 2009 in paragraph 46 of the Leaders' Statement of the G20 Pittsburgh Summit hosted by the US President Obama. In line with the Pact, the Summit Declaration confirmed the commitment of G20 governments to ensuring an economic recovery and growth geared towards quality employment. The same document made special reference to the need for supporting ILO's Decent Work Agenda, protecting and raising employment and taking further steps to improve the social dimension of globalization during the process of recovery and afterwards. The Summit Declaration also called upon the ILO to prepare country briefs and examine the crisis response measures at the global level for the forthcoming G20 meeting of Ministers of Labour in Washington DC in April 2010. The significance of employment-oriented, balanced and sustainable growth as well as social protection was also reiterated during the G20 Seoul Summit held in November 2010.

The recent global crisis has laid bare the inseparability of economic and social issues from one another as well as the need for an integrated approach to tackle them. It is mainly as a result of this realization that various projects are being implemented in several countries within the framework of ILO's *Global Jobs Pact.* Through the project entitled "Impact analysis of the crisis response and lessons learned for the way forward", the ILO Ankara Office sought to assess the impact of the global crisis on Turkey as well as the effectiveness of Turkey's crisis response at macroeconomic and sectoral levels as well as in terms of its contribution to quality employment creation. Reports by three distinguished academics presented in this book have been prepared for this purpose. Furthermore, various interviews with social partners were conducted by the ILO Ankara Office, which offered valuable guidance during the process of project implementation.

A striking point that emerged from the interviews with stakeholders representing workers and employers is that Short-Time Work Allowance was considered as the most effective of all measures adopted by the Turkish government in response to crisis. This view was supported by both parties. Hence, this policy response was highlighted not only as an anti-crisis measure but also as a possible employment policy tool, which could be implemented over the long-run, since it constituted a positive approach to "flexicurity" as well as a good example in terms of its contribution to mitigating post-crisis job losses.

A point frequently emphasized by employers was related to 5-point reduction in employers' contribution to social security premium. It was stressed that this arrangement was in fact introduced prior to the crisis, but expected positive impact on employment did not occur, since its implementation was given start during the crisis. A point underlined by workers' representatives was the belated recognition by the government of the adverse effects of the crisis and the consequent delay in the adoption of relevant measures. It was further argued by workers' organizations that most measures in response to crisis were in fact geared towards employers.

Three studies that follow in the next sections of this book elaborate on the effects of the crisis and the crisis response measures on Turkey from ILO's decent work perspective, first by addressing the macro dimensions, then within a sectoral context by examining the case of the automotive industry, and finally by giving a detailed picture of the labour market dynamics on the basis of micro-data sets. A finding common to all three studies is that, in spite of high rates of growth that followed the 2001 crisis in Turkey, expansion in employment was not enough to pull down the rate of unemployment, giving rise to a process called jobless growth or employment-unfriendly growth. As a result of the economic and financial policies pursued in Turkey, this problem had become chronic and led policy makers to adopt new measures geared towards employment promotion. The negative effects of the latest global crisis have, however, made the achievement of this goal even more difficult.

In his study entitled "A Macroeconomic Assessment of the Effects of Fiscal Stimulus Measures on Employment and Labour Markets", Erinç Yeldan links the dual nature of the Turkish economy,

which is characterized by advanced areas enjoying high technology and growth rates as opposed to traditional and informal areas associated with recession and insufficient employment creation despite high growth rates, to the structural features of the macroeconomic policies followed in the 2000s. Yeldan argues that as a result of policies focusing on price stability and fiscal austerity, excessively cheap rate of exchange has led to ever-growing external deficits, while current account deficit has been financed through speculative capital inflows which further increased the external debt stock. He emphasizes that this kind of growth fuelled by speculative flows is associated with such costs as shrinking employment, expanding informality and decreasing wage incomes. Yeldan maintains that the global crisis started to affect the Turkish economy negatively starting from October 2008, in response to which the government introduced a series of fiscal stimulus measures. He points out that Short-Time Work Allowance appears to be the most intensively implemented measure of the government with respect to labour markets. After showing that the employment creation capacity of recovery measures introduced in Turkey fell short of those adopted by comparable OECD countries, Yeldan further states that 65% of the gains in employment following the implementation of the crisis response measures consists of low quality and informal jobs without any social security coverage.

In "The Effectiveness of Crisis Measures: The Case of Motor Vehicles Industry", Erol Taymaz examines the effects of the reduction in Special Consumption Tax (SCT) and Short-Time Work Allowance introduced in 2009 to mitigate the effects of the crisis and protect employment. Taymaz argues that the SCT reduction boosted the demand for cars in particular, but only with a similar increase in demand for imported cars. Hence, SCT reduction had limited effects on domestic production and even more limited effects on employment, as testified by continuing job losses in the sector while the reduction was in effect. According to Taymaz's analyses, in spite of SCT reduction and Short-Time Work Allowance, post-crisis labour force adjustment in the automotive sector took place through reductions in the number of workers rather than adjustments in average working time. Taymaz's calculations also show that, while SCT reduction was partly successful in increasing car production, its public cost in terms of lost tax revenues was quite high.

In his study entitled "The Impact of the Global Financial Crisis on Employment in Turkey", Hakan Ercan argues that heavy losses in growth and employment especially in 2009 were partly recovered in 2010 and there are three major components behind this recovery. The first is considerable return back to work in manufacturing industry thanks to positive trends in exports and production, which points out to gains in formal employment compatible with ILO's definition of decent work. Secondly, as men lost their jobs women started to work on their own account to support family subsistence. The increase in women's labour force and employment participation during the crisis can be explained by this factor. The third is related to a 'virtual' employment increase in agriculture. According to Ercan's study, there have been considerable employment gains in agriculture during the post-crisis recovery; however, this increase in agricultural employment is considered to be 'virtual' since the bulk of this employment pertains to those who return to rural areas to work as unpaid family workers, after having lost their urban jobs. In other words, the latter two components of the employment recovery observed in 2010 comprise jobs that are not compatible with ILO's definition of decent work. In the context of the impact of anti-crisis measures, Ercan stresses that Turkey was late in responding to the crisis and points out that the first comprehensive employment package was introduced in May 2009. In fact, back in 2008 and independently of the crisis, an employment package was declared focusing particularly on youth and women and envisaging incentives geared towards reducing labour costs. However, these incentives paid only to a limited extent according to Ercan, since they could reach only formal employment and since formal employment increases much slower than informal employment during and after the crisis. Another interesting finding in Ercan's study is the recent widening of earnings gap between high and low paid occupations.

If we bring these three reports together in a common denominator, it can be said that the global crisis of 2007-2009, which is recorded as the second greatest depression in history, revealed that policies and measures at different levels, if designed independently and geared towards a single objective, either prove to be ineffective or produce unexpected side effects. In other words, if macro, micro and sector-based policies are not well considered while developing employment policies or, putting it the other way around, if measures geared towards preventing job losses and enhancing quality employment are designed without due account of their cost as well as their macroeconomic and sectoral effects, it becomes unrealistic to expect lasting and sustained solutions. Each social policy has its economic cost and each economic policy has its social implications. Unless it is well thought out where they can reinforce each other and where they operate in a mutually destructive way, in other words unless structural problems are addressed through an integrated approach, overcoming the problem of unemployment and eliminating decent work gaps in Turkey or globally would not be possible.

In both Turkey and other countries experiencing economic recession, thanks to the recent recovery in economic growth, there is a tendency to believe that the crisis is over. Yet, as emphasized by the recent ILO publication *World of Work Report 2010*, "labour market recession" still continues, while economic recession seems to have been left behind. In fact, the title of the report invokes this fact: "From one crisis to the next?"[6]

The report underlines the need for full and quality employment to be a macroeconomic policy objective equal in importance with objectives of inflation and fiscal consolidation, since the crisis experienced clearly shows none of these targets can be sustained individually without achieving them all simultaneously.

The report maintains that, as shown by earlier crises, there are serious time lapses between post-crisis economic recovery and recovery in employment. It varies from 5 to 8 years for employment to regain its pre-crisis level. In other words, restoration of social balances takes much longer than the restoration of economic and financial balances. Moreover, the effects of the crisis are associated with many social problems beyond mere figures relating to employment and unemployment. In environments of crisis and high rates of unemployment, long-term unemployment becomes more common and those losing their hopes to find a job withdraw from labour markets. Indeed, worldwide falls in labour force participation rates after crises; increase in precarious, part-time, unprotected and informal jobs; fall in wages, large number of people without social rights including unemployment and health insurance; rise in poverty and the number of working poor and deepening inequalities all indicate how a global economic crisis could turn into a global jobs crisis and eventually into a multi-dimensional social crisis.

Moving ahead exactly from this concern, the report makes three basic policy suggestions for recovery from the crisis accompanied by quality growth and employment creation. The first is related to policies with employment focus. There is need to strengthen such policies to eliminate long-term unemployment, informality and the skills mismatch between labour force supply and demand. This means well designed and successfully implemented active labour market policies targeting vulnerable groups, including women and youth in particular, and employment oriented social protection policies. The report gives concrete examples from countries where these policies have been successfully implemented and stresses that the public cost of such policies is not so high. Looking at longer term, these policies contribute to public finance through increased tax revenues which in turn derive from increase in labour force participation and quality jobs.

6 For the report, see: http://www.ilo.org/global/resources/WCMS_145078/lang--en/index.htm

The second important recommendation of the report is about strengthening the link between wages and productivity and thus rapidly enhancing the capacity of creating sustainable employment. The report shows that fast and effective reflection of productivity increases in wages feeds economic growth much more strongly than exchange rate policies.

Thirdly and lastly, the report points out to the need for a real financial reform, which is capable of ensuring, at both global and national levels, transformation of savings into productive investments and productive investments into sustainable jobs.

Findings of the studies carried out for the project fully reflect, with regard to the case of Turkey, those findings and concerns underlined in the *World of Work Report.* The observation common to all reports is as follows: Policies to create employment need to be supported by a macroeconomic policy environment at the global level marked by the dominance of an employment friendly stance. Thus, each step taken by the member States for implementing the Global Jobs Pact undersigned by the ILO member States is of critical importance.

GLOBAL CRISIS and TURKEY:

A Macroeconomic Assessment of the Effects of Fiscal Stimulus Measures on Employment and Labour Markets[1]

Erinç Yeldan[2]

SUMMARY

During the 2000s, despite rapid growth and a significant surge in exports, Turkish economy could not generate jobs at the desired rate. Rapid rates of growth were accompanied by high rates of unemployment and low participation rates. The inertial persistence of the rate of *open* unemployment after the 2001 crisis, despite rapid growth, has generated a dualistic environment with advanced *islands* of high technology and rapid growth situated in a vast, *stagnant* traditional (and informalized) traditional economy.

The *great recession* had adverse effects on the Turkish economy beginning October 2008. Industrial activity fell by 40% and open unemployment rate rose by 5 percentage points to 15.4% by the first quarter of 2009; and GDP contracted by 4.7 over 2009.

Against the global recession, the Turkish government enacted a series of fiscal stimulus measures ranging from tax reductions to increased public spending. In terms of labor markets, the most actively implemented policy measure was the reduced time working fund. According to our calculations, the Turkish government disbursed a total sum of TL64.8 billion (approximately US$45 billion) over 2008 – 2010 second quarter. As a ratio to the 2008 GDP, this is a ratio of 6.8%, placing Turkey among the highest stimulus rate among the OECD countries. The fiscal stimulus package is estimated to generate an employment multiplier of 0.91 which is at the lower end of the comparable OECD data.

As of June 2010, labor employment is estimated to rise by 2.324 million persons in comparison to January of the same year. However, the quality of these job gains had been questionable. 65% of this increase is reported to be based on informal, unregistered employment with no social security protection. In fact, the expansions of the fiscal stimuli seem to have deepened the informalization of the labour force, with insufficient gains in decent work.

We trace this informalization duality and the overall poor job performance of the Turkish economy to the structural conditions of the macro economic policies pursued over the 2000s. Based on a focal emphasis on price stability and fiscal credibility, the authorities ignored the adverse consequences of excessive appreciation and mis-alignment of the *Lira* and the widening of the external deficit. Financing of the current account deficit was mostly based on foreign debt accumulation.

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As Turkey consumed more and more of the value added produced *abroad*, and found it profitable to do so with an appreciated currency financed by speculative financial inflows, external deficit widened and foreign debt accumulated. The costs of this *speculative-led growth*, however, were realized as loss in jobs, deepening informalization, and decline of real wage income.

We argue that a structural transformation of the macro economic policy environment towards distributional and allocative goals is essential; and that a narrowly focused *micro reform* agenda emphasizing *flexibilization* of labor markets is no panacea under these conditions, and will likely to deepen the duality and informalization of the labor markets with further adverse welfare consequences.

All of these observations underscore the argument that labor enhancing policies will not be successful unless complemented by an *employment-friendly* vision in the overall macroeconomic policy environment, to be designed and implemented not only at a domestic, but also at the *global* level. Excessive reliance on external finance is compelling at first sight, but its costs could be tremendous, and not necessarily limited to conjectural swings of the business cycle but typically involve strategic costs adversely affecting the future growth path and its quality.

1. Introduction: Rapid Growth, Faltering Employment Performance

During the 2000s, despite rapid growth and a significant surge in exports, Turkish economy could not generate jobs at the desired rate. Open unemployment rate which stood at 6.5% in 2000 has jumped to 10.3% in 2002 in the aftermath of the February 2001 financial crisis. Since then the Turkish gross domestic product has increased by a cumulative 30% in real terms. Yet, employment generation capacity of this rapid growth had been dismal, and the open unemployment rate could not be brought down below 9% by the end-of 2007, just before the eruption of the current global economic crisis. Despite rapid expansion of production in many sectors, civilian employment increased sluggishly at best, and labour participation remained below its levels as observed during the 1990s. Currently (as of June 2010)2[3] open unemployment rate stands at 10.5%, one of the highest among the OECD countries.

Turkey and the IMF signed a *Staff Monitoring Program* in 1998 to enable closer supervision and control of the Turkish economy by the IMF staff. Turkey experienced a severe economic crisis in November 2000 and again in February 2001 when it was following the *exchange-rate based disinflation program* led and engineered by the IMF.[4] During the year 2001 the GNP fell by 7.4% in real terms, consumer price inflation soared to 54.9%, and the domestic currency (the Turkish Lira, TL) lost 51% of its value against the major foreign monies. The burden of adjustment fell disproportionately on the labour as the rate of unemployment rose steadily to 10% and the real wages were reduced abruptly by 20% upon impact in 2001.

The post-crisis adjustments of the Turkish economy came at a very unique conjuncture of the global economy. First of all, growth, while rapid, showed quite peculiar characteristics. It was mainly driven by a massive inflow of foreign finance capital which in turn was lured by significantly high rates of interest offered domestically; hence, it was *speculative-led* in nature (*a la* Grabel, 1995).

3 Since 2006, the Turkish Statistics Institute (TURKSTAT) is reporting its labour market data estimates based on three month moving averages. Thus, the "June" 2010 data are the three-month average of the period "May-June-July".

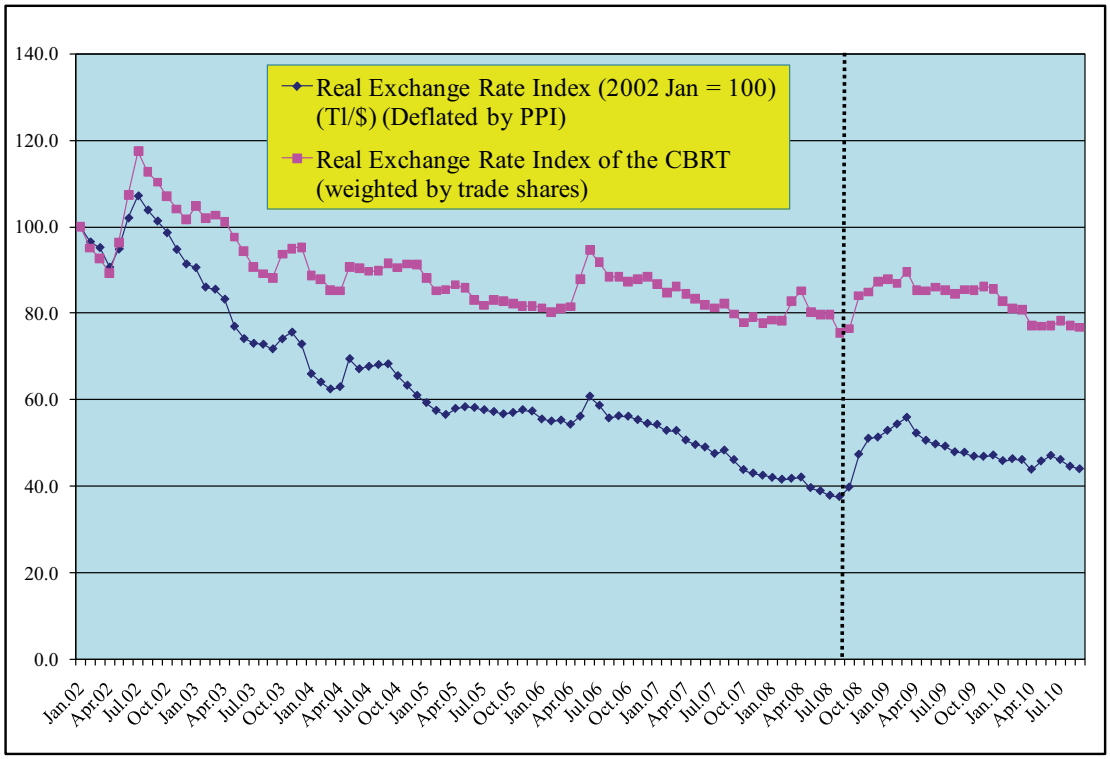
4 The underlying elements of the disinflation program and the succeeding crisis are discussed in detail in Akyuz and Boratav (2004); Ertugrul and Yeldan (2003), Yeldan, (2002), Independent Social Scientists Alliance, 2006.

The main mechanism has been that the high rates of interest prevailing in the Turkish asset markets attracted short term finance capital, and in return, the relative abundance of foreign exchange led to overvaluation of the *Lira*. Cheapened foreign exchange costs led to an import boom both in consumption and investment goods. The overvaluation of the *Lira*, together with the greedy expectations of the arbitrageurs in an era of rampant financial glut in the global finance markets, led to a severe rise in its foreign deficit, and hence, in external indebtedness.

A further characteristic of the post-2001 era was Turkey's *poor job creation* pattern. Rapid rates of growth were accompanied by high rates of unemployment and low participation rates. The inertial persistence of the rate of *open* unemployment after the 2001 crisis, despite rapid growth, has generated a dualistic environment with advanced *islands* of high technology and rapid growth situated in a vast, stagnant traditional (and informalized) traditional economy. The underlying logic of the macroeconomic policies followed under the post-1998 IMF supervision (based on the so-called *Washington consensus* measures) had actually intensified this dualistic pattern. With the available bonanza of relatively cheap foreign credit, demand for imports accelerated, and Turkey got trapped into an unsustainable path of consumption and investment boom. Based on massive inflows of speculative external finance, Turkey was excessively consuming imports; that is, the products of —foreign economies". Thus, the problem of poor job performance and the fragility embedded in the increase of the current account deficit ought to be recognized as manifestations of the same conundrum.

Another key characteristic of the period was the inertia of interest rates. Inertia of the real rate of interest is enigmatic from the successful macro economic performance achieved thus far on the fiscal front. Even though one traces a decline in the general plateau of the real interest rates, the Turkish interest charges are observed to remain significantly higher than those that prevail in most emerging market economies. The credit interest rate, in particular, has been stagnant at the rate 16% despite the deceleration of price inflation until the 2008 global recession.

Figure 1. Indexes of the Bilateral and Trade-Weighted Real Exchange Rate



Source: TR Central Bank and TURKSTAT.

High rates of interest were conducive in generating a high inflow of hot money finance to the Turkish financial markets. The most direct effect of the surge in foreign finance capital over this period was felt in the foreign exchange market. The over-abundance of foreign exchange supplied by the foreign financial arbitrageurs seeking positive yields led significant pressures for the Turkish Lira to appreciate. Figure 1 portrays the paths of the *bilateral* (vis-à-vis the US$) and the *trade-weighted* real exchange rate (in PPP terms, with producer prices as the deflator) over 2002-2010. As the Turkish Central Bank (CBRT) has restricted its monetary policies only to the control of price inflation, and left the value of the domestic currency to the speculative decisions of the market forces, the *Lira* appreciated by as much as 60% in real terms against the US$ and by 25% against Euro (in producer price parity conditions) over 2002 to 2008 October. The recent blip in late 2008 and through 2009, on the other hand, had a minimal effect on the real value of the real exchange rate and was not enough to change the direction of the course of ongoing real appreciation.

The structural overvaluation of the TL, not surprisingly, manifests itself in ever-expanding deficits on the commodity trade and current account balances. As traditional Turkish exports lose their competitiveness, new export lines emerge. Yet, these proved to be mostly import-dependent, assembly-line industries, such as automotive parts and consumer durables. They use cheap import materials, are assembled in Turkey with low value added, and are re-directed for export. Thus, being mostly import-dependent, they have a low capacity to generate value added and employment. As traditional exports dwindle, the newly emerging export industries had not been vigorous enough to close the trade gap.

Consequently, starting in 2003 Turkey has witnessed expanding current account deficits, with the figure in 2007 reaching a record-breaking magnitude of $38.1 billion, or 6.7% as a ratio to the aggregate GNP. In appreciation of this figure, it has to be noted that Turkey traditionally has never been a current account deficit-prone economy. Over the last two decades (80's and 90's) the average of the current account balance hovered around plus and minus 1.5-2.0%, with deficits exceeding 3%, leading to open crises as in 1994 and 2001, during when significant currency depreciations had taken place. Thus, the mechanics behind the culminating current account deficit of the post-2001 period can only be understood in the context of the speculative transactions embedded in the *finance account* of the balance of payments.

In sum, as the domestic industry intensified its import dependence, it was forced toward adaptation of increasingly capital-intensive, foreign technologies with adverse consequences on domestic employment. It is to this issue now we turn.

2. The Post-2001 Patterns of Employment

Table 1

Developments in the Turkish Labor Market (1,000 persons)

								New Series				
	2000	2001	2002	2003	2004	2005	2006	2006	2007	2008	2009	2010 June
15+ Age Population	46,209	47,158	48,041	48,912	49,906	50,826	51,668	48,485	49,994	50,772	51,686	52,503
Civilian Labor Force	23,078	23,491	23,818	23,640	24,289	24,565	24,776	23,250	23,114	23,805	24,748	26,239
Civilian Employment	21,581	21,524	21,354	21,147	21,791	22,046	22,330	20,954	20,738	21,194	21,277	23,488
Unemployed (Open)	1,497	1,967	2,464	2,493	2,498	2,520	2,446	2,295	2,376	2,611	3,471	2,751
Open Unemployment Ratio (%)	6.5	8.4	10.3	10.5	10.3	9.9	9.9	9.9	10.3	11.0	14.0	10.5
Disguised Unemployment[a]	1,139	1,060	1,020	945	1,223	1,714	2,087	1,959	1,805	1,850	2,061	1,857
Total Unemployment Ratio[b] (%)	10.9	12.3	14.0	14.0	14.6	16.1	16.9	16.9	16.8	17.4	20.6	16.4
Civilian Employment by Sectors												
Agriculture	7,769	8,089	7,458	7,165	7,400	6,493	6,088	5,713	4,867	5,016	5,240	6,233
Industry	3,810	3,774	3,954	3,846	3,987	4,284	4,407	4,136	4,314	4,441	4,079	4,536
Construction	1,364	1,110	958	965	1,030	1,173	1,267	1,189	1,231	1,241	1,306	1,580
Services	8,637	8,551	8,984	9,171	9,374	10,096	10,569	9,918	10,327	10,495	10,650	11,139

Source: Turkish Statistical Institute (TURKSTAT), Household Labor Force Surveys.

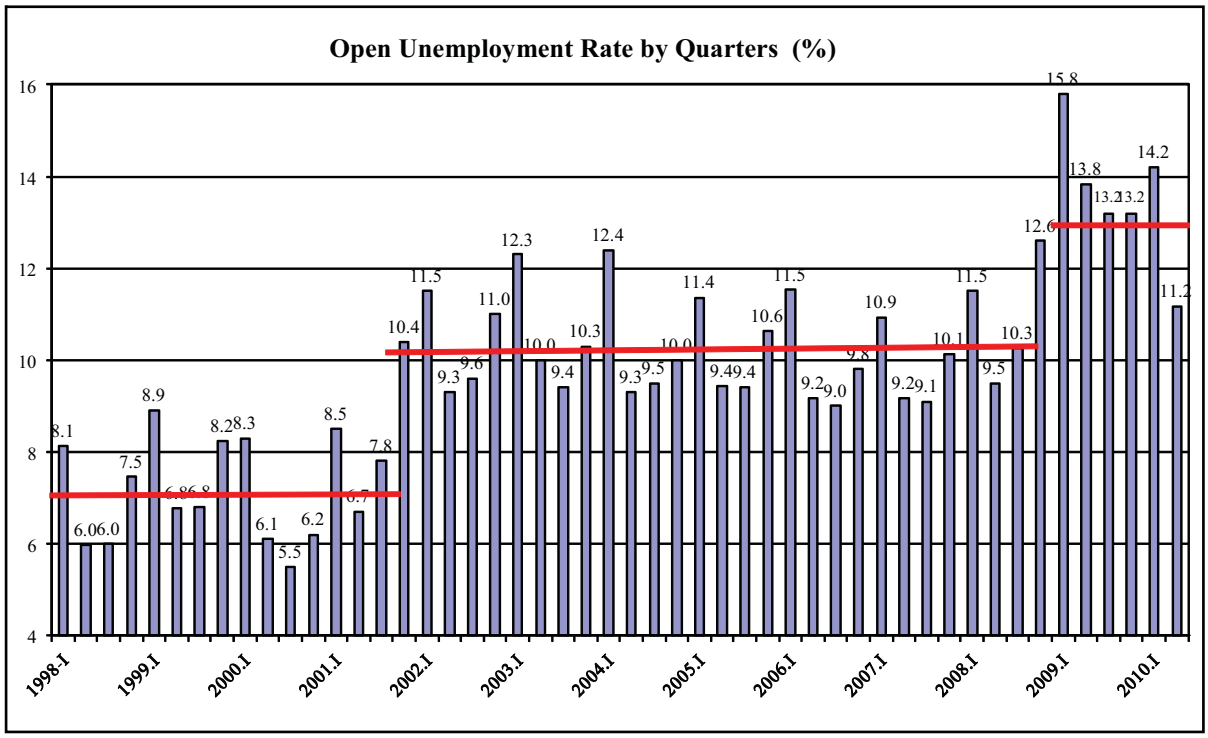
a. Persons not looking for a job yet ready to work if offered a job: (i) Seeking employment and ready to work within 15 days, and yet did not use any of the job search channels in the last 3 months; plus (ii) discouraged workers.

b. Total (open + disguised) unemployment accounting for the persons "not in labor force".

In this section we first offer a thorough overview of the characteristic patterns of employment in the Turkish economy over the post-2001 period. Table 1 tabulates pertinent data on the Turkish labour markets.

The civilian labour force (ages 15+) is observed to reach 52.5 million people as of June, 2010 (the latest data available at the time of writing). Total employment reached to 23.488 million. The number of openly unemployed people is reportedly 2.751 million, bringing the open unemployment ratio to 10.5%. The rate of open unemployment was 6.5% in 2000; increased to 10.3% in 2002, and remained at that plateau despite the rapid surges in GDP and exports. In fact, over the post-2001 adjustment path into the global recession of 2008/2010, we witness a jump of the trend open unemployment at almost regular intervals. Based on a quarterly version of the data tabulated in Table 1, one can highlight the evolution of the unemployment rate in Figure 2.

Figure 2



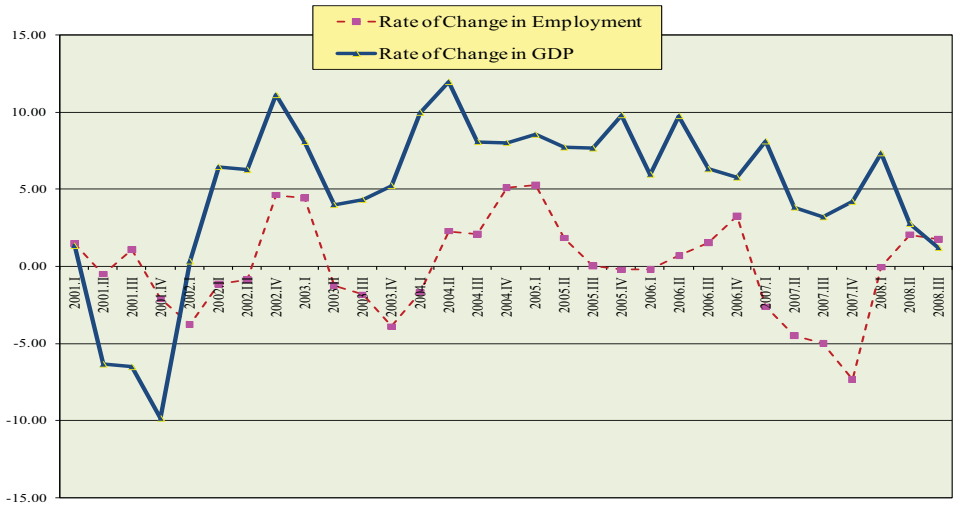
Source: TURKSTAT, www.TÜİK.gov.tr

An important group of people not covered in those numbers is the group of *"discouraged"* workers. As distinguished in the Turkish Statistical Institute (TURKSTAT) surveys, this group is identified as: *"Persons not looking for a job yet ready to work if offered a job: (i) Seeking employment and ready to work within 15 days, and yet did not use any of the job search channels in the last 3 months; plus (ii) discouraged workers".* This group of people is not counted as part of the civilian labour force and is regarded out of the openly unemployed. This number had been consistently rising over the course of 2000s and, according to the TURKSTAT's Household Survey results in June 2010, had reached to 1.857 million. If we add the TURKSTAT data on the *disguised unemployment* defined as such, the excess labour supply (unemployed + disguised) is observed to reach 16.4% of the labour force.

Open unemployment is acute among the youth. As of June 2010 youth unemployment (ages 15-24) stands at 19.1%; in the urban centres this number reaches to 23.1%. Labour participation ratio is also significantly low with a current average of 49%. This ratio is especially low among urban women with 24.9%.

Yet, the most striking observation on the Turkish labour markets over the post-2001 crisis era had been the sluggishly slow performance of employment generation capacity of the economy. Despite the very rapid growth performance across industry and services, employment growth was meagre. To make this assessment clearer we plot the quarterly growth rates in real gross domestic product in Figure 3, and contrast the *y-o-y* annualized rates of change in labour employment. In order to make comparisons meaningful, the changes in labour employment is calculated relative to the same quarter of the previous year.

Figure 3. Annual Rate of Change in GDP and Aggregate Employment



Source: TURKSTAT, Household Labour Force Surveys.

The figure discloses that **over 27 quarters** of data points between 2002.Q1 and 2008.QIII, the average rate of growth in real GDP had been 6.5%. In contrast the rate of change of employment averaged *only 0.8%* over the same period. Over the twenty seven quarters portrayed in the figure, GDP growth was *positive* in all periods. Yet, labour employment growth was *negative* in 14 of those 27 quarters.

Another reflection of this phenomenon was the significantly *low elasticity of employment*; that is percentage gain in employment due to percentage changes in GDP growth had been relatively low (see table 2). Compared over broad period averages, employment generation capacity of the domestic economy seems to have been relatively poor in the post-2000s. There had been labour shedding in agriculture, while the non-agricultural sectors had significantly lower employment elasticities. As calculations in offered in Table 2 attest, overall elasticity of employment with respect to output has fallen from 0.14 to 0.39 in 2002-2008 in comparison to the average of the 1990s.[5] This indicates that the employment generation has been roughly cut by more than a half after 2001. The same verdict stands if the same exercise is carried at the sectoral level. In non-agricultural sectors, the trend in the output elasticity of employment was a decline from 0.68 to 0.48; while in agriculture it was a fall from *negative* 0.42 to *negative* 1.66, revealing that agriculture was shedding labour faster than the increase in output.

5 This elasticity is calculated as rate of change in employment due to the rate of change in output produced; *i.e.*, $\epsilon = \frac{\Delta L/L_t}{\Delta Q/Q_t}$ where L and Q denotes labor employment and output, respectively. Hence, over the 1990s, in response to a unit rate of change in aggregate output there had been an increase of 0.39 units of expansion in labor employment. After 2001, a comparable unit expansion in output was associated with only 0.14 units of employment gains.

All of these phenomena had been succinctly phrased as *jobless growth* for Turkey. (see, *e.g.* Telli, Voyvoda, Yeldan, 2006; Taymaz, 2007).

Table 2

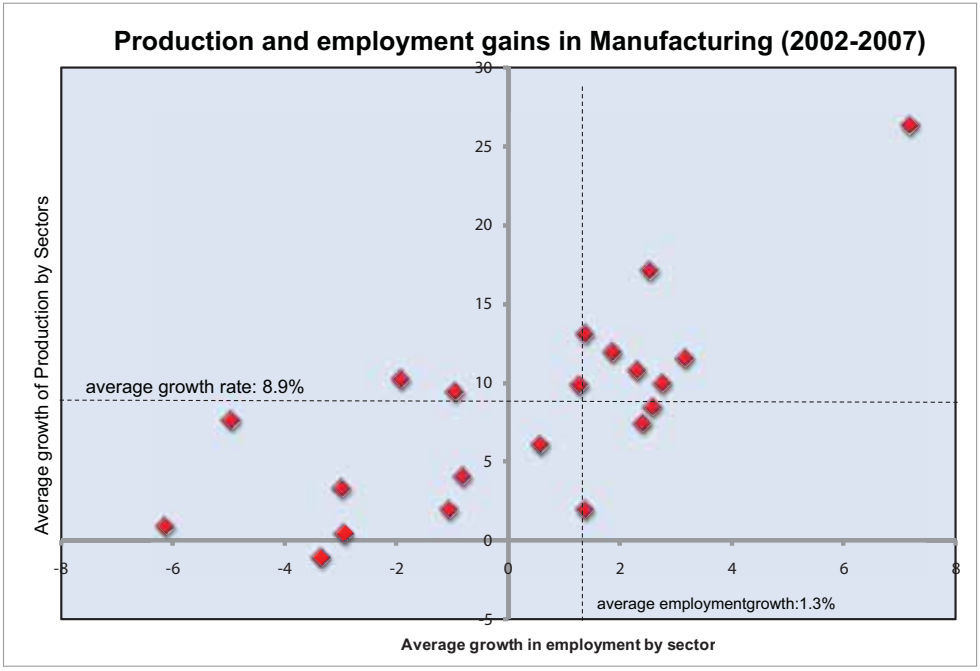
Output Elasticities of Employment By Sectors (Annual averages)

	1989-2008	1989-2000	2002-2008
Total	0.25	0.39	0.14
Agriculture	-1.19	-0.42	-1.66
Non-Agricultural Sectors	0.54	0.68	0.48
Industry	0.43	0.49	0.39
Services	0.55	0.76	0.47
Source: Author's calculations based on Turkstat and SPO data			

The sectoral breakdown of the post-crisis employment patterns reveals, in fact, a massive re-structuring of the rural-urban composition of the labour market. Agricultural employment has been reduced by 3,073 thousand workers from 2001 to 2008. Against this fall, there had been a total increase of employment in the services sectors by 1.944 thousand, and by only 667 thousand in industry. Simultaneous to this was the overall expansion of the aggregate labour supply from 47.158 million in 2001 to 50.772 million in 2008, adding to the acuteness of the joblessness problem. Thus, it is clear that the structure of the work force has been changing with population moving out of rural areas into urban areas, and yet this shift out of agriculture has not been converted into an expansion of the industrial labour force, and got translated mostly as *"marginalized/informal labour"* into services.

Regarding the productivity patterns and employment incidences across the non-agricultural sectors, recent data are scarce and studies are limited. Focusing on the manufacturing industries, we report available figures from Taymaz and Voyvoda (2009) who studied growth in manufacturing output and in employment as distinguished by sectors.

Figure 4



Source: IMF and ILO (2010); Turkey: TURKSTAT Household Labour Force Surveys

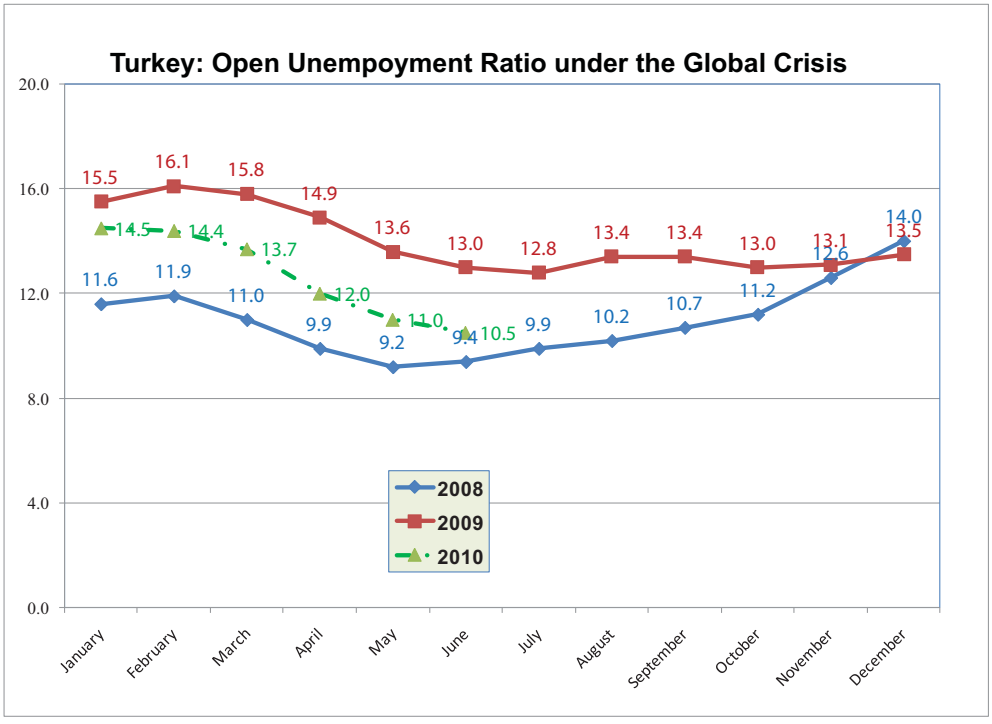
Figure 4 summarizes Taymaz and Voyvoda's findings in a nutshell. Over 2002 – 2007, manufacturing industry as a whole grew at an annual rate of 8.9%. In contrast, rate of manufacturing employment was a meager 1.3%. Across sectors, all of the 21 subsectors except one achieved positive growth rates over this period. Yet their employment performance had been quite mixed and nine out of those 21 had actually reported labour shedding. Decline in employment were especially pronounced in the traditional sectors such as food processing, textiles and mining and quarrying.

To complete this picture, there is ample evidence that agricultural labour surplus has been moving into small scale, family-owned services with low-quality, low-pay, and insecure "jobs", intensifying the informalization of the urban labour markets (see also, Ercan and Tansel, 2006; Taymaz and Ozler, 2005; Agénor *et.al*, 2007).

3. The Effects of the Great Recession on the Turkish Labour Markets

The effects of the global crisis on the Turkish economy were increasingly felt starting the third quarter of 2008. As the growth rate in GDP decelerated to 0.9% as an average for the whole of 2008, it registered a further decline of 6.8% over the first half of 2009. The burden of adjustment increasingly fell on the real economy, in particular the industrial sectors and the labor market. Industrial output fell by 24% by the January of 2009 and could have reached to the pre-crisis levels only as late as July 2010. Open unemployment rate rose secularly towards the second half of 2008 and jumped to a new plateau in 2009; and finally receded to its pre-crisis levels, albeit at significant wage losses and extended informalization of the work place (Figure 5).

Figure 5

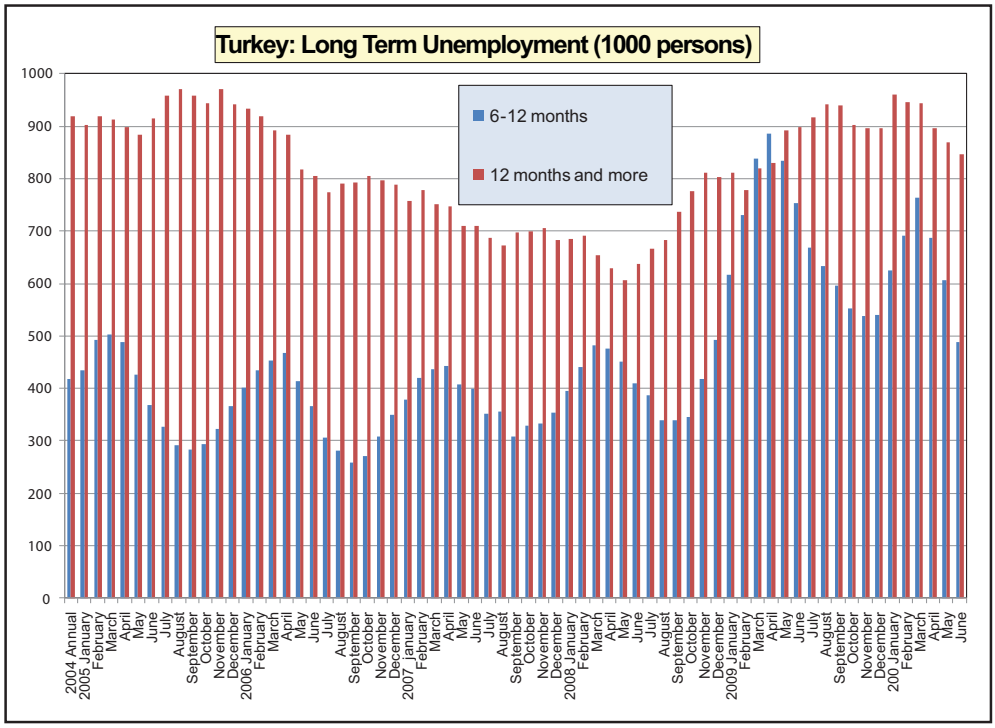


Source: TURKSTAT, Household Labour Force Surveys.

A significant characteristic of the unemployment problem over this period was the rapid rise of long term unemployed —that is those who had been unemployed for 6 months and more. In 2008, the annual average of long term unemployed for six months and more duration was 1,112 thousand persons, or 42% of the total openly unemployed. In 2009 the share of long term unemployed to total

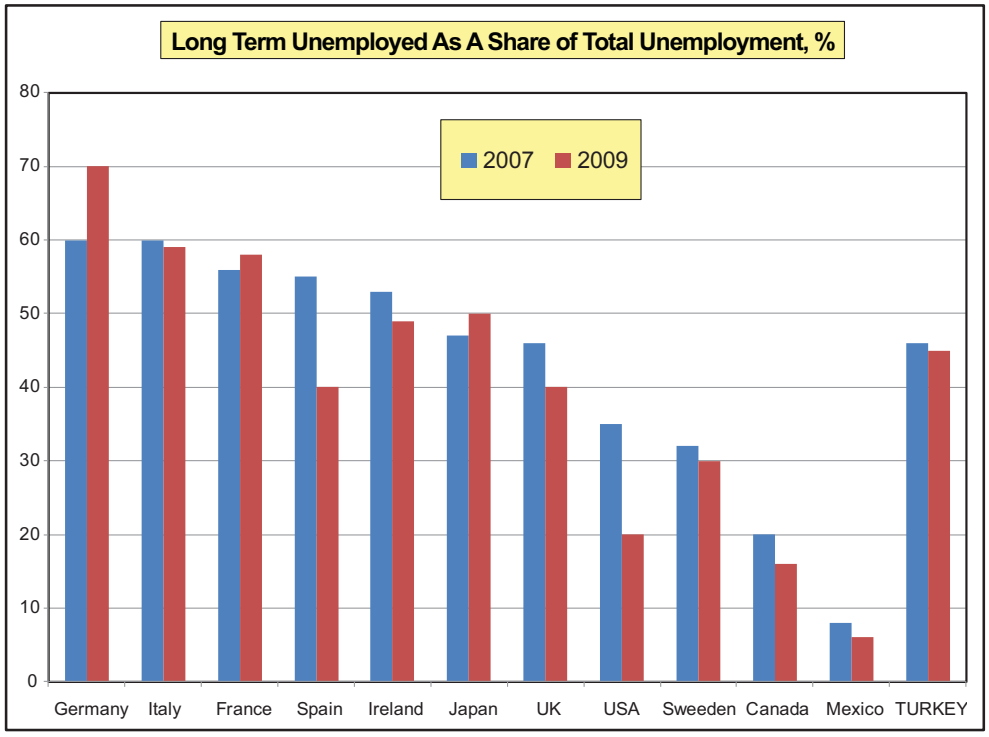
increased to 45%, or 1,560 persons. As of June 2010 the share of long term unemployed stood at 49%. Figure 6 below gives the evolution of long term unemployed across months.

Figure 6



Source: TURKSTAT, Household Labour Force Surveys.

Figure 7

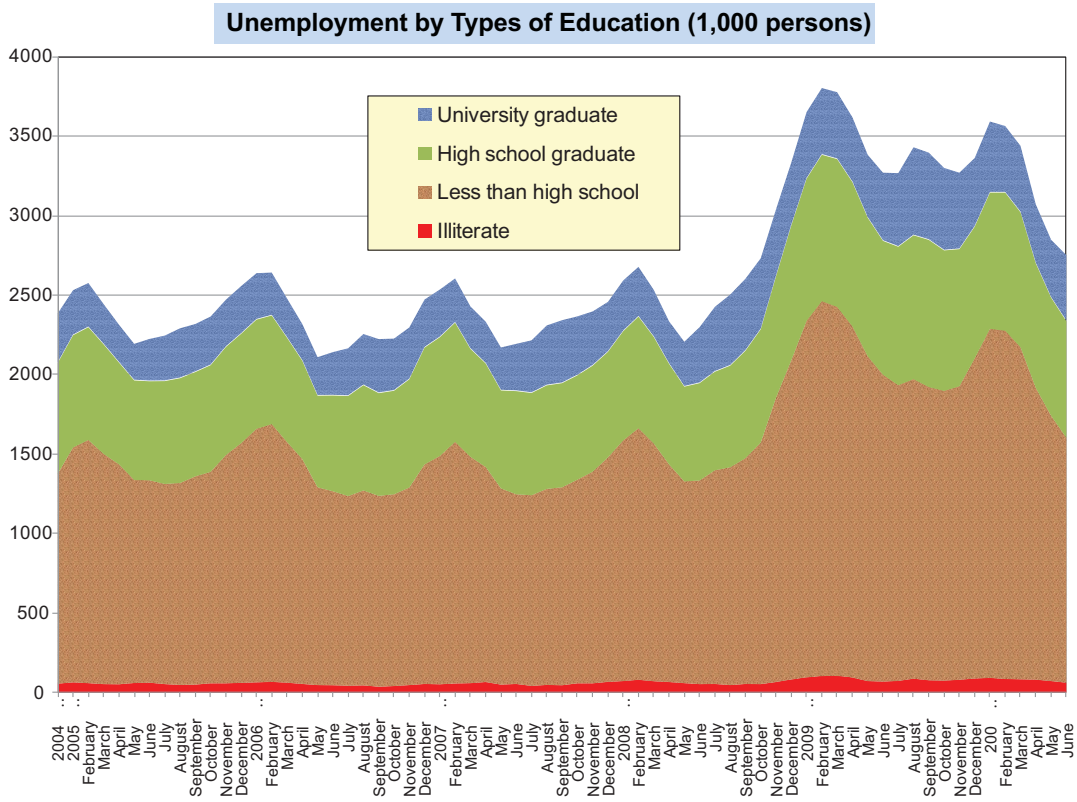


Source: TURKSTAT, Household Labour Force Surveys.

When contrasted against selected major OECD economies, Turkey fares midway in terms of its long term unemployment status. As data from the joint IMF-ILO study indicate, long term unemployment seems especially acute in Germany and Italy with rates close to 60% (Figure 7). The IMF-ILO document argues that, "although there are obvious cyclical patterns, it is clear that there has been a secular upward trend in the duration of unemployment." This indicates that there are structural factors hindering the re-employment prospects in these countries that were present before the global crisis.

Another important structural breakdown is the composition of the unemployed with respect to education status. The global crisis hit all education levels almost proportionately, with a slightly more pronounced effect over the university graduates in relative terms. As of 2009 average, 59 percent of total unemployment has less than high schooling (1,670 thousand persons), 26 percent was high school graduates (744 thousand persons), and 13 percent held university degrees (360 thousand persons).

Figure 8



Source: TURKSTAT, Household Labour Force Surveys.

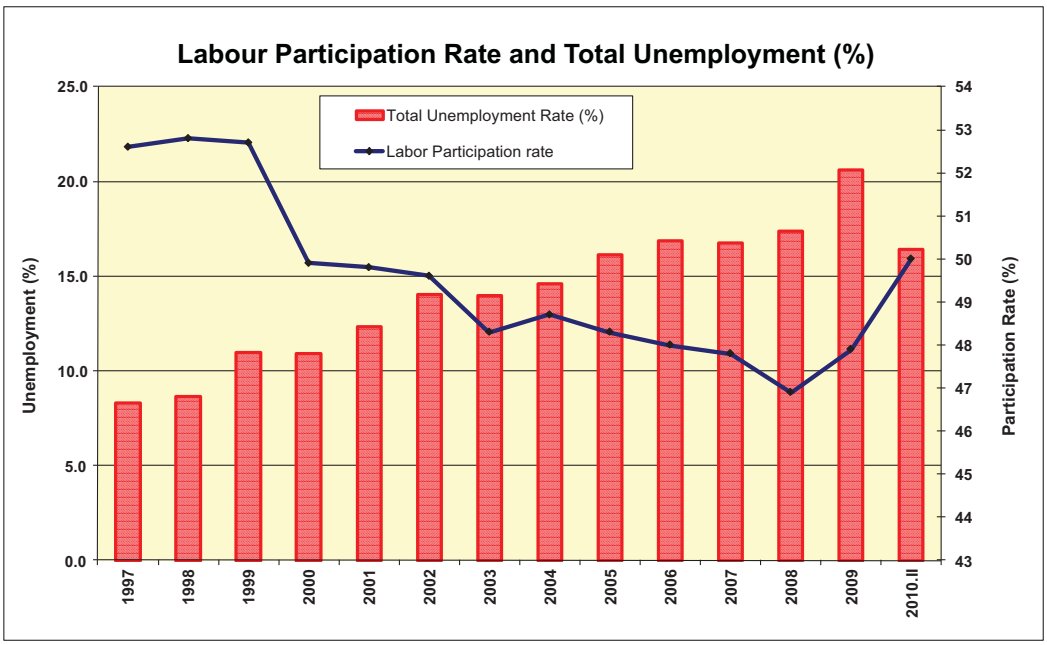
A further detrimental impact of the speculative-led, jobless growth era was the overall decline in the labour participation rates. Even though lower than the comparable member countries of the European Union, labour participation rates were nevertheless above 50% during most of the 1990s. The participation rate declined to less than the 50% threshold first during the implementation of the 2000 exchange rate-based dis-inflation programme. It continued its secular decline over the rest of the decade as is depicted in Figure 9. The participation rate has been on an increasing trend under the global crisis conditions. This is mostly due to increased pressures from declining family incomes and forces idle household members –mostly women- to join the labour force.

Figure 9 depicts the rate of participation in contrast to the *total* unemployment ratio. This unemployment indicator covers openly unemployed and persons not looking for a job yet ready to

work if offered a job who are seeking employment and ready to work within 15 days, and yet did not use any of the job search channels in the last 3 months; plus discouraged workers.

The Figure shows very clearly the extent to which job creation has not kept up with population growth. At an average of 50% in June 2010, this is still one of the lower rates of employment in the world. Most countries in the world, with the exceptions being largely in the middle east, have employment rates in excess of 50 percent (World Bank, 2004) The figure also illustrates one of the more striking features of the Turkish labor market: the large and growing gap between the adult population and the labor force. A large proportion of the labor force, primarily women, is staying out of the labor market. According to survey data, of the labor force of 24 million in 2008, only 6.5 million were women. This has been the subject of much discussion in Turkey (see, *e.g.*, Tunalı, 2003). What may be happening is that as Turkey urbanizes, women in urban areas find that there are not many wage earning opportunities, particularly for those with low education. Another possibility is that labor market regulations may be limiting the possibilities for part time and other flexible working arrangements that would permit women to participate in the workplace. Other potential contributing factors might include discouraged male workers dropping out of the labor force and undercounting of workers as a result of a growing informal sector. Tansel (2001) and Tunalı (2003) find that the rate of decline in female participation has declined and suggests that this is consistent with Turkey being at the bottom of a U-shaped curve in female participation rates that has been seen in other countries, and that participation rates will increase over time, especially as education becomes more widespread. Nevertheless, Tunali (2003) notes that persistently low female participation rates in urban areas remains a puzzle. Ecevit (2003) notes that demand issues may be a factor implying that the problem will not solve itself over time.

Figure 9



Source: TURKSTAT, Household Labour Force Surveys.

A more thorough analysis of the factors underlying the nature of the mechanisms involved with respect to the decision to participate to the labour force is given under the "micro analysis" of this project effort. We will now turn to the analysis of the macro policies designed to stimulate the economy.

4. Stimulus Packages to Foster Aggregate Demand and Employment

The government had enacted a series of stimulus packages to combat aggravating unemployment and output losses spread over the last quarter of 2008 and the first half of 2009 in general. Turkish response to the global crisis mainly relied on tax reductions and subsidies to promote investment and employment. It is estimated that as a ratio to the GDP, the fiscal costs of the overall stimulus package were on the order of 0.99% in 2008, 3.41% in 2009, and 2.23% in 2010 (See summary Table 3).

Table 3

Measures Related to Labour Markets and Their Estimated Fiscal Costs				
	Estimated Fiscal Cost (Million TL)			
	2008	**2009**	**2010 (planned / estimated)**	**2008-2010**
In order to reduce the labor costs on employers 5 percentage point reduction on employers' social security contributions (over a total of 19.5%) was granted and taken over by the Treasury (part of October 2008 package)	17	3,726	4,327	8,070
Active Employment Programs (ISKUR's job training, apprenticeship, etc.)	-	152	343	495
Social security contributions for young and female workers are reduced (May 2008)	16	66	137	219
Unemployment insurance payments will be calculated in terms of *gross* , instead of net income, thereby the amount will be increased by 11%	40	119	87	246
The amount of reduced working time fund is increased by 50% and its duration is increased from 3 to 6 months.	-	162	106	268
The temporary public employment programme through infrastructure investment	-	78	151	229
Total costs of employment related measures	**73**	**4,303**	**5,000**	**9,527**
As a ratio to GDP (%)	**0.01**	**0.45**	**0.49**	**..**
General Total including other measures	9,365	32,612	22,889	64,866
Total Stimulus Measures as a ratio to GDP (%)	0.99	3.42	2.23	..
Memo: GDP estimates (for 2010; last four quarters)	950,000	952,635	1,025,500	..

Source: Calculations based on Table 3

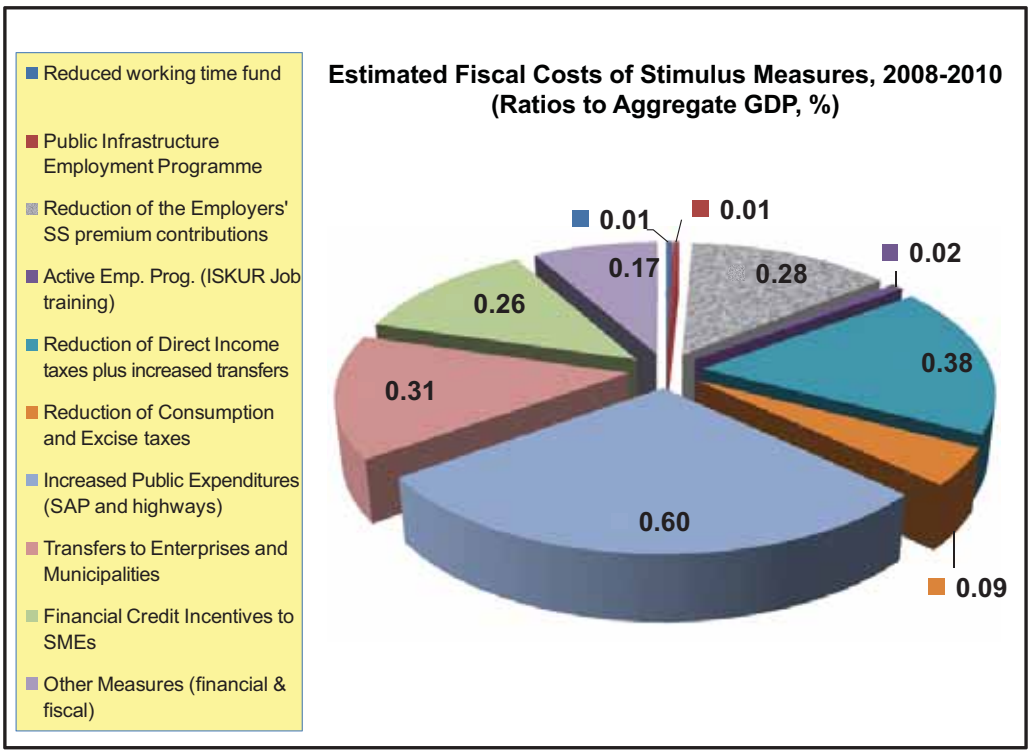
Pertaining to the labour markets, the first package was announced in October 2008 (came to be known as the *first employment package*, article code 5763). With the October package the government has taken the following measures:

- Five percent reduction in social security premiums,
- Further reductions were granted in the social security premiums for the young (18-29 age group) and women workers,
- Payments for the unemployed were increased by 11%
- Increased subsidies were granted out of the Treasury for the disabled and impaired,
- Administrative requirements of the private enterprises such as to provide sport facilities, infirmary, and to employ convicts were lifted.

These measures were complemented in February 2009 (article code 5838) by a further set where the short term employment programme (reduced working time fund) was extended from 3 to 6 months and the payments were increased by 50%.

In May 2009, a new package was enacted. With this package, the employers' share of the social security premiums of any extra employment following April 2009 were to be covered from the unemployment insurance fund. Furthermore, to support investment costs of the Southern Anatolia Project, a pre-determined sum would be allocated to the Treasury from the unemployment insurance funds.

Figure 10



Source: Calculations based on Table 3

The temporary public employment programme through public infrastructure investment came into effect in July, 2009. The package was initially announced to command a total of 1 billion Turkish liras (646 million USD) and was launched in June 2009 with two major components: one was direct creation of temporary public employment (renovating schools and hospitals, refurbishing public parks, etc.); and the other was support for vocational schools, apprenticeship schemes, and job training with a view to boost employment. The program was initially announced as a uniform package of these two components; however, its practical application has taken rather two independent programs loosely connected to each other, with the job-training activities gaining more attention.

A further element of the package addressed the exporter SMEs. The government offered credit with no interest to these enterprises and gave them the possibility to pay back their debt in 2 years instead of 1 year. Other packages included economic measures to stimulate demand and prevent lay-offs. One of these measures was a cut in consumer and other forms of excise taxes from 18% to 8% in the automotive sector, electronics, and household appliances until the end of September 2009.

Figure 10 brings all these components together. The figure displays the aggregate estimated costs of the fiscal stimulus measures as a ratio to the combined aggregate GDP over 2008 – 2010 June. The *active* employment programs which consist mainly of job-training, vocational courses, and apprenticeship claimed 0.17% of the combined GDP over two and half years. Among the *passive* employment generating programs, the most visible one has been the reduction of the employers' social security premiums with an aggregate 0.28%; while the reduced working time fund and the PIEP had an aggregate cost of 0.01% of the estimated 2009 GDP.

Even though it had a relatively low fiscal component, the policy of *"reduced working time"* funding was the most widely implemented and most visible aspect of employment related measures. The programme was initiated initially to compensate those workers employed in those enterprises where, due either to crisis or other adverse conditions, production and employment hours were reduced, or even completely stopped. Given approval of the Ministry of Labour, those workers are granted payments from the RWT fund. In order for a worker to be granted compensation from the Fund, it is necessary that the employer's application is approved by the Ministry; and the employee ought to satisfy the general conditions for eligibility to obtain *unemployment insurance* (the employee should be employed at least for a total of 120 days uninterrupted, and should have paid insurance premiums for at least 600 days over the last three years).

Table 4

Reduced Working Time Fund: Expenditures and Employment Gains

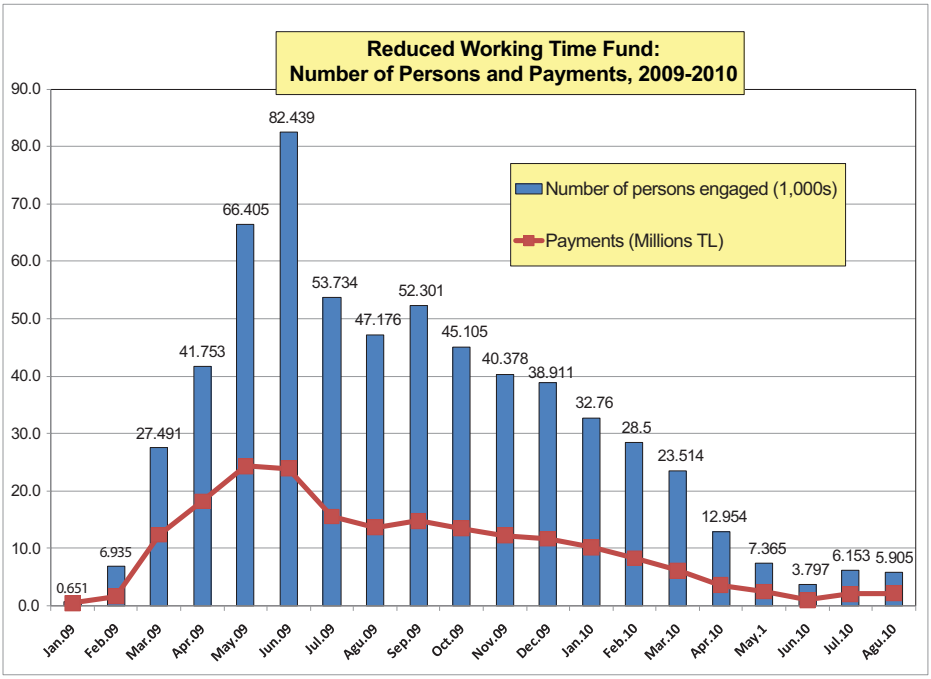
	Number of Persons Engaged	Payments (thousands TL)
2005	21	10.6
2006	217	64.4
2007	40	22.1
2008	0	0.0
2009	503,279	162,473.1
2010 (*)	120,948	36,387.9

(*) As of September 2010
Note: Applications in 2008 had been granted starting 2009.

Source: İŞKUR

RWT payments are granted in instalments so as to compensate for the lost working hours over weekly periods. The daily payments for the eligible workers were set at the levels of unemployment insurance scheme. This amount is set at 40% of the daily average gross compensation of the worker over the last 4 months of his/her employment. There is a further cap on its aggregate value for those 16+ aged persons where the payment cannot exceed 80% of the gross legal minimum wages. Initially the RWT payments were granted for a maximum period of three months only. Starting February 2009, the payments were increased by 50% and the programme was extended up to six months.

Figure 11



Source: İŞKUR

Table 5

Reduced Working Time Fund: Selected Indicators (*)

	Number of Applications		Number of Approvals	
	Enterprises	Persons Engaged	Enterprises	Persons Engaged
November, 08	33	8,627	19	6,451
December, 08	271	31,633	162	19,939
January, 09	384	37,767	250	26,273
February, 09	678	49,388	385	33,347
March, 09	1,345	68,227	753	44,412
April, 09	666	23,177	351	13,273
May, 09	331	13,725	208	8,496
June, 09	244	10,809	147	7,289
July, 09	292	28,162	226	25,353
August, 09	277	21,575	229	19,900
September, 09	358	21,283	276	15,876
October, 09	176	14,252	96	6,487
November, 09	160	9,357	125	7,514
December, 09	215	16,239	156	11,583
February, 10	44	3,293	25	2,349
March, 10	116	6,103	79	3,930
April, 10	50	2,783	32	2,001
May, 10	39	3,074	27	2,280
June, 10	21	1,540	16	1,050
July, 10	23	2,101	14	1,631
August, 10	11	742	6	564
Total	**5,734**	**373,857**	**3,582**	**259,998**

(*) As of September, 2010

Sources: İŞKUR Bulletins, İŞKUR 5th General Assembly Report, November 2009, Ankara.

The program had a very weak start back in 2005 when it was first initiated. In 2005 only 21 employees were granted a total 10,567 TL (8,000$). In 2007, 40 workers were eligible to the program and received a total of 22,051 TL (18,000$). Applications have surmounted starting March of 2009 and accelerated to a peak of 82,439 persons in June. Over 2008 to 2010 September, a total of 259,998 persons from 3,582 enterprises had benefited from the programme with a total disbursement of 198.8 millions TL (approx 150m $). The pattern of persons who had been engaged in the RWT fund together with the corresponding disbursements are portrayed on a monthly basis in Figure 11, and reported in table 5.

Table 5 further documents the position of the applicants and approvals over the post-October 2008 crisis-era.

4.1 Public Infrastructure Employment Programme (PIEP)

The public infrastructure employment programme (PIEP) was initiated as an additional component of *active employment programs* in July of 2009. It was designed to target those employees that were threatened by economic crises, or displacement due to privatization, economic re-structuring, or natural disasters. The program aims at providing short term employment along with training and apprenticeship services in exchange for a public-related work or service. In cases of excess demand participants are selected by lottery, and are paid the legal minimum wage. Their social security premiums are also covered within the programme. The programme had an initial funding *from the unemployment insurance fund* of an aggregate sum of 250 million TL (approx 165m $) for 2009. This sum was further supplemented in July by a provision equalling to 50% of the aggregate public contribution to the unemployment insurance fund. This brought the total assets of the fund to 511 million TL (approx 370m $).

In order to get approval for participating to the programme, the following criteria are requested:

- Be an unemployed person, registered formally to the Turkish Employment Agency (İŞKUR)
- Be at least of 18 years of age
- The person should not have participated to previous PIEPs
- The person should not be receiving any retirement dependency, or orphanage payments
- The person should not be receiving any other public income under any comparable program

The benefit period is initially set at 6 months with no proviso for further extension. The programme meets the following expenditures from its funds:

- Total wage costs, based on 16+ persons' gross salary income engaged in industrial sectors
- Administrative costs, based on a maximum of 10% of total labour wage costs, pertaining to costs of equipment needed for administration of the program
- Profits, based on a maximum of 10% of total labour wage costs pertaining to accounting and similar services.

The program had been operational in 2009 in 81 provinces. According to İŞKUR reports, the program has initiated a total of 1,595 contracts covering a total of 46,146 employees (of which 33,970 were males, and 13,015 were females). Total costs of these programs amounted 151.5 million TL (approx 100m $). In addition, under the Southern Anatolian Project-II provisions a total 839 persons have benefited from 14 programs with a total disbursement of 3.7 million TL.

Comprehensive as it is, a major deficiency of the program is voiced over its short term structure, and the rather low employment gains thus far. A major shortcoming of the package was that these

jobs were actually created for a maximum of 6 months only, and lacked formal channels for further follow-up towards formal employment.

4.2 Other Employment-Generating Programs

İŞKUR's *active* employment programmes mainly consisted of vocational courses, job-training, apprenticeships, and guidance towards job applications such as proper resume writing, etc. İŞKUR had been granted a total of 511,495 millions TL over 2009 and 2010, respectively, for designing such programmes. İŞKUR reports indicate that in 2009 213,852 persons benefited from the employment courses. 21,608 of these participants were under employment guaranteed courses. Over January – August of 2010 a total of approximately 184,586 persons were engaged in such training programs, with 28,986 benefiting from employment guaranteed courses. (table 6).

Table 6

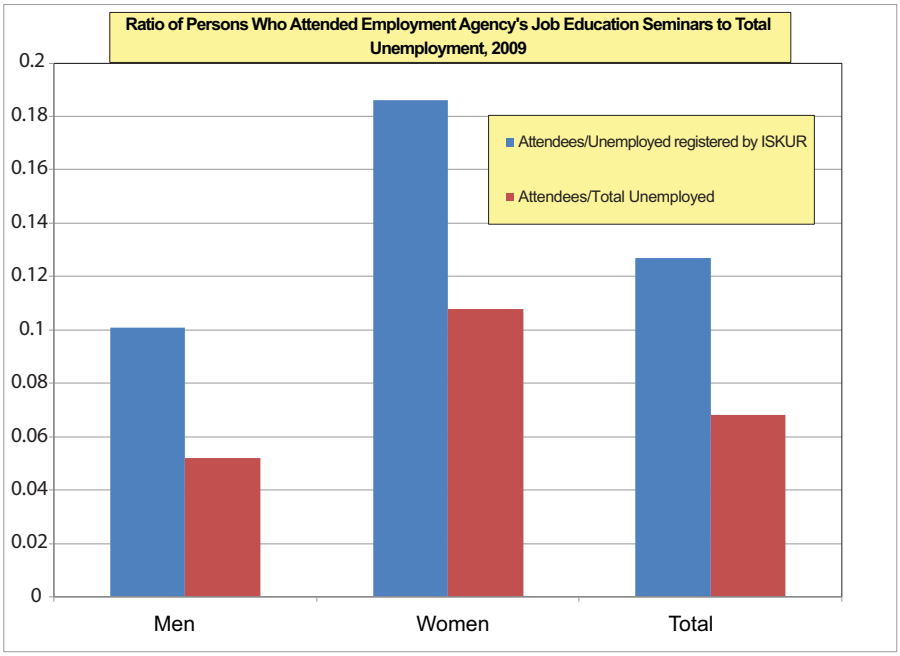
Active Employment Programmes by ISKUR

	2007		2008		2009		2010	
	No of programs	No of Participants	No of programs	No of Participants	No of programs	No of Participants	No of programs	No of Participants
Courses					7,931	167,100	5,500	149,372
Employment guaranteed					942	21,608	1,293	28,986
PIEP					1,627	45,467	1,585	32,386
Apprenticeship					555	1,285	1,215	2,828
TOTAL	**1,325**	**32,691**	**1,888**	**32,206**	**10,113**	**213,852**	**8,300**	**184,586**

(*) As of August

Source: Turkish Employment Agency (İŞKUR)

Figure 12



Source: Turkish Employment Agency (İŞKUR)

One of the main criticisms over the job-education campaigns of İŞKUR was that the programs offered little opportunity for guaranteed job for the attendees. Karadeniz (2010) for instance, argues that a major mishap had been the fact that many courses were provided without due marketing research about the job prospects. He also joins many others' arguments that İŞKUR overall is understaffed and lacks the infrastructures and means to provide such services for its clientele. There are also wide spread concerns over employers' lack of interest, in general, towards İŞKUR's education campaigns. Figure 12 summarizes all these and discloses the ratio of number of persons who had attended İŞKUR's education seminars to total unemployed, both to those who were registered to İŞKUR as unemployed, and to those estimated by the TURKSTAT as open unemployed. At a ratio of only about 12 percent of all İŞKUR's registered unemployed (7% of overall unemployment), those people who were under an education programme for future job skills ought to be regarded as quite a small number. It is clear that a shift of focus is severely needed if the Turkish labour force is to switch from its traditional base toward maintaining a supply of technical expertise with modern job skills.

4.3 Wage Guarantee Fund

Among the *"passive"* employment programmes, one of the most visible designs was the *wage guarantee fund (WGF).* It was initially established as part of the Labour Code No. 4857, article 33. In May 2008, the fund was annexed to the unemployment insurance code No 4447. Its main aim was to protect those employees who had been adversely affected from their employers' declaration of bankruptcy and/or revelation of inability to pay. Under those conditions the *fund* meets up to three months of unpaid wages of the affected workers. To be eligible for the *fund*, the employee has to be continuously employed by the firm a minimum of one year before the declaration of inability to pay.

Since August 2003, 1% of the employers' share of unemployment insurance fund contributions was allocated to the WGF. Total assets of the *fund* reached to 104.4 million TL as of September 2009. It has disbursed a total sum of 1.1 million TL for 827 workers in 2008; and a total of 19.8 million TL for 10,463 workers in the first nine months of 2009.

Another important passive measure was the reduction of employers' social security premium payments by five percentage points. The measure was initially drafted in May 2008 and was put into effect in October of the same year. It is estimated that the programme had cost savings of at least 32TL *per worker, per month* from October 2008 to January 2009 and 33.5 TL since then.[6] SPO estimates that total cost of this program has reached to 3,358 million TL (2,200 million $) or to about 0.40% of the 2009 GDP estimate.

5. Taking Stock: An Overall Assessment

5.1 Assessing the Size of Fiscal Costs Incurred

Total fiscal costs of the stimulus measures (covering both discretionary and normal public expenditures) were introduced in Table 3 and Figure 10. Now it will be informative to assess the overall effectiveness of these programs in terms of employment gains as well as their implied overall quality. We shall first start with a comparison of the size of the Turkish stimulus package with other major OECD countries and emerging markets.

6 Based on the legal minimum wage structure that pertained over the period. Employers' premium burden had been effectively reduced from 19.5% to 14.5% starting October 2008.

Although directly comparable data across national economies are scarce, a direct *year by year* comparison of the aggregate level of fiscal stimuli across Turkey and other G20 emerging market economies reveal that the size of the Turkish packages had been relatively small. Part of this problem stems from the fact that the Turkish fiscal balances were relatively more fragile at the onset of the crisis. Thus the government seems to have been severely constrained and had relatively less room for manoeuvre towards intervention.

A comparison of the Turkish fiscal stimuli as estimated by the IMF staff (IMF, 2009) reveals that Turkish fiscal stimulus measures had fared significantly dismal as compared to the global average of the emerging market economies (see Table 7). Turkey had relatively high fiscal deficits, where the sources of employment-generating fiscal measures had been significantly at the low end.

Table 7

	2009			2010		
		of which			of which	
	overall balance	crisis related discretionary measures	other factors	overall balance	crisis related discretionary measures	other factors
GDP weighted average	-5.5	-2.0	-3.5	-5.5	-1.6	-3.8
Advanced G-20	-5.9	-1.9	-4.0	-6.2	-1.6	-4.5
UK	-8.9	-1.6	-7.4	-10.6	0.0	-10.7
USA	-5.6	-2.0	-3.6	-5.6	-1.8	-3.9
Emerging Market G-20	-5.0	-2.2	-2.8	-4.4	-1.6	-2.8
Argentina	-1.1	-1.6	0.4	0.7	0.0	0.7
Brasil	-0.7	-0.6	0.0	1.2	-0.6	1.8
Korea	-6.7	-3.6	-3.0	-7.8	-4.7	-3.1
Mexico	-2.8	-1.5	-1.0	-2.6	-1.0	-1.6
Turkey	-3.7	-0.8	-2.9	-3.3	-0.3	-3.0
Weighted average incl financial support	-7.0	-2.0	-4.9	-5.8	-1.6	-4.2

Figures reflect the budgetary cost of crisis-related discretionary measures in each year compared to 2007, based on measures announced through mid-July. They do not include (i) acquisition of assets (including financial sector support) or (ii) measures that were planned before the crisis.

Source: IMF Staff Position Note 30 July 2009, SPN/09/21

Table 8

Table. G-20 Countries: Impact of Fiscal Expansion on Growth (%)			
	2009	2010	Average
G-20 Total	1.2 to 4.7	0.1 to 1.0	0.7 to 2.8
Advanced G-20 Countries	1.3 to 4.4	0.1 to 1.1	0.7 to 2.7
Emerging Market G-20 Countries	1.1 to 5.0	0.0 to 0.8	0.6 to 2.9

Note: Fiscal expansion and growth are calculated with respect to the previous year.
Fiscal expansion is measured as the change in the real overall fiscal balance between the two years in relation to real GDP of the previous year.

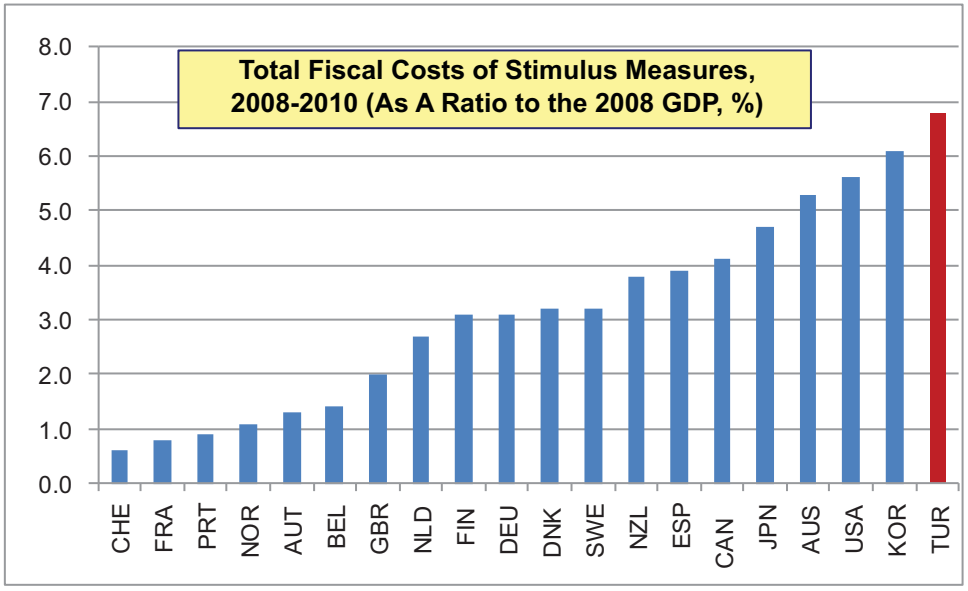
Source: IMF Staff Position Note 30 July 2009, SPN/09/21

The IMF staff estimated that, as of 2009 July, gains in growth due to the fiscal stimulus measures were on the order of 0.6 to 2.9 percent on average for the emerging market economies; and were between 0.7 percent to 2.8 percent for the G20 as a whole (See Table 8).

A more recent estimate is given by the OECD (cited in ILO, 2009). Following a different methodology and a different time frame, OECD studied the size of the *aggregate* fiscal costs of the stimulus measures *relative to the 2008 level* of the respective GDP. To enable a comparison with this data set, we first obtain the aggregate cost of fiscal stimulus measures over 2008-2010 from table 3 above: 64.8 billion TL. Given 2008 GDP as 950 billion TL, this gives a ratio, 0.068(or 6.8 percent) of the costs of fiscal costs of the stimulus package to the 2008 GDP.

Based on this measure Turkey stands out significantly as an aggressive stimulus provider. Figure 13 ranks the major OECD economies in terms of their total fiscal costs of stimuli *relative to 2008 GDP.* With a 6.8 percent ratio Turkey exceeds the OECD average, 4.1 percent.

Figure 13



Source: ILO (2009, Fig 2.1) based on data from OECD Economic Outlook data base.

It is clear that Turkey's score mostly depends on the relatively low level of its 2008 GDP. Nevertheless, calculations in figure 13 appreciates the stimulus effort provided by the authorities against the crisis.

5.2 Administration of the Unemployment Insurance Fund

Among the passive labour programs, a significant component is the *unemployment insurance fund (UIF).* The fund commenced its operations back in June 2000 with the enactment of the U*nemployment Insurance Law*, coded 4447, article 53. Collection of premiums began in 2001, and disbursements to eligible individuals began in March 2003. According to the law, participation to the unemployment insurance is compulsory and is subject to premium payments based on monthly gross wages of which 1% is paid by the employee; 2% by the employer and 1% by the state. Furthermore, as the law stipulates, possible deficits of the fund is under the guarantee of the state.

For eligibility to the fund's support four conditions are required: (1) Within the three years before the date of the termination of the contract, insurance premiums ought to have been paid for a total of 600 days; (2) Before the date of termination of the contract, insurance premiums ought to have been paid for a continuous 120 days; (3) The contract ought to have been terminated due to one of the reasons recognized in the *Unemployment Insurance Law*, article 51; and (4) the insured has to apply to İŞKUR within 30 days following the date of termination of the contract.

Of the persons meeting the above conditions, unemployment insurance payments are granted for

180 days for those who paid premiums for 600 days;

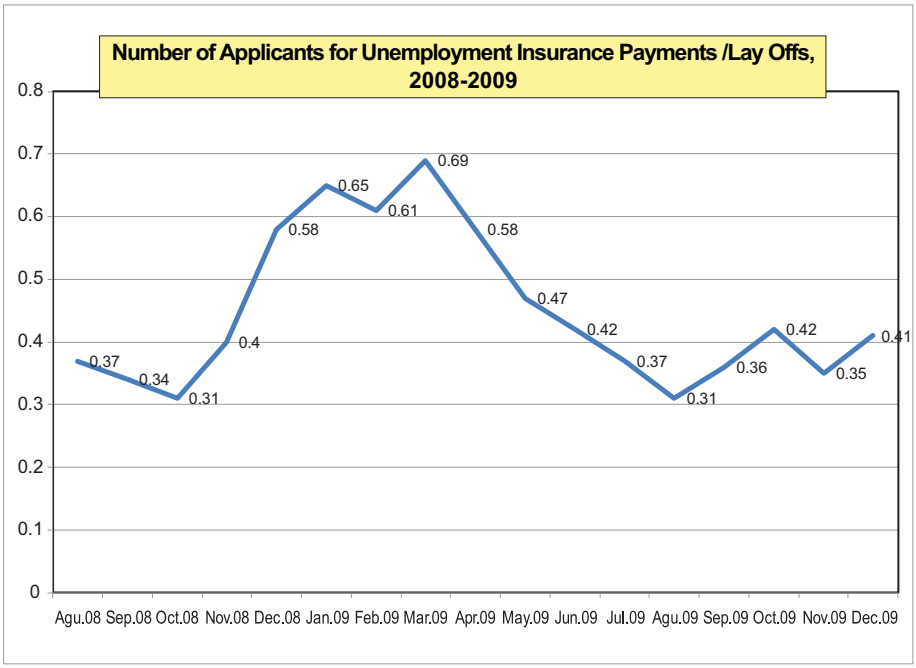
240 days for those who paid premiums for 900 days

300 days for those who paid premiums for 1080 days

According to law, daily insurance payments is set at 40% of the average of daily gross earnings over the last four months. Based on this calculation, maximum monthly payments cannot exceed 80% of the minimum wage recognized for the workers age 16+.

Even though the fund was fully operational on paper during the days of the global crisis, number of persons that benefited from the fund was quite small. As a ratio of the number of workers who had lost their jobs, on average, only 6% had been applying to benefit from the fund's services in the heydays of the crisis. Figure 14 summarizes the flow of applicants to the unemployment insurance fund as a ratio to the number of lay offs over the period, August 2008 to January 2010.

Figure 14



Source: Cited in Karadeniz (2010), data adapted from İŞKUR and TURKSTAT

One of the main reasons for the insufficiency of the UIF to reach to the needy seems to have stemmed from the general stringency of the conditions as well as the rather cumbersome nature of the bureaucratic requirements. Workers' unions and many labour institutions confer that the eligibility criteria for the laid off persons are too narrow; the duration for engagements is short; and state support for those who could not have met the eligibility criteria was either limited or simply non-existent.

Another major concern is due to the usage of the funds thus far. A quick glance to the UIF accounts indicate that insurance payments constitute a minor component of the overall balances. As of June 2010 the fund has a command of 44.1 billion TL net assets. Total expenditures reached 12.1 billion TL. However, only 28% of these expenditures (3.4 billion TL) have been disbursed as insurance payments.

A major bulk of the expenditures, on the other hand, was transfers to the central budget for regional development (Southern Anatolia Project investments). Such a transfer from the İŞKUR's funds to the central budget administration has risen concerns regarding misuse of the available funds for purposes not recognized by law. See table 9 for the breakdown of the UIF accounts.

Table 10, in turn, reports İŞKUR's estimates of the Unemployment Fund balances for the end of 2010. It is easy to follow that the trends in expenditure patterns are expected to continue over the remaining five months of the year. İŞKUR's forecasts indicate that by the end of 2010, the fund's assets will reach to 45.9 billion TL, and total expenditures will reach to 14.5 billion TL. Out of this magnitude only 26% is planned as insurance payments. Thus, over the rest of the 2010, insurance payments is expected to lose its importance even further.

These observations, coupled with the overall concerns regarding the stringency of the programme overall, led to criticisms over the effectiveness and governance optimality of the unemployment insurance scheme as a stabilizer during the great recession.

Table 9

Unemployment Insurance Fund Balances (as of 30 June 2010) (Millions TL)	
Unemployment insurance premiums (employer and employee)	17,865.6
State contributions	6,038.6
Administrative penalties	15.6
Delay penalties	398.2
Other revenues	0.2
Returnin receipts	155.3
Interest revenues	31,626.9
Total inflows	56,100.4
Short term working fund	195.5
Unemployment insurance payments	3,382.3
Active labour programmes	465.8
Transfers for regional development (SAP investments)	7,125.8
Wage guarantee fund payments	46.2
Other expenditures	822.5
Total outflows	**12,038.1**
Total Assets of the Fund	**44,062.3**

Source: Employmet Agency, İŞKUR, 2010 Yılı Kurumsal Mali Durum ve Beklentiler Raporu, July 2010.

Table 10

Estimates of the Unemployment Fund balances for the end of 2010 (Millions TL)	
Unemployment insurance premiums (employer and employee)	19,665.6
State contributions	6,638.6
Administrative penalties	15.6
Delay penalties	443.2
Other revenues	0.2
Returnin receipts	190.3
Interest revenues	33,503.4
Total inflows	**60,456.9**
Short term working fund	225.5
Unemployment insurance payments	3,782.3
Active labour programmes	705.8
Transfers for regional development (SAP investments)	8,775.8
Wage guarantee fund payments	61.2
Other expenditures	952.4
Total outflows	**14,503.0**
Total Assets of the Fund	**45,953.8**

Source: Employmet Agency, İŞKUR, 2010 Yılı Kurumsal Mali Durum ve Beklentiler Raporu, July 2010.

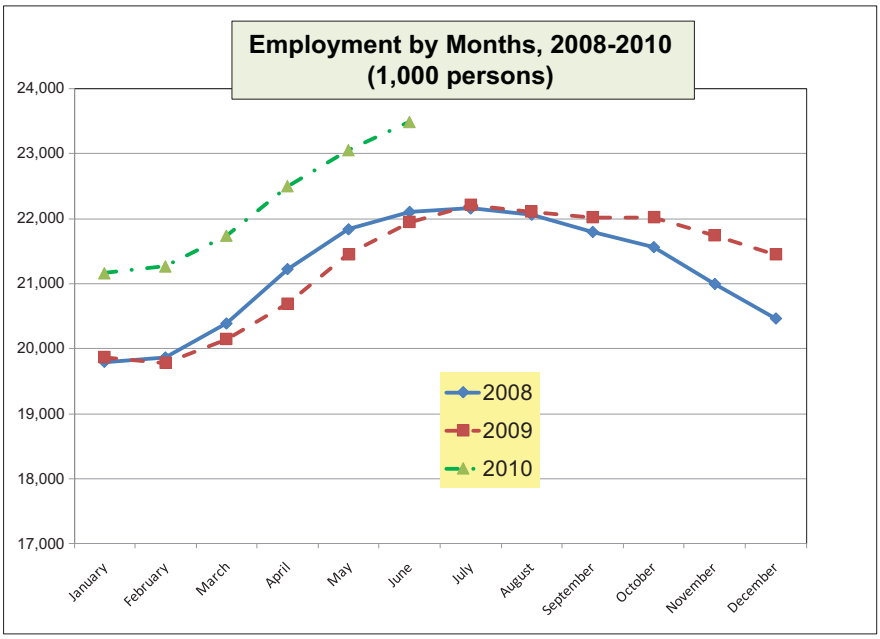
5.3 Assessing the Employment Gains

Data reveal that employment levels had recovered by July 2009, and over June 2008 to June 2010 employment gains had reached to 1,377 thousand people (Figure 15). However, the composition of such employment suggests that it is mostly centered over informal/small scale services, rather than decent paying, high quality productive jobs.

We can make a further analysis of these numbers via calculation of the *employment multiplier* against the fiscal stimulus measures. Given the 2008 base of employment this generates a ratio of 0.062. Based on these values we calculate an estimate of *employment multiplier* of 0.912.[7] Table 11 summarizes the key steps.

7 That is, $\epsilon = \frac{\Delta E / E_{2008}}{AFC / GDP_{2008}}$, where E is change in employment over 2008-2010 June; E_{2008} is employment level in 2008; AFC is aggregate fiscal costs of stimulus measures, and GDP_{2008} is the level of gross domestic product in 2008.

Figure 15



Source: TURKSTAT, Household Labor Surveys.

Table 11

Total costs of stimulus measures 2008-2010	64,866
GDP 2008	950,000
2008 June - 2010 June Increase in Level of Employment	1,377
2008 June Employment	22,111
Program costs as a ratio to the 2008 GDP	0.068
Rate of increase in Level of Employment over 2008 June - 2010 June	0.062
Employment multiplier	0.912

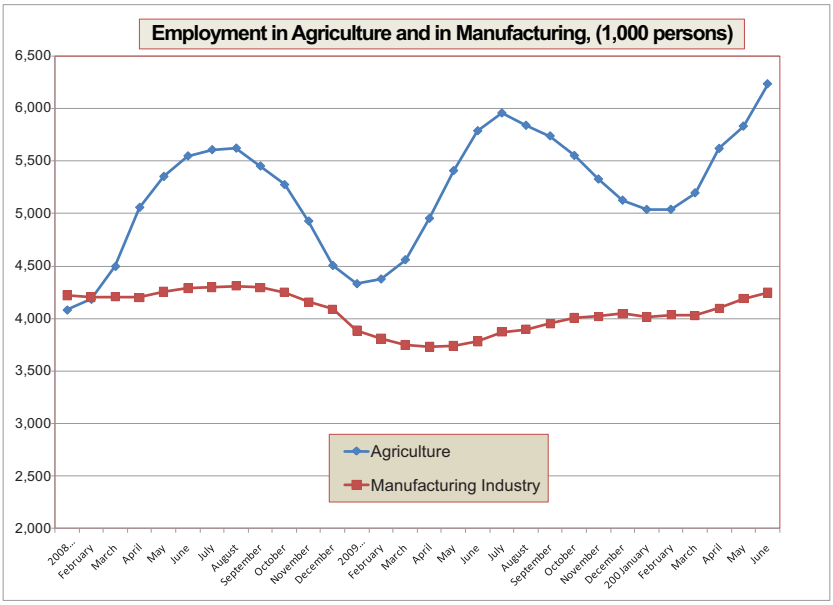
Source: Author's calculations based on TÜİK data.

ILO (2009) indicates that the average employment effect of the stimulus packages in 2010 for the 19 OECD countries corresponds to somewhere in the range of 0.8-1.4. According to the ILO report, the jobs impact of the stimulus measures is estimated to be particularly strong in Australia (1.4-1.9), Japan (1.3-2.0) and the United states (1-1.8) owing to both the relatively large size of the fiscal packages in these countries and their relatively large fiscal employment multipliers.

A closer look at the details of these employment gains disclose important traits of the adjustment process experienced within the domestic economy. Composition of employment by sectors is portrayed in Figure 16. The trends of employment in the agricultural versus manufacturing industry reveal that the burden of adjustment in the labour markets was absorbed by the rural economy. Agricultural

employment was about 4 million 200 thousand people in early 2008. During the evolution of the effects of the great recession on Turkey throughout 2008 and 2009, agricultural employment is observed to *increase* by 2 million people bringing number of workers employed in the agricultural activities to 6.2 millions. Employment in the manufacturing industries, on the other hand, contracted sharply during 2009 and could not recover its pre-crisis levels as of June 2010 (see Figure 16).

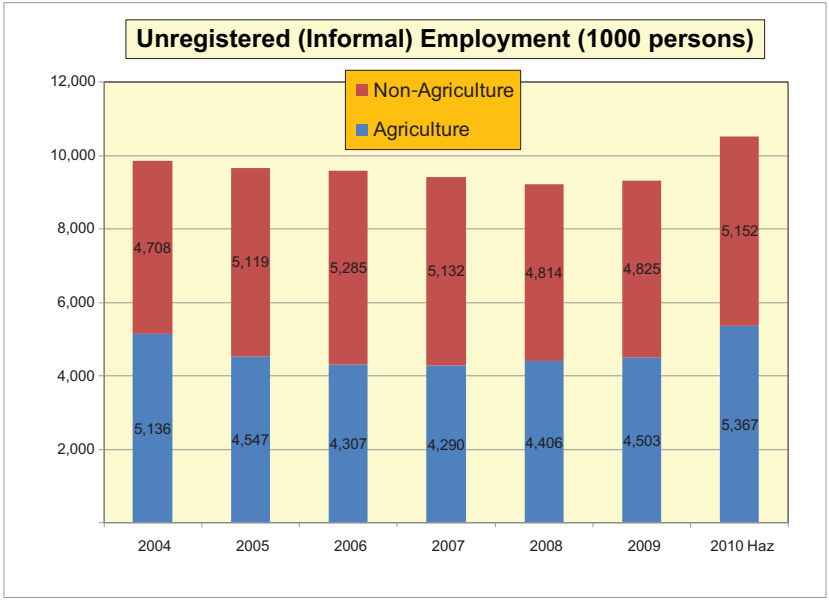
Figure 16



Source: TURKSTAT, Household Labor Surveys.

These adverse trends in favor of the agricultural activities raise doubts about the quality of the employment gains generated thus far. The fact agricultural output had expanded at a cumulative of only 2.3 % over the course of the last two years, the source of this observed expansion in agricultural employment reaching to 30% is hard to explain. Clearly this had occurred at the expense of significant informalization and widening of the employment slack in the rural economy.

Figure 17

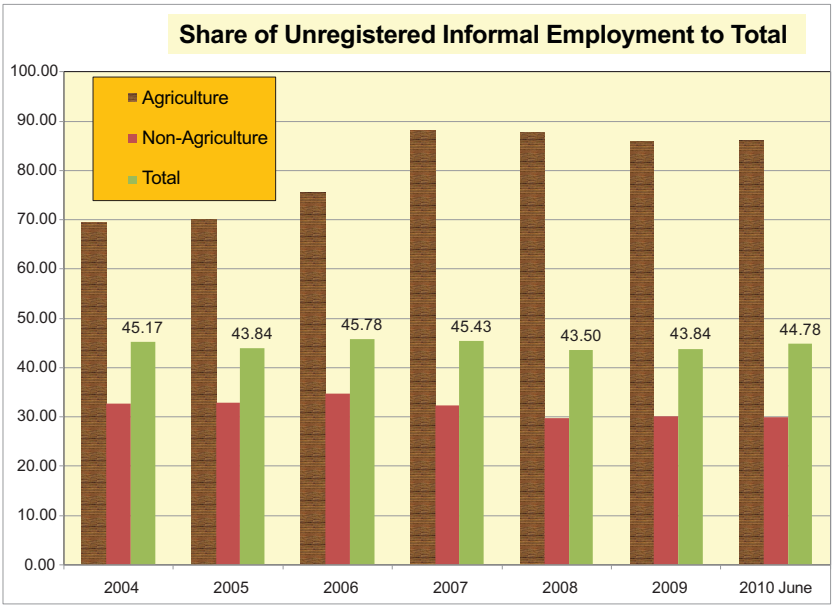


Source: TURKSTAT, Household Labor Surveys.

As a follow up of these observations, in Figure 17 we report on the available data from TURKSTAT data base over the extend of informalization and duality in the Turkish labour markets. Data reveal that as of June 2010, unregistered workers in agriculture was 5 million 152 thousand persons. With an addition of 5 million 367 thousand workers employed under unregistered conditions, this brings total unregistered employment to 10.5 million people. This is 44.78% of total employment. (See data in Figure 17).

Informal, unregistered employment without any social securitization coverage has been an indispensable trait of the Turkish labour markets over the 2000s. The ratio of the unregistered employment to total employment had fluctuated between 45 – 50 percent over the decade, and as it seems, had constituted one of the major (arguably *the main*) mechanism of adjustment. As informal labour bore the burden of adjustment, wage remunerations fell and quality of jobs unavoidably got worsened. See Figure 18 for the historical trend in the informalization of the labour markets over the 2000s.

Figure 18



Source: TURKSTAT, Household Labour Force Surveys.

In fact, unregistered informal employment gains mostly explain gains in total employment in the first half of 2010. As Table 12 attests, one can read a rapid expansion in total employment over the first half of 2010. Yet a close inspection of the status of these data reveals that of the 2 million 324 thousand newly employed workers, 1 million 570 thousand were "employed" without any social security coverage, as "unregistered" employees. This phenomenon had been particularly acute in agriculture, where of the total 1 million 194 thousand new employment, 1 million 45 thousand were unregistered as informal workers. This is a ratio of 98%!.

Thus far, the expansions of the fiscal stimuli seem to have deepened the informalization of the labour force, with insufficient gains in decent work. This is a key attribute that we come across again and again in the country experiences since the onset of the global recession.

Table 12

Employment and Unregistered Informal Employment over January-June 2010					
	Total	**Agriculture**	**Industry**	**Construction**	**Services**
Employed					
January 2010	21,164	5,039	4,281	1,161	10,683
June 2010	23,488	6,233	4,536	1,580	11,139
January-June Difference	2,324	1,194	255	419	456
	Total	**Agriculture**	**Non-Agriculture**		
Unregistered Informal Employed					
January 2010	8,949	4322	4627		
June 2010	10,519	5367	5152		
January-June Difference	1,570	1,045	525		

Source: TURKSTAT, Household Labour Force Surveys.

6. Outlook and Challenges

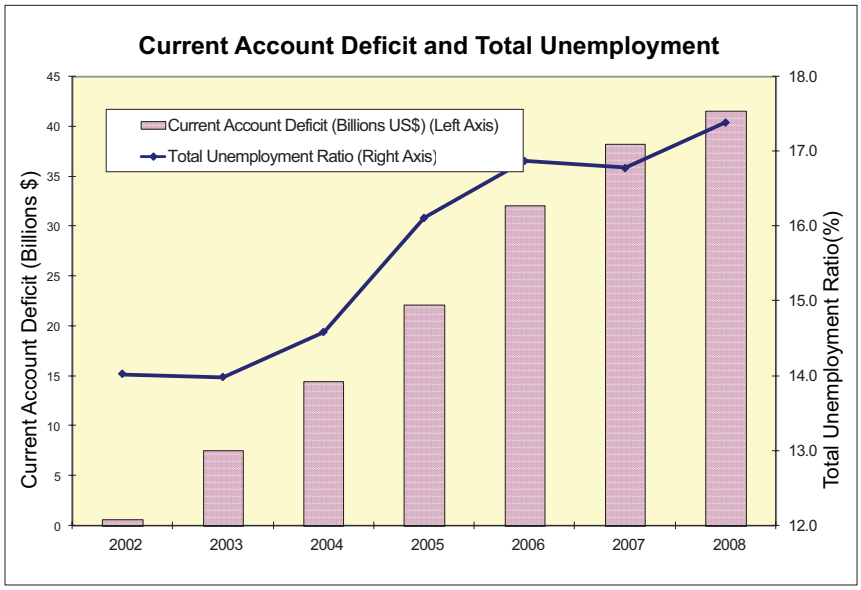
To be certain, the effectiveness of the labour promoting policy measures cannot be separated from the overall macroeconomic environment the domestic economy had been situated in, and none of these outcomes were of course independent from the overall macro performance of the Turkish economy. Unfortunately, the character of macroeconomic policies that were effective in Turkey following the 2001 crisis had generally been quite unfriendly for employment generation.

A major distinct feature of the Turkish economic scene in the post-2001 crisis era was its relatively high interest rates and high costs of credit. Operating under an environment of global financial expansion, this fact has led to a rapid expansion of foreign capital inflows, especially in the form of short term speculative "hot" finance. The underlying speculative nature of such flows was a witness to the fact that they were not necessarily part of "green field investments" that could expand labour demand by creating new jobs and bringing new advanced technologies. The "hot" character of speculative finance resulted in mainly currency *appreciation* and loss of competitiveness for the traditional Turkish exportables. "Modern" manufacturing sectors, on the other hand, gained from this appreciation. These were mostly sectors such automobiles, auto parts, and consumer durables. They typically display high import content, and the fact that imports got cheaper meant significant cost savings for such sectors. Thus, Turkish exports of automotives and consumer durables expanded during this period. However, being import dependent, such sectors displayed relatively low domestic value added content and had relatively low elasticities of labour employment. In what follows, the appreciation of the exchange rate led to a loss of competitiveness and stagnation of the labour intensive traditional Turkish exportables, such as textiles, clothing, small scale glass and ceramics. As labour employment demand dwindle in these sectors, the rising "modern" manufactures had low elasticities of labour and could not maintain high employment gains. The end result had been a rise of unemployment.

Figure 19 summarizes these assessments. The figure depicts total (open plus disguised) unemployment ratio as a line graph with respect to the right axis. This ratio is borrowed from data in Table 1 above. It is contrasted against the *current account deficit* displayed with respect to the left

axis. The portrayal of the rising unemployment along with an expanding current account deficit is no surprise to students of development economics. As Turkey consumed more and more of value added produced abroad, and found it profitable to do so with an appreciated currency financed by speculative financial inflows, external deficit widened and foreign debt accumulated. The costs of this *speculative-led growth,* however, were realized as loss in jobs, deepening informalization, and decline of real wage income.

Figure 19



Source: CBRT.

On the other hand, the recently released[8] *medium term economic program* estimates reveal that the Turkish economy will likely to re-enter a new path of relatively large current account deficits over the years ahead (see Figure 20 below). The program forecasts that the GDP would expand at a rate of 6.8% in 2010 and at rates of 4.5% , 5% and 5.5% over 2011, 2012 and 2013, respectively. It is expected that the unemployment rate will be 12.2% in 2010 to recede to 11.4% by the end of 2013.

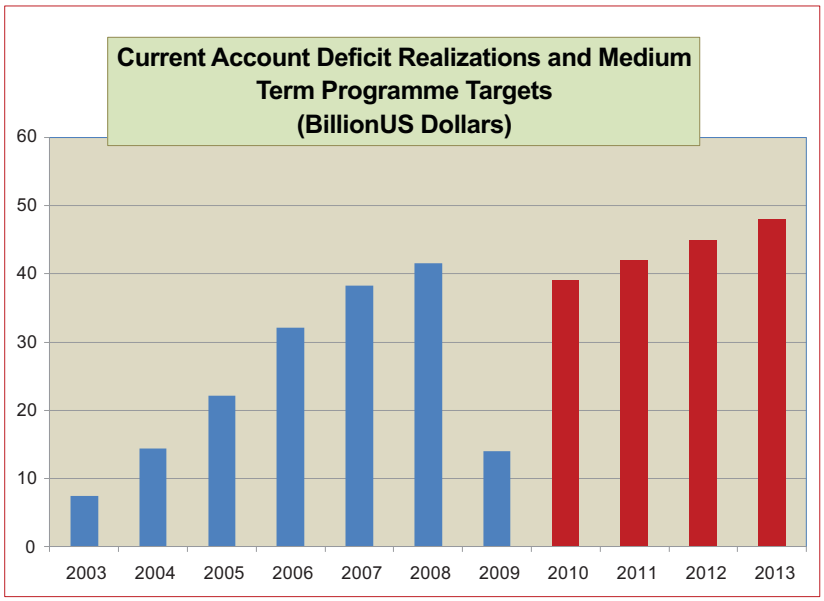
The MTE program's main assumptions seem to rely on the strategy of continued external deficit financing with an expected re-emergence of current account deficits over 2011-2013. It is expected that as a ratio to the GDP, the external deficit will rise from 3.5% in 2009 to 5.3% over 2011-2013(Figure 20). Leaving the general question of whether such external deficits could at all be feasible in the period ahead, the desirability and appropriateness of this strategy for employment is desperately questionable given the historical experience of the early 2000s. Continued adherence to external deficit-led growth will, no doubt, result in undue strain in the labour markets.

These observations were also resonated in Rodrik (2009) who writes that *"... a financially open economy has many sources of vulnerability. Even when a country does its homework, it remains at the mercy of developments in external financial markets. Crises and contagion are endemic to financial globalization. The world of finance does not always operate in a benign fashion. So lesson number one is that policy needs to guard not just against domestic shocks, but also shocks that emanate from (external) financial instability. Writing in particular over the Turkish experience with the global recession, Rodrik further comments that" the Turkish economy grew at quite rapid rates in the years before the most recent crisis.*

8 State Planning Organization, Medium Term Economic Program, 2011-2013. Dated 11 October 2010, Ankara

This can be interpreted as the reward for the solid macro policies pursued since 2001. At the same time, there were too many disconcerting elements in this growth experience. In particular, domestic saving fell (instead of rising, as it should have done in an environment of increased macro stability and confidence) and unemployment remained stubbornly high. The external deficit kept on widening. Investment remained lower than required. All of these put the sustainability of the economic boom into question. Even if the sub-prime mortgage crisis had never taken place, Turkey's prevailing pattern of growth would have run into problems. Therefore it would be a mistake for the country to return to the status quo ante and resuscitate a model that fails to make adequate use of domestic resources. Most importantly, Turkey has to learn to live with reduced reliance on external borrowing." (Rodrik, 2009, p.2).

Figure 20



Source: State Planning Organization (2010) Medium Term Economic Program, 2011-2013, October, Ankara

All of these observations underscore the argument that labor enhancing policies will not be successful unless complemented by an *employment-friendly* vision in the overall macroeconomic policy environment, to be designed and implemented not only at a domestic, but also at the *global* level. Excessive reliance on external finance is compelling at first sight, but its costs could be tremendous, and not necessarily limited to conjectural swings of the business cycle but typically involve strategic costs adversely affecting the future growth path and its quality.

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THE EFFECTIVENESS of CRISIS MEASURES

The Case of Motor Vehicles Industry[1]

Erol Taymaz[2]

SUMMARY

The aim of this study is to assess the effects on the motor vehicles industry of special consumption tax (SCT) reduction and short-time work allowance that have been introduced in Turkey to mitigate the impact of the crisis and to protect employment. The findings of the study suggest that the demand for motor vehicles, especially for passenger cars, was stimulated to some extent by SCT reduction, but the value of motor vehicle imports has also increased almost at the same rate as the increase in domestic sales of local producers. The impact on employment of the SCT reduction has been rather limited, and the motor vehicle producers continued to shed labor even when SCT rates were reduced. In spite of SCT reduction and short-time work allowance, employment (the number of employees) rather than average working time has been the dominant labor adjustment factor in response to the crisis. SCT has achieved limited success in boosting local production of motor vehicles, but its cost to the society has been quite substantial in terms of the foregone tax revenue.

1. Introduction

The Turkish economy achieved considerably high growth rates after the 2001 financial crisis. The economy grew very rapidly in 2002 partly because of the post-crisis low base, and kept its growth rate at a high level until 2006 (the average annual growth rate of gross domestic product exceeded 7% in the period 2002-2006). However, the economy failed to sustain high growth rates, and started to slow down since 2006 (the annual growth rate was 4.7% in 2007). The world economic crisis that affected almost all economies in the world in the second half of 2008 imposed additional constraints for growth, and the economy almost stopped its growth in 2008 (0.7% growth), and shrunk 4.7% in 2009. Although the economy grew rapidly in the post-2001 period, that was not sufficient to reduce the rate of unemployment that jumped from about 7% to 9.5% after the 2001 crisis, and remained almost fixed at that level. This process, described as "jobless growth" by many researchers, forced the policy makers to introduce specific measures to stimulate employment generation. The government launched a set of programs, the so-called "Employment Package", to address the (un)employment problem, which was defined accurately by Juan Somavia, the Director-General of the ILO, as "the crisis before the crisis", long before the effects of the 2008 crisis have become visible (Erdoğdu, 2009). The package, adopted as a law by the Parliament on May 15, 2008, introduced measures to reduce labor costs of employers so as to raise the demand for labor. Later on, the government has introduced anticrisis measures starting in the first half of 2009. The Employment Package, launched in 2008, and the anti-crisis measures implemented in 2009 were mainly composed on horizontal, economy-wide, policies.

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However, the government introduced some sector-specific policies as well because the impact of the crisis was felt more strongly in certain sectors. Sectoral measures provide useful examples to understand the effectiveness of anti-crisis measures and to develop new ones. Accordingly, the aim of this study is to assess the effectiveness of specific measures implemented to support the motor vehicles industry in 2008-2009, and to draw lessons for policy design and implementation. The assessment of the effectiveness of sector-specific crisis measures, as in the case of any program evaluation, is based on a comparison between the observed outcome after the implementation of the measures and the outcome that could have been achieved had the measures not been implemented. Since such a comparison requires a substantial amount of analysis, this study is focused on only one sector, namely the motor vehicles industry. The study is organized as follows: After this introductory section, the anti-crisis measures implemented in 2008-2009 and the factors behind the selection of the motor vehicles industry for our analysis are summarized in the second section. The third section provides the assessment of the effectiveness of crisis measures on the basis of sectoral-level data and sectoral comparisons. A similar analysis is performed by using firm-level data in the fourth section. Since the objective of most of the measures was to protect employment, the fifth section is devoted to the analysis of labor adjustment mechanisms and the effect of crisis measures on the patterns of labor adjustment. SCT reduction was the most important measure for the motor vehicles industry. Therefore, the effect of SCT reduction on tax revenue is discussed in the sixth section. Main findings of the study and policy recommendations are summarized in the final section.

2. Anti-crisis Measures

2.1. The Extent of the Crisis and Crisis Measures

The impact of the 2008 crisis has been observed in the Turkish economy since the middle of the year. The annualized output growth rate of manufacturing had become negative the first time in August 2008,1[3] and it remained negative until October 2009. When the crisis reached to its dip in the first months of 2009, the annual change in manufacturing output was about -30% (Figure 1).[4]

There are significant inter-sectoral differences in response to the crisis. For example, the fall in output was limited in consumer goods industries, whereas capital goods industries experienced a substantial contraction. The decline in capital goods output reached 60% in the period January-March 2009. The motor vehicles industry has been one of the worst affected sectors. Since consumers could delay their demand for automobiles, the motor vehicles industry faced with huge decline in demand, and, consequently, in production. Another factor that contributed to the deepening crisis in the motor vehicles industry is the dependence of the industry on foreign markets because motor vehicles producers in Turkey tend to export a large part of their output. The contraction in their main market, namely the European Union (EU), during the crisis was a major blow to the Turkish motor vehicles industry (see TEPAV, 2010).

3 In this study, the annual growth rates for quarterly and monthly data were calculated as the logarithmic rate of change from the corresponding period in the previous year to the current period (i.e., year-on-year growth rate). We prefer to use the logarithmic growth rate because it provides symmetric values around downturns and upturns. For example, if output declines from 100 units to 80 units in the first period, and comes back to 100 units in the second, the logarithmic growth rates would be -22.3% and +%22.3%, respectively. If the growth rates were calculated as a simple ratio, than the decline would be -20% and the increase +25%.

4 Unless otherwise stated, the Turkish Statistical Institute (TURKSTAT) is the data source for all tables and figures.

The Turkish government introduced a number of measures before the 2008 crisis to stimulate employment generation because the unemployment rate had been persistent around 10% in spite of rapid growth in the 2002-2007 period. The most important set of measures was the "Employment Package" that was incorporated into the Law (No 5763, adopted on May 15, 2008). The main aim of the employment package was announced to be reducing unemployment. These measures aimed at boosting the demand for labor by cutting employers' labor costs (for example, by reducing employers' contribution to the social security by 5 percentage points, temporary and gradual social security reductions for newly hired female and young workers, etc.) . Moreover, the package included new vocational training schemes to be conducted by the Turkish Employment Agency, and extended the coverage of the Wage Guarantee Fund and Short-time Work Allowance (Erdoğdu, 2009). The government was confident, even in the late 2008, that the global crisis would (tangentially) bypass Turkey and there were no need for specific anti-crisis measures. However, when the crisis hit hard and the unemployment rate jumped up in the early 2009, the government changed its stance, and started to announce additional measures. The Undersecretariat of Treasury classifies the measures under seven categories (Hazine Müsteşarlığı, 2009):

Liquidity support: Measures to provide FX and TL liquidity to the markets, and to strengthen the financial structure of the banking system

Tax reductions: Measures to lower costs or to raise revenue of the private sector by reducing the tax burden

Employment promotion: Measures to reduce labor cost (especially for the newly hired), the provision of vocational training, extensions in the level and coverage of the short-time wok schemes

Investment promotion: Various investment promotion schemes devised on the basis of the scale of investment, and region and sector

Credit and credit guarantee schemes for (small) producers and exporters: Credit subsidies and credit guarantee schemes designed specifically for small and medium-sized enterprises and exporters

Regulations on credit provision and credit cards: Measures and regulations regarding FX and FX-linked loans

R&D support schemes: Various tax-based R&D support schemes

The total cost associated with these measures was less than 1% of GDP in 2008, but reached 2.17% in 2009 and 2.15% in 2010 (ILO, 2010a). However, the measures listed above are not exclusively anti-crisis measures.[5] For example, as mentioned before, the Employment Package was designed and launched before the 2008 crisis. Investment and R&D support schemes are being implemented on a permanent basis without due consideration to the crisis. Thus, tax re ductions seem to be the most important crisis measure for the corporate sector, and among various tax reduction measures, special consumption tax (SCT)[6] and value added tax (VAT) reductions could be classified as "sector-specific".

5 Öniş and Burak (2010) suggest that, by "March 2009, six months into the crisis and despite imploding industrial production and soaring unemployment, Turkey was one of only two OECD countries without a clear fiscal stimulus package in place (the other was Greece), and when the government finally announced one, it was comparatively the smallest among the developing members of the G-20".

6 According to the Special Consumption Tax Law, there are four product groups that are subject to special consumption tax at different rates: i) petroleum products, natural gas, lubricating oil, solvents and derivatives of solvents, ii) automobiles and other vehicles, motorcycles, planes, helicopters, yachts, iii) tobacco and tobacco products, alcoholic beverages, and iv) luxury products.

These measures devised temporary SCT reductions for motor vehicles, motorcycles and durable consumer goods (the so-called "white goods"), and VAT reduction for furniture and computers. The rate of SCT reductions for motor vehicles depended on the type and the engine size of the vehicle. This study will focus on the effects of SCT reductions for motor vehicles.

2.2. Motor Vehicles Industry in Turkey

Motor vehicles industry[7] is considered to be a "growth industry" for Turkey, as it is the case for most of the middle-income countries. The industry achieved a rapid growth especially since the mid-1990s, and has become a major sector in Turkey in terms of its share in manufacturing output, employment and exports.[8]

There were about 133,000 people employed in the motor vehicles industry in 2007 (Table 1). The share of motor vehicle industry in total manufacturing employment was 4.8%, whereas its output and value added shares were almost its double, 9.0%. In other words, the motor vehicles industry is about 2 times more productive that the manufacturing industry as a whole. Consequently, the motor vehicles industry pays 60% higher wages that the average wage in manufacturing.

The motor vehicles industry (NACE 34) is not a homogeneous sector. The automotive subsector (NACE 341), where the final product, motor vehicle itself is produced, is dominated by large firms who are more productive and pay higher wages. This sub-sector employs about one third of all employees working in the motor vehicles industry. Small, less productive, low-wage firms are dominant in the coachwork and trailer sector (NACE 342). The largest sub-sector in terms of employment (about 80,000 employees) is the manufacture of parts and accessories sector (NACE 343). Although a typical firm in this sub-sector is also small (the average firm size is only 26 employees), this sub-sector is more productive (and pay higher wages) than the manufacturing industry.[9]

In addition to the manufacture of motor vehicles and parts, motor vehicles trade and repair/maintenance is also a major source of employment. In 2007, motor vehicles related services (motor vehicles and spare parts sales, repair/maintenance, gas stations, etc.) employed 460,000 people. Finally, with the additional 720,000 people employed in the land transportation sector, motor vehicles-related sectors are among the major sources of employment in Turkey.

Turkey is one of the main automotive producer countries in the world thanks to its 825,000 vehicle production capacity (Haugh et al., 2010).[10] Motor vehicles production in Turkey is expected to grow at a rapid pace in the next decade because of high income elasticity of motor vehicles demand in Turkey, the tendency towards regionalization of motor vehicles production chains in the global economy, and the relocation of production destined for the EU into the European peripheral countries. In other words, the motor vehicles industry will continue to play a crucial role for the development of the Turkish economy in the medium term.

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7 According to the NACE (Rev. 1.1) classification, the "motor vehicles industry" (NACE 34) is composed of three sub-sectors: "Manufacture of motor vehicles" (NACE 341), "Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers" (NACE 342) and "Manufacture of parts and accessories for motor vehicles and their engines" (NACE 343). In this study, we use the terms "manufacture of motor vehicles" (NACE 341) and "automotive industry" interchangeably. Moreover, automotive products are classified into two groups: passenger cars and commercial vehicles. The later group includes trucks, pick ups, buses, minibuses, midibuses, etc. Manufacture of agricultural and industrial tractors is not included in the motor vehicles industry.

8 For a comprehensive study on the development of the motor vehicles industry in Turkey, see Taymaz and Yılmaz (2008).

9 This sub-sector (NACE 343) includes only manufacture of parts and accessories specific to motor vehicles. In addition to this sectors, there are about 55,000 people employed in other motor vehicle-related parts and accessories (tires, gears, etc.).

10 In 2009, the countries were ranked by production capacity as follows: China, Japan, US, Germany, Korea, India, France, Spain, UK, Mexico, Canada, Italy, Turkey and Belgium (Haugh et al., 2010).

Motor vehicles industry accounts for a significant part of output and employment in developed (Canada, France, Germany, Japan, Spain, UK, US, etc.) as well as in rapidly developing countries (China, India, Korea and Mexico). Large and regionally concentrated employment in motor vehicles makes it politically sensitive. Therefore, all governments have introduced special measures to protect the industry during the 2008-2009 crisis. Some countries have adopted specific measures to reduce costs and to overcome financial problems (special R&D support to design energy efficient cars, credit guarantee schemes, operating capital injection, etc.). The most widely adopted measure in developed countries has been to subsidize consumption so as to increase the demand for new motor vehicles (Sturgeon and Van Biesebroeck, 2010; Haugh et al., 2010).

Consumption subsides have been provided usually to boost the demand for energy efficient and low CO2 emission vehicles, and to replace old vehicles (car scrapping/"cash-for-clunkers" programs). Car scrapping subsidies range between $1000-2000 in many OECD countries (Figure 2). The amount of subsidy was the most generous in Germany ($3000) and the US ($4000). Scrapping scheme was introduced in Turkey in the years 2008-2010 for some types of commercial vehicles (trucks, buses, etc.). The scheme was designed in the late 2007 as a policy to scrap old commercial vehicles, not as an anti-crisis measure. The average scrapping subsidy was about 6,000 TL ($6,000 by PPP) in 2009. There are a number of quantitative assessments of the scrap subsidy programs. An official study estimates that the $3 billion cash-for-clunkers program in the US increased the output of the automobile sector in the second half of 2009 by between about $2.5-6 billion (Council of Economic Advisers, 2009).

2.3. Specific Measures for the Motor Vehicles Industry

There have been three major specific measures implemented in 2008-2010 for the motor vehicles industry in Turkey: scrapping subsidy, SCT reduction, and short-time work allowance. Although the scrapping subsidy and short-time work support were not introduced as anti-crisis measures, we will analyze the effects of these measures as well because the motor vehicle producers would potentially benefit form them during the crisis period.

2.3.1. Scrapping Subsidy

Scrapping subsidy was introduced by the communiqué no 49 published in the Official Gazette (OG) on November 17, 2007. The aim of the measure (Article 1 of the *communiqué*) was to scrap economically and technically obsolete commercial vehicles in order to enhance safety on roads and to establish a strong market for transportation by reducing the excess capacity. The program covered trucks, tankers, trailers, midibuses and buses that were produced not later than 1972, and at working conditions. The scrapping scheme provided bonuses, based on the weight of the vehicle, if they were to be scrapped before December 31, 2009. By a new *communiqué* no 54 (OG, May 3, 2008), the coverage was extended, and the bonus was increased.

Since the number of vehicles scrapped was almost negligible (only 1551 vehicles in 2008), the scrapping scheme was revised (by *communiqué* 56 and 57, OG, March 19 and May 31, respectively) to include vehicles produced until 1980. An amnesty for the unpaid motor vehicles tax was also granted as a part of the scrapping scheme.

Although the estimated number of vehicles older than 20 years was 164,000, there were only 15,331 vehicles scrapped by the end of 2009, and 6000 TL per vehicles was paid on average (Ulaştırma Bakanlığı, 2009: 189; Ulaştırma Bakanlığı, 2010: 107). These figures indicate that the scrapping subsidy has not been effective during the crisis period. Note that the scrapping subsidy in

Turkey did not impose any conditionality (such as buying a new vehicle), and, more importantly, it excluded passenger cars. It is expected that the total scrapping payment will remain less than 100 million TL. Compared to the size of scrapping programs in the US and Germany ($3 billion and €5 billion, respectively), its size was quite small.

2.3.2. SCT Reduction

The decree adopted by the Council of Ministers on March 13, 2009 (No 14802, published in the OG on March 16, 2009) on special consumption tax (SCT) reductions is the most important crisis measure for the motor vehicle industry. By the decree, The SCT was reduced for a number of products for the period from March 16 to June 15, 2009. A new decree adopted on June 12 (No 15081, published in the OG on June 16) extended the period of reductions until September 30, 2009, albeit at lower rates than the previous one.

The highest reduction in SCT was provided for passenger cars with an engine smaller than 1601 cc (see Table 2). The SCT tax for these vehicles was reduced from the "normal" level of 37% to 18% in the first period (March 16-June 15, 2009), and 27% in the extended period (16 June-September 30, 2009). For passenger cars with large engines (larger than 1600 cc), the reduction was limited and applied only in the first period. SCT reduction was not used to encourage consumers to buy energy efficient or low emission cars, contrary to most EU countries did.

Since the SCT rates were already low for (heavy) commercial vehicles, the scope for reduction for these products was limited. Thus, the products whose demand would be the most affected were (small) passenger cars and light commercial vehicles.

2.3.3. Short-time Work Allowance

The Labor Law (no 4857) has first introduced the "Short-time Work and Short-time Work Allowance". The scheme was revised in May 2008 by the law no. 5763, and it was put under the Unemployment Insurance Law (no 4447). The Regulation on Short-time Work and Shorttime Work Allowance (published in the OG on January 13, 2009) limited the duration of benefits to 3 months. The law adopted on February 18, 2009 (no 5838) extended the duration of benefits up to six month, increased the amount of benefits by 50%, and allowed the period of short-time work allowance payments to be non-deductible from the period of unemployment benefits. The implementation of these regulations was extended, by modifications, until December 31, 2010, by the decrees of the Council of Ministers on June 22, 2009 and March 1, 2010.

Although the short-time work allowance is not a measure specific to the motor vehicles industry, it is analyzed in this study because of its importance for that sector. As mentioned before, the motor vehicles industry is much more productive than the manufacturing industry, and pays wages higher than the average. The main factor behind higher wages is the fact that the motor vehicle industry employs skilled-workers who are endowed with sector- and even firm-specific knowledge (the so-called "human capital"). Short-time work scheme is aimed at protection jobs so as to maintain workforce attachment during the crisis. If the workers are laid off during the crisis, they may not be re-employed in the same firm, or even in the same sector when the sector recovers. In such a case, the most precious asset for productivity, the specific human capital embodied in the workforce will be lost. Therefore, in order to save skills of the workforce, the short-time work scheme provides temporary assistance to the firm and the workers to preserve the employment relationship during the crisis.

The criterion for the success of the short-time work allowance is the degree the employment relationship preserved. During the crisis, total hours worked will undoubtedly decrease as a result of the decline in output. If the employment relationship is preserved, then the downward adjustment in hours worked has to be achieved by a decline in the average working time per employee. Thus, we will analyze in detail the process of adjustment in hours worked, and measure the contributions of changes in the number of employees and average working time in the adjustment process.

3. The Effects of Crisis Measures: Sectoral Analysis

3.1. The Impact Assessment of Support Programs

The impact assessment of support programs requires a comparison of the outcomes that would have been observed for supported firms/sectors had they not benefited from the program. For example, "the effect of the support program on output" can be defined as:

$$\Delta = Q^1 - Q^0$$

where Q^1 is the output observed when the support is provided, Q^0 the output that would have been produced anyway (without any support), and Δ the impact of the program. The counterfactual, Q^0, has to be estimated because it is not observable. There are three methods used to estimate Q^0, and, hence, Δ: *before-after* (using data on support-recipients prior to program participation), *cross-section* (using data on non-supported firms/sectors), and *difference-in-difference* (using both types of data).

Before-after comparison assumes that the output would not have changed had the program not been implemented. Therefore, the output level before the program implementation is used to estimate Q^0. The main shortcoming of this method is the fact that it cannot control for other time-varying effects.

In the case of *cross-section* comparison, the data on other units (on other products/sectors or even on other countries) that are not affected by the program are used to estimate Q^0. For example, if there is SCT reduction for only passenger cars, and no change in SCT for other vehicles, the output (index) of other vehicles can be used for Q^0 in estimating the impact of the program.

The method called *difference-in-difference* compares the average change in output of supported and non-supported products/sectors conditional on not having received the support at an initial time, *t-1*. It can be defined as,

$$\Delta = (Q^{+}_{t} - Q^{+}_{t-1}) - (Q^{*}_{t} - Q^{*}_{t-1})$$

where Q^+ denotes the product/sector supported by the program, Q^* the product/sector that does not receive the support, *t-1* the time period prior to the program implementation, and t the period after the program (the comparison period). This method is called difference-indifference because it is based on differences over time (between *t* and *t-1*) and over products (products + and *). Because of time-differencing, this method controls for time-varying factors (for example, the economic crisis) that could affect different products to the same extent.

In this study, we use these three methods for various variables. First, there will be before-after comparisons for a number of variables (prices, production, sales, exports and imports) to observe the effect of SCT reduction on the motor vehicles industry. Since there are differences in SCT reductions across motor vehicle types, there will be cross-section comparisons between different products and

sub-sectors. Moreover, there will be an international comparison (Turkey vs Germany and Spain) to understand differences in national responses to the crisis. In those comparisons, the difference-in-difference method will also be used to the extent the data allow. Finally, an econometric model on the determinants of motor vehicle production will be estimated to test if SCT reduction had a statistically significant impact on motor vehicles production.

3.2. Prices

The main aim of the SCT scheme was to stimulate the demand for motor vehicles by reducing the price for consumers, and, consequently, to increase production to satisfy the additional demand, and finally, to mitigate the employment effects of the economic crisis. Thus, we first need to analyze the effect of SCT reduction on consumer prices for motor vehicles.

Since SCT reduction differs across the types of motor vehicles, the effects on consumer prices should differ, too. For example, a SCT reduction from 37% to 18% for small passenger cars (engine size smaller than 1601 cc) should lead to 13.9% decline in consumer prices, conditional that the producer prices does not change.[11] When the SCT rate became 27% in the second period, the price decline would be 7.3% compared to the pre-program period. The expected price effects for passenger cars with engines 1601-2000 cc and larger are 3.8% and 2.2%, respectively. The share of small cars was about 80% in total passenger car production. Thus, we can expect that the average decline in consumer prices for passenger cars would be around -12% in the first period, March 16-June 15, and -6% in the second period, June 16- September 30, 2009.

The data on annual changes in prices for the January 2006-August 2010 period are presented in Figure 3. The months March-September 2009 is marked by a band to visualize the period of SCT reduction. Price changes are calculated as the logarithm of price ratios for the current month and corresponding month in the previous year. Since the rates are calculated on yearon- year basis, it also eliminates the effects of any seasonality.

The producer price index (PPI) for manufacturing started to decline during the dip of the crisis in the early 2009, and continued to decline until November 2009 (see Figure 3). Although the manufacturing PPI was declining, the PPI for motor vehicles kept its upward trend in 2009 and 2010. However, the consumer price index (CPI) for transportation vehicles remained less than its level in the corresponding month of the previous year throughout the SCT reduction period. The difference between CPI and PPI for motor vehicles would reveal the impact of SCT reduction. The difference in the growth rates of these indices (the difference-in-difference) was -7.2% in the first month when the SCT reduction was introduced, and remained (on average) -12.1% in April-March and -8.3% in July-September. These values are quite similar to the expected values mentioned above (for a similar finding, see Türkan, 2009).

3.3. Sales, Production and Foreign Trade

The SCT reduction was applied to all motor vehicles irrespective of their country of origin. Therefore, a similar decline in consumer prices is expected for both locally produced and imported vehicles. The decline in consumer prices would stimulate the demand for imported vehicles as well.

11 SCT payment is also subject to VAT because the taxable base for VAT includes SCT as well. Since there was no change in VAT for motor vehicles, the expected decline in consumer price as a result of a SCT reduction from 37% to 18% is equal to (1.18/1.37)-1.

However, the volume of exports of local producers would be determined by the conditions in foreign, especially the EU, markets. The decline in the consumer price for motor vehicles was estimated to be around 10% during the period of SCT reduction. The effect of the decline in prices on the quantity demanded is conditioned by the price elasticity of demand for motor vehicles. A recent study on Turkey (Alper and Mumcu, 2007) estimated the price elasticity for imports from the EU and other countries as -0.31 and -0.48, respectively, in the short term (in one quarter), and -1.1 and -1.69 in the long term.[12] Since the EU producers account a large part of imports to Turkey, one could estimate that a 10% decrease in consumer prices would lead to 10% increase in motor vehicles imports. Alper and Mumcu estimated a very low price elasticity for locally produced vehicles (almost zero), i.e., if that estimate is correct, one would not expect any change in the demand for domestically produced motor vehicles in response to the SCT reduction.

However, the price-quantity demanded relationship could change during the economic crisis, and the demand response to a *temporary* measure could be different. During the crisis, firms and consumers tend to postpone their expenditures on capital goods and costly products, and their demand may become more inelastic. However, a temporary SCT reduction may induce consumers to shift expenditures from the future to the present. Indeed, this is one of the main reasons behind the implementation of scrapping subsidies and tax reductions as anti-crisis measures.

Thus, the decline in prices as a result of SCT reduction may lead to an increase in the demand more than the level estimated by the price elasticity. Since these two effects operate in opposite directions, it is necessary to estimate empirically the effect of SCT reduction on sales.

Figure 4 presents the data on annual changes in the indices for domestic and foreign (export) sales of local producers, and imports. Domestic sales and imports indices exhibit a similar change during the SCT reduction. These two indices started to recover two months before the exports did. The co-movement between domestic sales and imports indicates that the price elasticities of demand for local and foreign vehicles should be around the same level.

In order to analyze the effects of SCT reduction in detail, the data on passenger cars and light commercial vehicles (the two products that benefited form reductions the most) are presented in Figures 5 and 6, respectively. Since local producers take annual holiday and reduce production in August, the data on local production and exports are not presented for that month.

The quantity of cars imports jumped rapidly in March 2009 when the SCT reduction was first introduced, and it remained within the range of 25-30,000 cars per month until the end of June 2009 (Figure 5). Imports experienced sporadic jumps in September 2009 (the final month of SCT reductions) and December 2009 (the end of the season). Domestic sales increased rapidly, albeit with a short delay compared to imports, and monthly sales volume remained around 15,000 cars during the first period of SCT reductions. The ratio between the number of imported cars to the number of domestically sold cars during the SCT reduction period (2.06) is almost equal to the same rate for 2008 (2.03). The lack of any change in the imports/domestic sales ratio provides additional evidence for the argument that the SCT reduction had the same impact on both imports and domestic sales.

In order to estimate the degree of the impact of SCT reduction, the changes in domestic demand (domestic sales of local producers plus imports) for passenger cars can be compared with the changes in exports.

12 Elasticity estimates for Turkey are similar to those estimated for the US. McCarthy (1996) says that the estimates for the US are usually within the (-1.2, -0.6) range, with an average close to -1.

The volume of exports dropped by 31.6% in March-September 2009 since the corresponding period in 2008, but domestic demand increased 23.3% in the same period, i.e., the difference-in-difference is about 55%. Although all that difference cannot be attributable to the SCT reduction because of the differences in the timing of measures introduced by Turkey and the EU governments, the size of the difference-indifference may indicate that the SCT reduction had a noticeable impact on domestic demand for passenger cars.

The data on light commercial vehicles reveal a similar pattern as observed in the case of passenger cars, but there are meaningful differences as well (Figure 6). Domestic sales of light commercial vehicles increased rapidly during the SCT reduction period but, unlike the passenger cars, the volume of light commercial vehicles imports did not increase much in the same period. Consequently, the imports/domestic sales ratio declined from the average 0.90 for the March-September 2008 period to 0.53 in the next year (March-September 2009). The slow response of light motor vehicles imports could be due to the strong competitive position of local producers. The difference in the growth rates of domestic demand and exports for light commercial vehicles was 43%. This finding reveals that light motor vehicles had a weaker response to the SCT reduction than passenger cars did.

The detailed data on local production of passenger cars by engine size are presented in Figure 7.[13] As shown in the figure, the production of small cars (with an engine smaller than 1601 cc) increased rapidly during the SCT reduction period. The growth rate of production of very small cars (with an engine smaller than 1301 cc) was especially very high. The production of large cars (with an engine larger than 1600c) did not increase at all in the same period. One of the factors behind those differences is the fact that the SCT reduction was much higher for small cars. Moreover, the preference of consumers to buy small, fuel efficient cars during the crisis period could be another explanatory factor. The data on the annual changes in the production level of passenger cars, pick ups and other motor vehicles (midibuses, buses, trucks, etc.) support our conjectures. Passenger car production and, with a short lag, pick up production started to recover during the SCT reduction, but the sector that benefited the least from the SCT reduction, other motor vehicles, could not recover until the end of 2009, and achieved positive growth as late as the early months of 2010 (Figure 8).

SCT reduction seems to stimulate domestic demand for motor vehicles, especially passenger cars, by reducing consumer prices. The indirect effect of increasing expenditures on motor vehicles on other products will depend on how motor vehicles expenditures are financed. If the consumers financed motor vehicles expenditures from their own income, the demand for other products may decline. In other words, SCT reduction may increase the demand for motor vehicles, but it may cause a decline in the demand for other products.

There are three methods of financing automobile expenditures: consumers' own income, sale on credit terms (sale by installments), and credit provided by the financial institutions.

There has not been any noticeable change in the stock of consumer and commercial vehicle credits provided by the financial institutions (Table 3). Although the value of total stock is fairly large (about 4 billion TL), the stability of the level of credit stock during the SCT reduction period shows that the value of new credits did not exceed credit payments, i.e., credits by financial institutions did not play an important role in financing increasing demand for automobiles (TEPAV, 2009).

13 Since the foreign trade data are not available at the same classification, we use the data on only domestic production.

3.4. International Comparisons

Comparisons with the EU countries could provide useful insights to understand the effect of crisis measures implemented in Turkey. This type of comparison would be more useful had the compared countries experienced the crisis or introduced crisis measures at different time periods. The 2008-2009 crisis affected the EU countries and Turkey almost in the same period. Moreover, the motor vehicles industry in Turkey is well-integrated with the EU industry, and it benefited from the crisis measures with a (short) time lag. Because of these reasons, international comparisons help us to understand how the motor vehicles industry in these countries are affected by the crisis, but its use to measure the impact of the SCT reduction in Turkey would be more limited.

The data on the annual changes in motor vehicles production indices for Germany, Spain and Turkey are provided in Figure 9. While motor vehicles production increased rapidly in Turkey in the months preceding the crisis, especially in the first half of 2008, it was almost stagnant in Germany and Spain. All countries experienced a sharp drop in production in the second half of 2008. The crisis hit Turkey hardest, and Germany was able to limit the decline in production, and had a better performance relative to Spain and Turkey. The decline in production reached its dip in the early 2009 in all countries, and started to increase (relative to its lowest level) in the late 2009 and early 2010. Although Turkey experienced the highest drop in production, it also recovered faster than Germany and Spain. Germany, Spain and Turkey experience a similar pattern and timing in motor vehicle production during the crisis, partly because of the fact that they all introduced specific measures in the early 2009. Germany launched the scrapping scheme by January 2009, and provided €2500 support for consumers who replace their 9 years or older cars with the new ones. Spain also introduced interest free loan provision for new car purchases in the beginning of 2009 (Haugh et al., 2010). Turkey followed these countries about two months later by its SCT reduction.

3.5. Production, Employment and Wages at the Sub-sectoral Level

An important aspect of SCT reduction scheme in Turkey is the fact that only the producers of the final product, motor vehicles (NACE 341), benefited directly from the scheme. As shown in Table 1, there were only 28 producers in that sub-sector in 2007. Moreover, the SCT reduction has been effective mostly for passenger cars, and there are only five local producers who can benefit from the scheme (Honda, Hyundai Assan, Oyak Renault, Tofaş and Toyota).[14]

The final product (automotive) producers are very large firms: an average manufacturing firm employs only 8.8 people but the average size of automotive producers exceeds 1500 employees. The firms that can benefit from the scheme indirectly, namely coachwork (NACE 342) and parts and accessories (NACE 343) producers, are also relatively small firms (on average, coachwork 9.6 and parts and accessories 25.8 employees). Since the sub-sectors of the motor vehicles industry have different characteristics, and they are affected by the SCT reduction differently, we will analyze in detail the responses of all sub-sectors to the crisis and crisis measures.

The data on production, employment and (real) wages in all sub-sectors of the motor vehicles industry are presented in Figures 10-12. These figures include the data on manufacturing for comparison purposes.

14 As mentioned before, the importers and foreign producers are also among direct beneficiaries of the scheme that does not discriminate against imported vehicles.

Among the sub-sectors, it is apparent that coachwork producers were affected rather badly during the crisis. Parts and accessories producers had a lower decline than automotive producers. Production cuts in all these three sub-sectors were much more than the case observed in manufacturing. It seems that the decline in automotive production started to slow down a quarter earlier than it did in other sub-sectors. All these sub-sectors and the manufacturing industry as a whole achieved to increase their output only in the last quarter of 2009.

Motor vehicles industry had also a much deeper decline in employment than the manufacturing industry. Employment losses reached extraordinary levels in the coachwork and parts and accessories sub-sectors. Employment in the automotive industry started to decline later, but it was also slow in reacting to the recovery process. Since the automotive producers benefited directly from the SCT reduction, slow employment recovery in that sector could be an indication for the ineffectiveness of SCT reduction policy for employment protection. Moreover, although all these sectors were able to increase output in the last quarter of 2009, employment continued to decline even in the first quarter of 2010. It does appear that there is a substantial lag between output recovery and employment recovery.

Automotive and parts and accessories sub-sectors started to cut wages long before the crisis, in the late 2007. The average wage rate in these sectors had an upward trend since the mid 2009. The rapid decline in employment (massive lay offs) could explain why the average wage rate increased in these sub-sectors in the mid-2009. The employees laid off first are likely to be low-skilled, low-paid workers. In such a case, the average wage rate will tend to increase even if those employees who keep working are not getting wage rises.

3.6. The Impact of SCT Reduction: An Econometric Analysis

Our analyses so far depended on inter-temporal and inter-sectoral comparisons. Although those analyses provide insights into the impact of the SCT reduction, they do not provide any precise qualitative impact assessment. Therefore, we will estimate in this sub-section a model of the determinants of motor vehicles demand to provide additional information on the size of the impact of the SCT reduction.

The model for motor vehicles demand is defined by the following equation:

$$q_t = \alpha_0 + \alpha_1 q_{t-1} + \alpha_2 gdp_t + \alpha_{3S} SCT + \alpha_4 SCT^{pre} + \alpha_5 SCT^{post} + \alpha_6 Z_t + \varepsilon_t$$

where qt represents the quantity of vehicles produce at time t, gdp Gross Domestic Product (logarithmic form), *SCT* the period SCT reduction was applied, SCT^{pre} and SCT^{post} the periods before and after the SCT reduction (2009:1 and 2009:4, respectively), Z other explanatory variables and ε the usual error term.

GDP is found to be one of the main determinants of motor vehicles demand and production in almost all cross-sectional and time-series studies. The logarithm of GDP is included into the model to control for the effects of income and the economic crisis.

The main variable of interest in this study is the *SCT* dummy variable. It takes the value 1 for the SCT reduction period ((2009:2 and 2009:3), 0 otherwise. In estimating the model, quarterly data are used because of the availability of the data. Therefore, the SCT variable has non-zero values for only two observations, and this could reduce the precision of our estimates. The coefficient of the *SCT* variable will show us the percentage change in output during the SCT reduction period because the dependent variable is in logarithmic form.

SCT^{pre} is used to test if there is any announcement effect. It takes the value 1 for the pre-SCT period (2009:1), and 0 otherwise. If the buyers foresee the SCT reduction, they may delay their demand to benefit form the reduction. In such a case, the coefficient of the SCT^{pre} variable is expected to be negative.

SCT^{post} variable is used to control for any "payback" effect. If the buyers shift their purchases from the future to the present during the SCT reduction, then there could be a decline in sales and production in the period right after the termination of the SCT reduction. The SCT^{post} variable takes the value 1 for the 2009:4 period, and 0 otherwise.

Z is the vector of all other relevant variables. All models include a time variable and season dummies to capture the effects of seasonality. Moreover, we experimented with a number of variables to control for macroeconomic conditions and uncertainty. Among those variables, foreign exchange rate variability[15] and the inflation rate (CPI growth rate) are found to be significant, and they are included in extended models. Finally, the lagged output (q_{t-1}) is also included into all models to capture the dynamic effects.

Estimation results for passenger cars, pick ups and other vehicles (trucks, buses, etc.) are summarized in Table 4.[16] In all models, the lagged dependent variable (q_{t-1}) has a statistically significant coefficient indicating the existence of dynamic effects (for example, partial adjustment). Moreover, the GDP variable has statistically significant (and positive) coefficient in 5 out of 6 models estimated.

SCT variables has a positive coefficient for passenger cars. Its coefficient is statistically significant at the 1% level when the exchange rate variability and inflation rate variables are not included in the model, and at 10% level when they are included. The point estimate of the coefficient is 0.2174 in the first model, and 0.1683 in the second one. Thus, the estimation results imply that the production of passenger cars increased by 17-22% when the SCT was reduced.[17]

The *SCT* variable does not have any statistically significant coefficient for pick ups and other vehicles. Therefore, our econometric analysis suggests that the passenger car producers benefited from the SCT reduction because the amount of reduction was high for those products, but there was not any noticeable impact on the production of pick ups and other vehicles for which the SCT was reduced only a few percentage points.

Regarding other explanatory variables, we observe significant decline in production of pick ups and other vehicles in the period prior to SCT reduction. Since this is the period the crisis reached its dip, the SCT^{pre} variable is likely to capture the effect of the crisis. SCT^{post} variable has a negative coefficient in all models, and it is statistically significant in some models. The findings suggest that, especially in the case of passenger cars, there could be about 10% decline in production in the period after the termination of the SCT reduction.

Exchange rate variability and the inflation rate have in many cases negative and statistically significant coefficients. As may be expected, higher exchange rate variability (higher uncertainty) and higher inflation rate have a negative impact on motor vehicles production.

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15 Exchange rate variability is calculated as the standard deviation of 30-days moving averages of daily US exchange rate series (in logarithmic form).

16 The data on vehicle production is obtained from the Automotive Industry Association; CBRT is the source for all other variables.

17 Since the SCT reduction was applied in two quarters, and the SCTpost variable has a negative coefficient, we present here only the short term effects.

The findings of econometric analysis provide additional support for our observations that SCT reduction had a positive impact on passenger cars demand and production, but the effect on other vehicles was rather small and negligible. The second model for passenger cars (the model including macroeconomic variables) implies that passenger car production increased by 17% in the first period of SCT reduction (2009:1), and it reached 29% in the second period (2009:3) due to dynamic effects, and the effect of SCT reduction disappeared quickly in two quarters after the termination of the SCT scheme.

4. The Effects of Crisis Measures: Firm-Level Analysis

There are two factors that could limit the effectiveness of SCT reduction: First, the measures were introduced after the crisis reached its dip position. Producers could satisfy increasing demand for motor vehicles during the SCT reduction by selling from their output inventories that they would have accumulated during the crisis. In such a case, the SCT scheme may have a positive contribution to the financial structure and profitability of producers, but its effect on production and employment would be limited. Second, those firms who would directly benefit from the SCT scheme are large automotive producers who are well-integrated within the international production chains. These firms are likely to be financially strong, and, in any case, they export a large part of their output. Therefore, SCT reduction that stimulate only domestic demand may have a little impact even on direct beneficiaries of the scheme.

Firm-level data should be analyzed in order to assess the effects of these two factors. We will use the data obtained from the Istanbul Stock Exchange to compare motor vehicles producers and other (usually large) manufacturing firms quoted on the stock market. The data for seven producers operating in the motor vehicles industry (Anadolu Isuzu, Bosch Fren, Ditaş, Ege Endüstri, Ford Otosan, Karsan and Tofaş) and 119 manufacturing firms were used in the analysis. “Refined petroleum products” producers are excluded from the manufacturing sample because they constitute outliers in the sample.

The data on average sales revenue of those firms quoted on the stock market are presented in Figure 13.[18] It is apparent that seven motor vehicles producers for which the data are available experienced a very sharp decline in sales from the period 2008:2 to 2009:1 (about 40%). Other manufacturing firms also experienced a decline in sales but at at a much lower rates (about 14%). Motor vehicles producers were able to increase their sales rapidly (compared to the previous period) during SCT reduction. Other manufacturing firms started to increase their sales one quarter later (2009:3). The extent and timing of the increase in motor vehicles sales show that the SCT scheme had a strong impact.[19]

The data on inventories (Figure 14) reveal the tendency of the manufacturing firms to reduce their inventories since the early 2007. The inventories of motor vehicles producers, however, accumulated in the mid 2008 following the increase in sales, but there is a rapid decline in motor vehicles producers’ inventories when SCT reduction was applied. To analyze changes in inventories in detail, we collected the data on finished good inventories (i.e., automobiles, trucks, etc.) for five automotive producers (Anadolu Isuzu, Ford Otosan, Karsan, Otokar and Tofaş).

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18 Istanbul Stock Exchange is the source for all data presented in Figures 13-16. All monetary values are deflated by PPI (base year, 2005).

19 The share of exports was about 70 % for two main passenger car producers (Ford Otosan ve Tofaş) before the crisis. That ratio declined to 50-60% range during the SCT reduction period, partly due to increasing domestic sales, and started to return back to its pre-crisis level since the end of 2009.

The sales and finished goods inventories data for these five firms are presented in Figure 15. The jump in sales and the decline in finished goods inventories of automotive producers during the SCT reduction period is apparent.

There is 50% decline in finished goods inventories from 2009:1 to 2009:2, but the decline in the value of stocks (20 million TL in 2005 prices) could account for only a small share of sales revenue earned in the same period (about 400 million TL in 2005 prices). Finally, Figure 16 presents the data on average profit margins (weighted by sales).[20] The average profit margin for motor vehicles producers declined rapidly since the mid 2008, following the decline in sales in the same period, but recovered very significantly in the first period of SCT reduction (2009:2), but continued its downward trend afterwards. Profit margins started to increase in the first quarter of 2010 by increasing sales stimulated by exports. The manufacturing firms experienced a sharper decline in the profit margin but they were able to recover sooner. The analysis of the firm-level data shows that automotive producers reduced their final product inventories during the SCT reduction period because they satisfied a part of increasing demand by sales from inventories, but the share of inventories sold in total sales revenue was not substantial. Automotive producers increased their profits during the first SCT reduction period (2009:2), partly by reducing the cost of inventories, and partly by increasing their sales.

5. Crisis, Crisis Measures and Employment

Job losses experienced during the crisis cause the depreciation of human capital, and social problems. The government could introduce temporary measures to mitigate these negative effects of the crisis. This is also the main objective of the short-time work allowance scheme introduced in Turkey. This scheme provides support for firms and employees during the crisis by facilitating adjustment through a decline in the average working time. A reduction in working time helps firms to reduce their (labor) costs, and the government compensates (a part of) the decline in wages for workers by short-time work allowance. Thus, there would not be any depreciation of human capital because the attachment of workers would be maintained, and the firm would continue to employ its skilled workers during the recovery process. Therefore, an important performance criterion for the short-time work scheme is the way the use of labor (total hours worked) is adjusted during the crisis, through job loses (decline in employment), or through a decline in average working time (per employee).[21]

The rate of change in total hours worked can be decomposed into two components as follows:

$$(W_t - W_{t-1})/W_{t-1} = (L_t - L_{t-1})w^a_t/W_{t-1} + (w_t - w_{t-1})L^a_t/W_{t-1}$$

where Wt is the total hours worked in the sector at time t, L the number of employees, and w average working time per employee. (By definition, W=Lw.) wa and La represents average values for the periods *t* and *t-1*: $w^a_t = (w_t + w_{t-1})/2$ and $L^a_t = (L_t + L_{t-1})/2$. As shown in the equation, total hours worked can be changed by changing he number of employees and/or by the average working time. The main objective of the short-time work scheme is to achieve that adjustment through changes in the average working time.

20 Profit margin is defined as the ratio between profits after tax and sales revenue. The pattern of changes in the rate of profit (profits after tax/value of assets) is quite similar.

21 SCT reduction is expected to complement the short-time work scheme by stimulating the demand for the final product, and for labor.

The contribution of the changes in number of employees in changes in total hours worked can be calculated by taking the ratio of these two variables. Thus, the contribution of the changes in the number of employees becomes,

$$(L_t - L_{t-1})w^a_t/(W_t - W_{t-1})$$

Changes in the number of employees and average working time in the sub-sectors of the motor vehicles industry are presented in Figures 17-19. In the automotive sub-sector that produces the final product and is dominated by large firms, the average working time declined since the early 2008. The contraction in employment, however, started with the deepening of the crisis (the late 2008) and employment did not start to recover until the first quarter of 2010 (Figure 17). Contrary to our priori expectations, the decline in employment exceed the decline in average working time when SCT was reduced and the coverage and benefits of short-time worked increased (2009:2 and 2009:3). It seems that these two measures were not so effective in reducing the employment loss in the automotive industry.

The process of adjustment has been quite different in the coachwork sub-sector that is dominated by small, less productive and low pay firms (Figure 18). Here, changes in the average working time have been much smaller than changes in the number of employees. In other words, the adjustment to the crisis in the coachwork sub-sector was achieved through a sharp contraction in employment. Moreover, the sector continued to lay off employees in the first quarter of 2010 although there was an increase in the average working time.

It is surprising that the parts and accessories sub-sector had a similar pattern of adjustment although it was dominated by small but productive and high paying firms (Figure 19). In this sub-sector, the attachment of workforce would be more important because it employs more skilled employees. However, the parts and accessories producers tend to reduce employment, not average working time, to adapt to the crisis.

A comparison between Turkey and the EU countries would provide additional information on the impact of the crisis measures on labor adjustment. We calculated the rate of change in labor input (total hours worked) and its sources (employment and average working time) in manufacturing and motor vehicles industries in Germany and Spain from 2008:3 to 2009:3 (Table 5). In Germany, total hours worked fell 5.5% in manufacturing and 11.0% in the motor vehicles industry in one year, but the decline in the number of employees was modest (0.6% in manufacturing and 2.5% in motor vehicles). In other words, Germany was successful in adjusting labor input through reductions in average working time. The share of employment losses could account for only 20.2% changes in hours worked in manufacturing and 22.8% in motor vehicles industry in Germany.

Spain experienced a different adjustment process. For example, the decline in total hours worked in Spanish motor vehicles industry was close to the decline in Germany (11.0% in Germany, 12.6% in Spain), but employment loss was much higher in Spain (8.3%) than in Germany (2.5%). In other words, changes in average working time was the main source of adjustment in Germany, but employment bore all the adjustment cost in Spain.[22]

The Turkish experience is similar to the Spanish case: employment losses account for most of the decline in total hours worked in Turkey as well (79% in manufacturing and 75% in motor vehicles).

22 In addition to short-time work arrangements, employer-initiated reductions in working time, implemented within existing collective agreements, has been instrumental in reducing average working time in Germany (for more information, see OECD, 2010).

It is surprising that motor vehicle producers in Turkey laid off their employees in order to cut labor input in spite of their large size and the specific SCT reduction they benefited from during the crisis. The findings on the main source of labor adjustment process in Turkey show that short-time work scheme was not very effective in providing temporary relief for employment.

The impact of short-time work scheme has been limited because the number of beneficiaries (employees) was small. According to the data provided by the Turkish Employment Agency (İŞKUR), the number of beneficiaries increased rapidly in the first half of 2009 and reached its maximum in June 2009. There were only 82,439 beneficiaries receiving short-time work allowance in that month. In other word, the proportion of short-time work beneficiaries remained less than 1% of all registered employees even during its peak period.[23] It should be noted that the number of employees benefiting from short-time working arrangements was about 1.4-1.5 million in Germany in the same period (ILO, 2010b).

6. Tax Revenue

The assessment of the SCT reduction would not be complete without an analysis on its implications for tax revenue. If the SCT reduction causes a loss in tax revenue, that loss would be compensated for by either (additional) taxes imposed on other activities, or by a cut in some public services, or by borrowing. Therefore, independent of the method of compensation, the loss in tax revenue will impose a burden on a part of the society.

The tax loss due to SCT reduction could be calculated as follows:

$$\text{Tax loss} = S[(1 + \tau)(1 + \kappa) - 1] - S(1 + \alpha)[(1 + \tau^*)(1 + \kappa) - 1]$$

where S is the value of sales had the special consumption tax not been reduced, τ and κ SCT and VAT rates, τ^* the SCT rate after reduction, and α the percentage increase in sales due to SCT tax reduction (hence, $S(1 + \alpha)$ would be the value of sales during SCT reduction). This equation calculates only the decline in tax revenue from motor vehicles sales. If consumers reduce their expenditures on other products because their demand for motor vehicles increases, there would be additional tax losses. We assume that these second order tax effects are negligible.

The only unobserved variable in the tax loss equation is the change in sales due to SCT reduction (the α variable). The analyses summarized in Section 3 indicate that the increase in motor vehicles sales is about on the same order of magnitude as the decline in prices, i.e., the elasticity during the SCT reduction period was around -1. We expect 15% decline in consumer prices as a result of a cut in SCT rates from 37% to 18%. Thus, assuming that the price elasticity was about -1, the value of sales would increase about 15% in the same period. Since the precision of the point estimate of price elasticity is low, we calculated the tax effects for a range of elasticity values in Table 6. As shown in the table, there would not be any change in SCT and VAT taxes had the price elasticity been around -3.8. Since there is no empirical study that estimates such a high value for price elasticity, we could safely claim that the SCT reduction caused a loss in tax (SCT *plus* VAT) revenue.

If the price elasticity were -1 (this is our best estimate), then motor vehicles sales would increase by 15%, and tax revenue (SCT *plus* VAT) would decrease by 27% (compared to the no-reduction case).

23 The short-time work allowance payments was only 71,000 TL in 2008. It increased to 162.6 million TL in 2009, and dropped to 32.3 million TL in the first six months of 2010.

The second panel in Table 6 presents tax loss in monetary values. Had local producers would sell 100 TL of motor vehicles in the domestic market without any reduction (S), their sales would increase 15 TL as a result of current SCT reduction (from 37% to 18%), and imports would increase by 30 TL, and the tax loss would be 50 TL.[24] If the elasticity is assumed to be -1.5, than the current SCT reduction would generate 41 units loss in tax revenue, 22 units increase in domestic sales and 45 units increase in imports.23[25] These calculations show that even under the very optimistic scenario, the government had to foregone 2 TL tax revenue in order to increase local producers' sales by 1 TL.

7. Conclusions

This study analyzes the impact of SCT reduction provided for motor vehicles in Turkey in 2009.[26]

SCT reduction in Turkey targeted final producers (most importantly, small passenger car producers), did not differentiate local production from imports, and did not impose any conditionality (for example, scrapping old cars or buying energy efficient cars). The extent of reduction differed only by vehicle type (passenger car, minibus, etc.) and engine size. Our analyses show that, during the SCT reduction period,

- the demand for/sales of passenger cars increased (about 15-20%),
- a part of the increase in demand was satisfied by selling from output inventories, but production also increased to a large extent to satisfy the demand,
- motor vehicles imports increased almost the same rate as the increase in domestic sales,
- the increase in sales did not compensate for the loss in tax revenue due to lower tax rates,
- domestic sales of local producers increased by 15-22 TL, imports by 30-45 TL, and the tax revenue declined by 50-41 TL for each 100 TL domestic sales of local producers under the no-reduction case,
- the motor vehicles industry suffered from serious employment losses in spite of SCT reduction and short-time work scheme, and
- the labor input was adjusted mainly through changes in employment, not changes in average working time during the crisis.

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24 Imports/domestic sales ratio was assumed to be 2. This is the ratio observed in the last three years.

25 The numbers of locally produced and imported passenger cars sold in Turkey were about 43,000 and 80,000, respectively, during the first SCT reduction period (March 16-June 15, 2009). Under the assumption that the average prices for those cars was 15,700 TL, and all of these cars benefited from the SCT reduction (from 37% to 18%), the estimated tax (SCT+VAT) loss is about 280 million TL. In the same period, domestic sales of local producers and imports increased by 90 and 165 million TL, respectively. If the elasticity is assumed to be -1.5, the tax loss, and changes in domestic sales and imports would be, 220, 120 and 225 million TL, respectively.

26 We need to mention that our analysis does not include the "crowding-out" effect (decline in consumers' demand for other products), the "payback" effect (shift in the demand for motor vehicles from the future to the present to benefit from the tax deduction), and the multiplier effect (generation of additional demand for intermediate inputs and raw materials stimulated by the increase in motor vehicles output). Since these effects operate in opposite directions (the first two are negative, the last one positive), and the direct effects themselves are not very strong, the error in ignoring the the indirect effects would be small.

As an overall assessment for the SCT reduction scheme, we could suggest that it has been a partial success in stimulating local automotive production but its cost to the society, in terms of the foregone tax revenue, has been substantial.

We can identify four factors for the limited success of the SCT scheme and for employmentled labor adjustment during the crisis.

Timing of measures: SCT reduction was introduced after the crisis reached its dip level. This could have made it difficult for firms to adjust to the crisis.

The extent of measures: SCT reduction aimed at increasing demand by (relative) price changes. Thus, only the final automotive producers benefited directly from the scheme, and other complementary sectors (for example, parts and accessories producers) benefited partially from the scheme through secondary effects (derived demand for inputs).

The lack of complementary policies: The policy to stimulate the demand by reducing taxescould be less effective during the times of crisis. When the purchase requires a large payment, as is the case for automobiles, the availability of credit would be important to finance the shift in the demand for that product. In other words, complementary policies are necessary to stimulate demand during the crisis.

Insufficient measures for protecting employment: It seems that the measures for protecting employees, the most vulnerable group during the crisis, have been insufficient and limited. It is necessary to protect the stability of the employment relationship in a sector like motor vehicles that is competitive in the world markets and has a substantial potential to achieve rapid growth after the crisis. The short-time work scheme, in its current application, has not been sufficiently effective. In order to use resources efficiently, it is necessary to protect employment in those sectors that generate employment and growth, and to support a gradual process of structural change in those sectors with limited growth prospects.

As Rodrik (2009) emphasized, it would be a mistake for Turkey to return to the *status quo ante*, to the growth strategy that does not generate enough growth and employment. In the new era after the crisis, it is necessary to pursue long term policies that encourage the shift towards more productive, high paying sectors and activities, and to supplement them by short term policies that protect human capital during the periods of crisis. The Turkish economy would not be able to generate (decent) employment for its growing population if it could not transform its structure towards human capital intensive, innovative and high value added sectors and activities through labor-friendly policies.

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Figure 1. Annual growth rates in manufacturing and sub-sectors

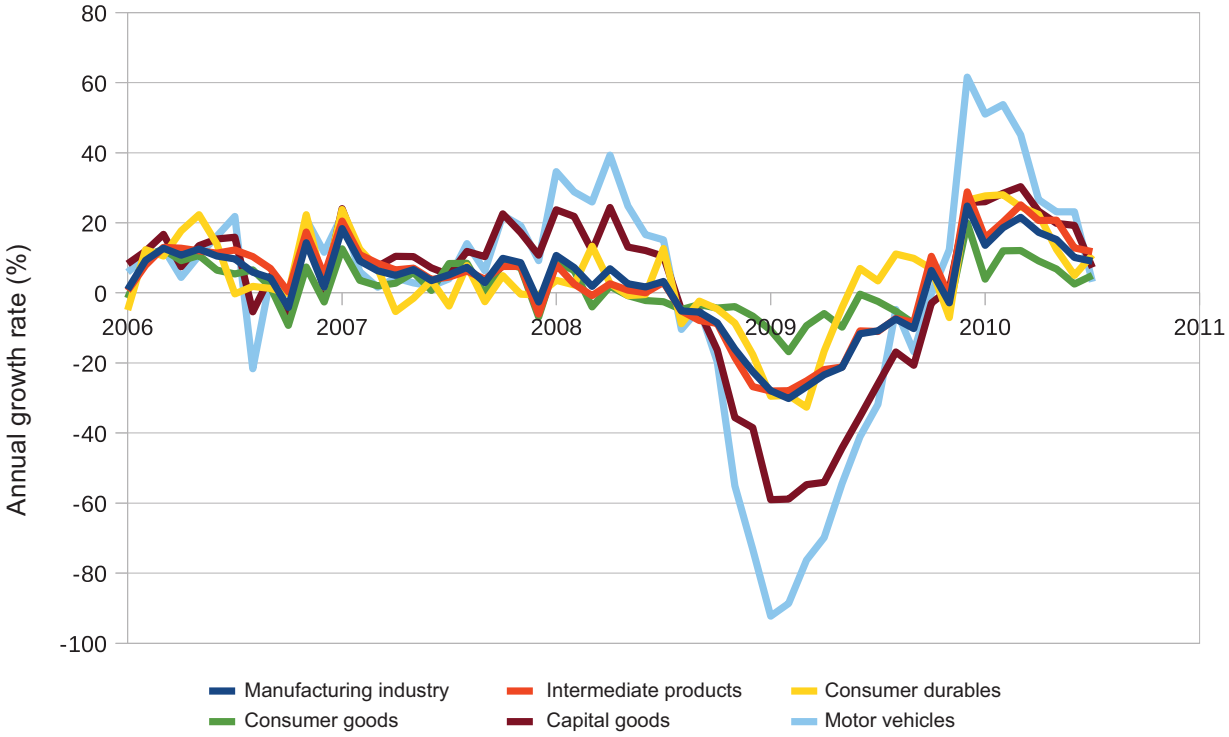
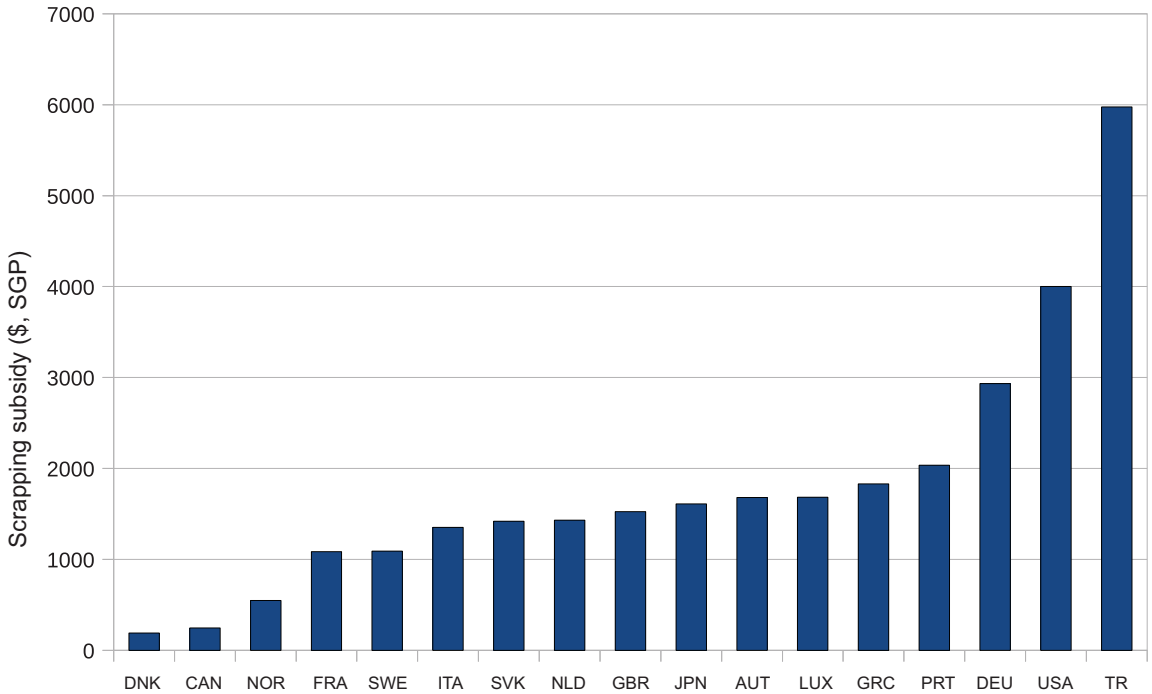


Figure 2. Scrapping subsidies in OECD countries ($, SPG)



Source: Haugh et al. (2010). The value for Turkey was calculated from the data obtained from TurkStart and the Ministry of Transportation.

Figure 3. Prices changes, selected products

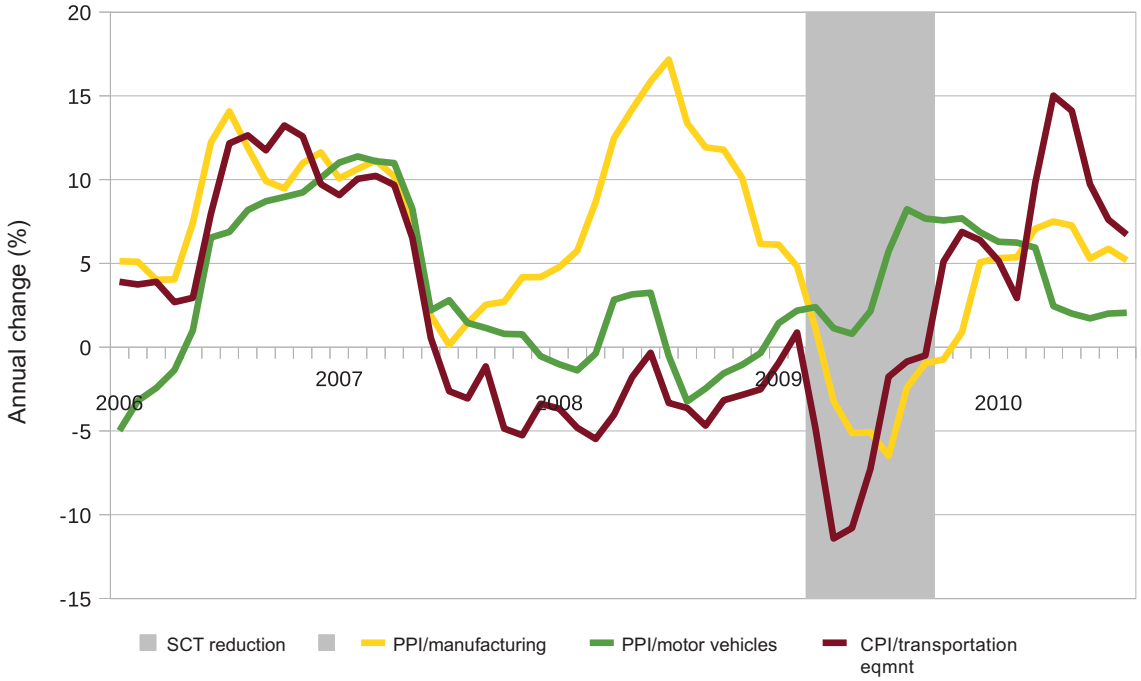


Figure 4. Changes in motor vehicles sales and imports

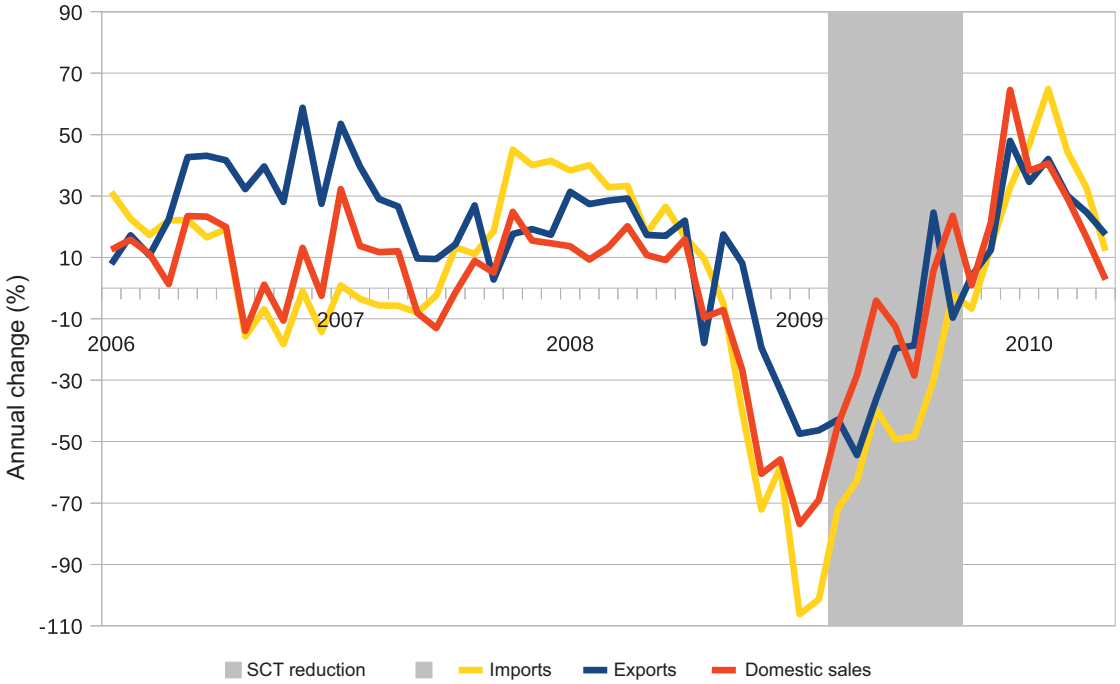
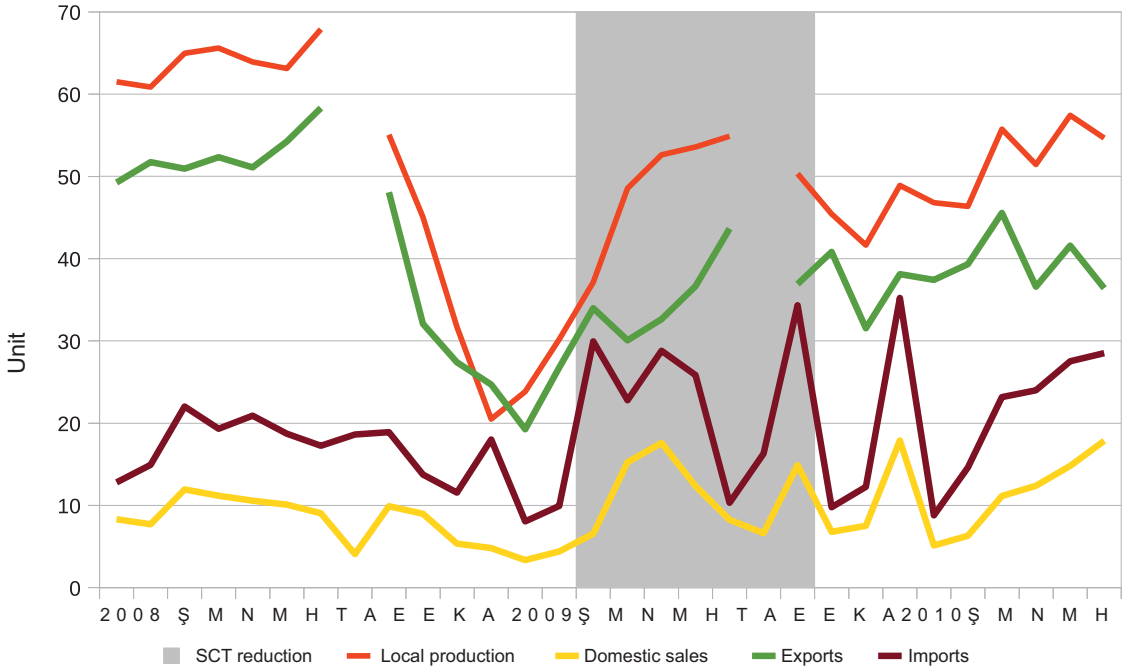
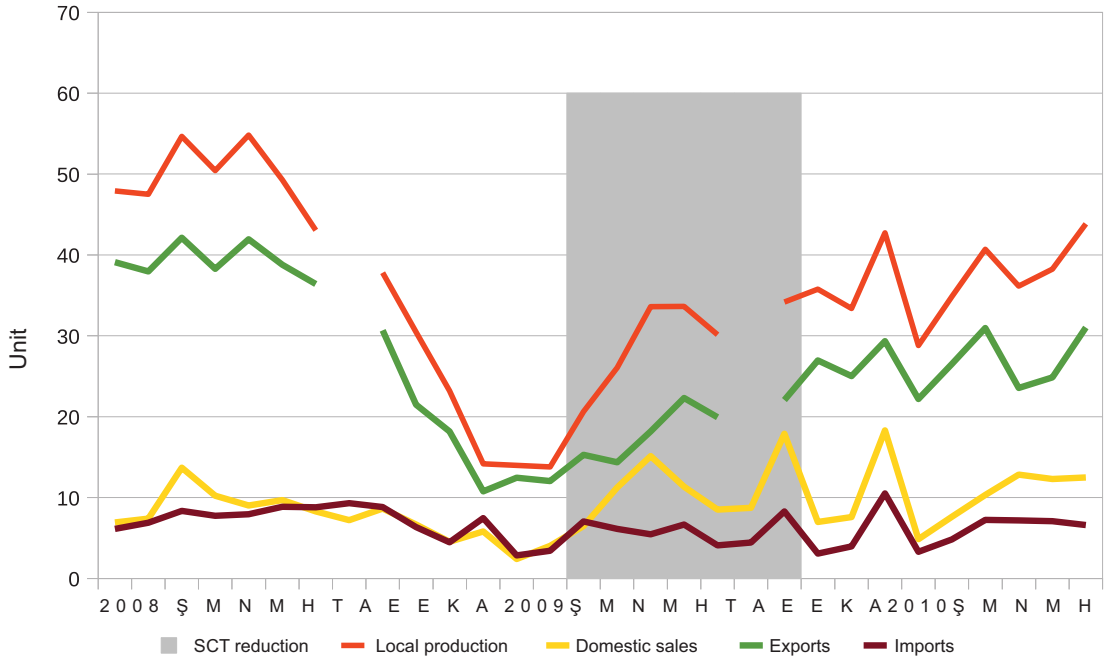


Figure 5. Monthly automobile production and sales



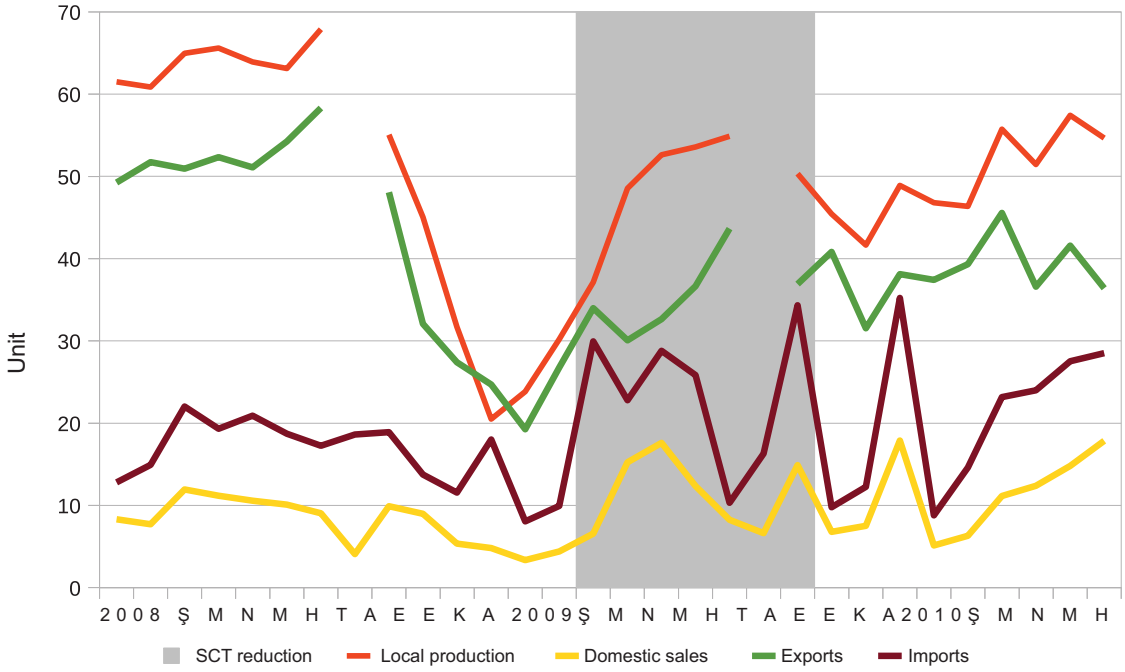
Source: Automotive Industry Association

Figure 6. Monthly light commercial vehicles production and sales



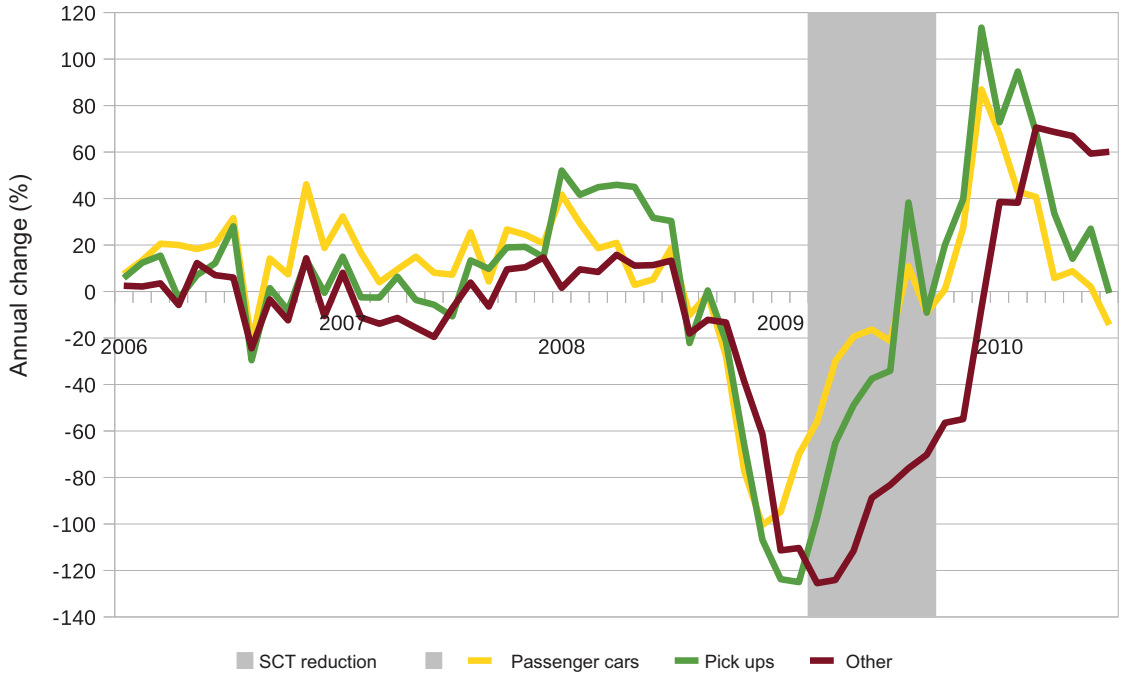
Source: Automotive Industry Association

Figure 7. Automobile production, by engine size



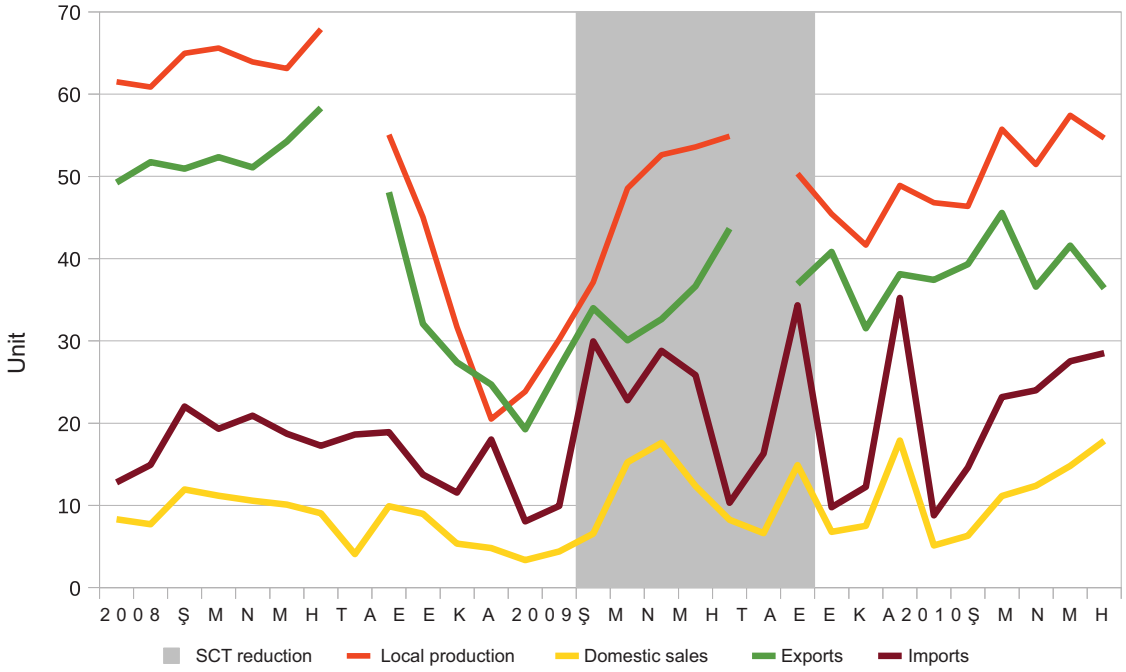
Source: Automotive Industry Association

Figure 8. Annual changes in motor vehicles production, by vehicle type



Source: Automotive Industry Association

Figure 9. Changes in motor vehicles production index, Germany, Spain and Turkey



Source: Eurostat

Figure 10. Changes in production index, motor vehicles sub-sectors

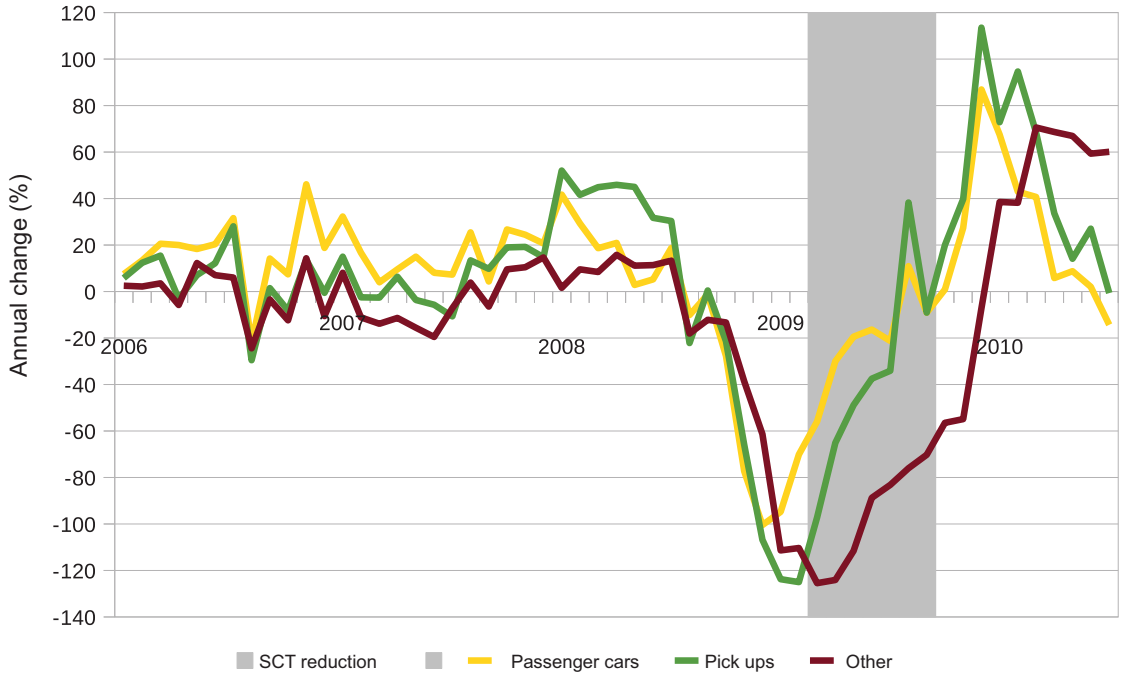


Figure 11. Changes in employment, motor vehicles sub-sectors

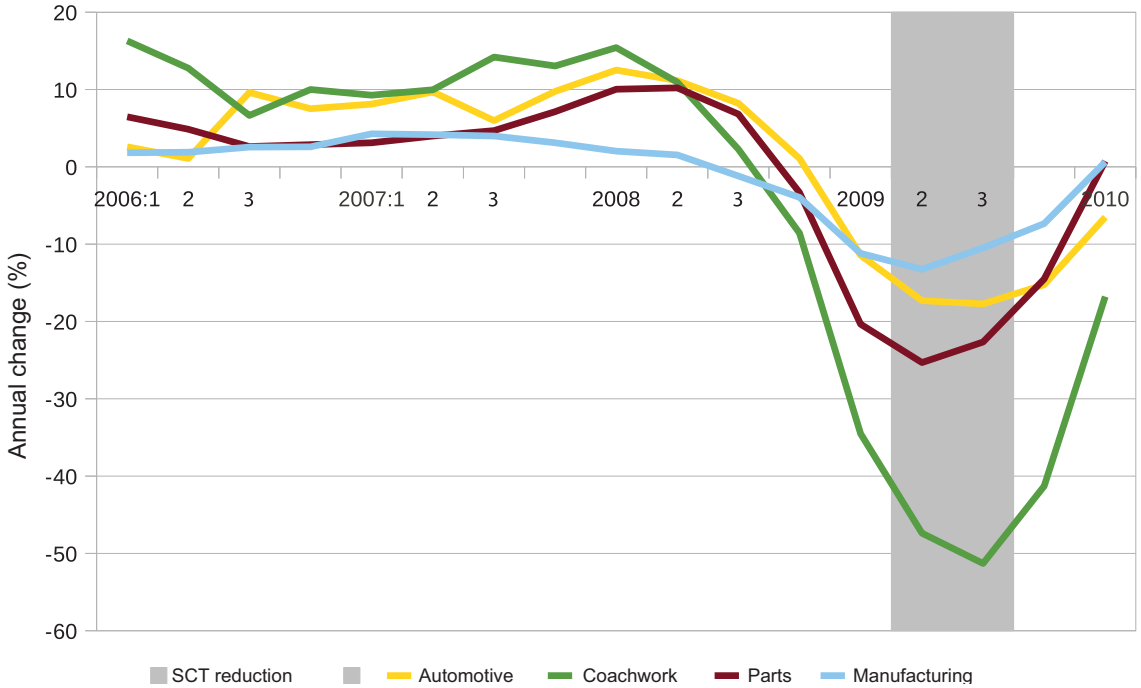


Figure 12. Changes in real wages, motor vehicles sub-sectors

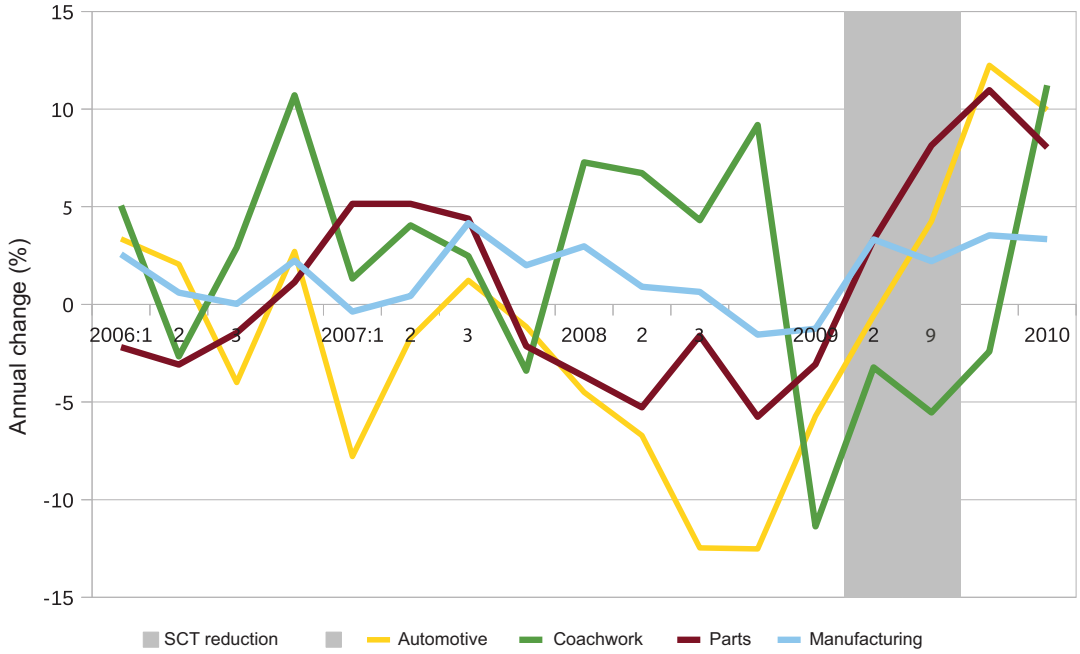


Figure 13. Average sales revenue, Istanbul Stock Exchange companies (2005 prices)

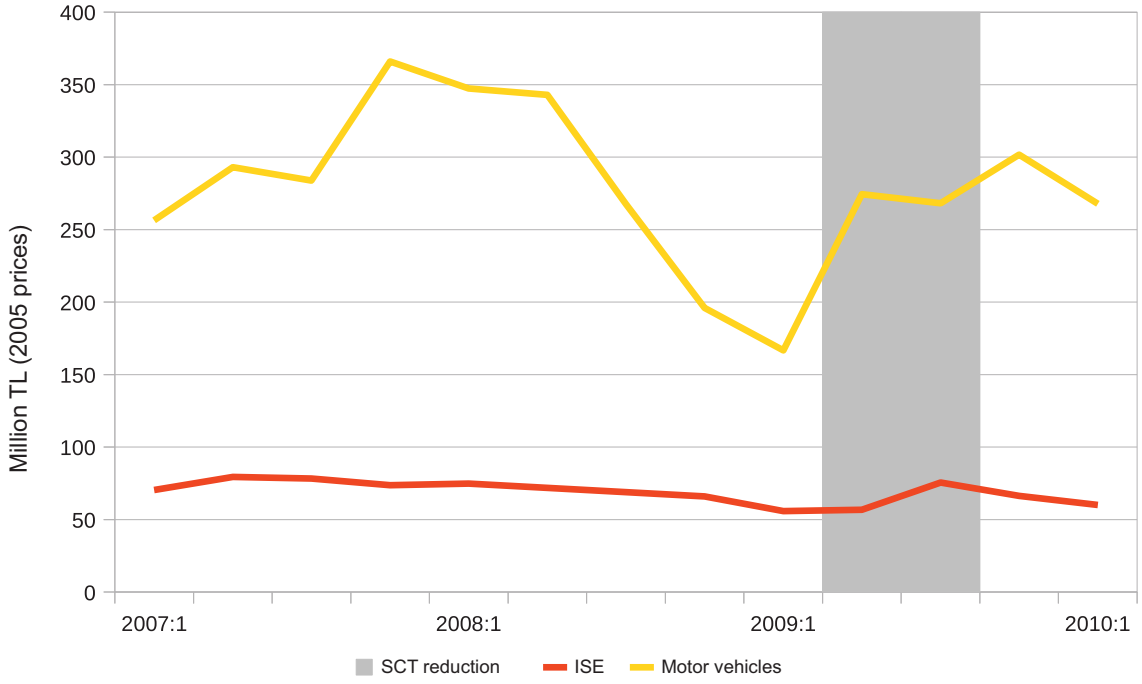


Figure 14. Average values of inventories, Istanbul Stock Exchange companies (2005 prices)

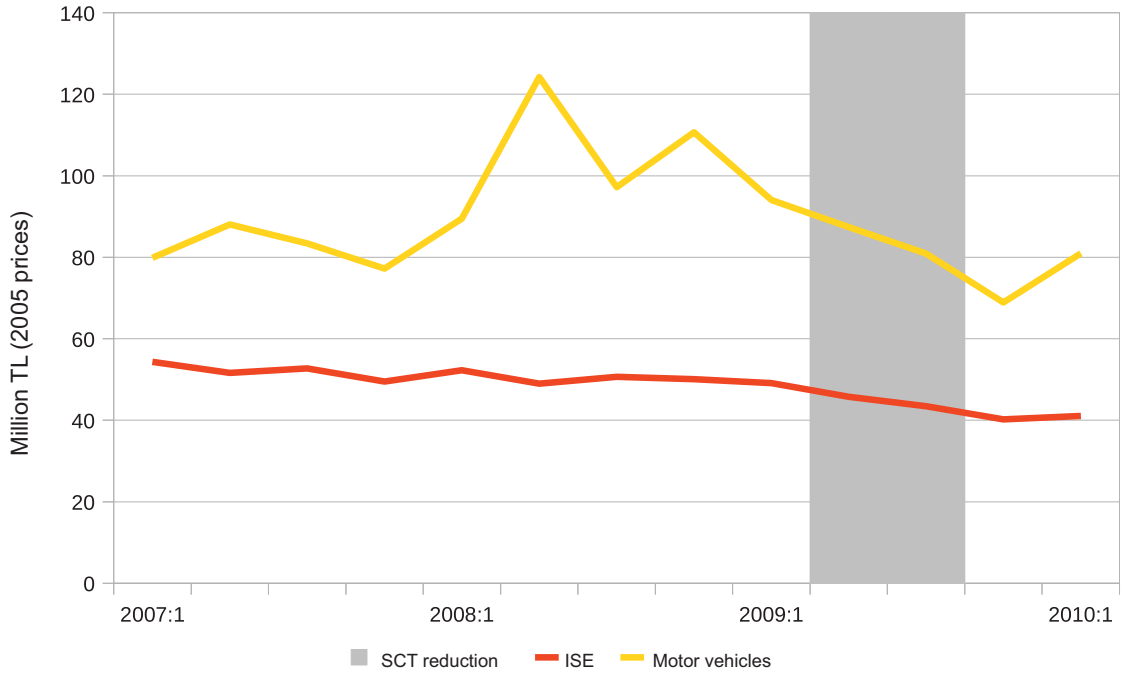


Figure 15. Average sales and output inventories or automotive producers (2005 prices)

Note: Average values for Anadolu Isuzu, Ford Otosan, Karsan, Otokar and Tofaş companies.

Figure 16. Profit margins of Istanbul Stock Exchange companies

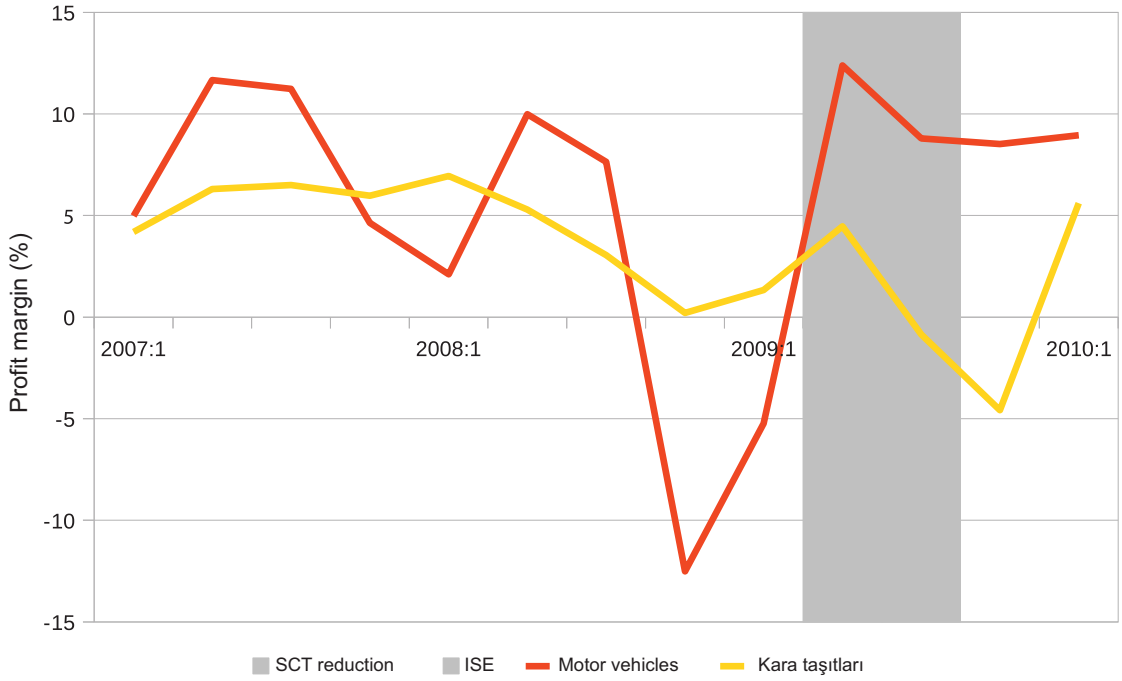


Figure 17. Changes in employment and average working time, automotive industry

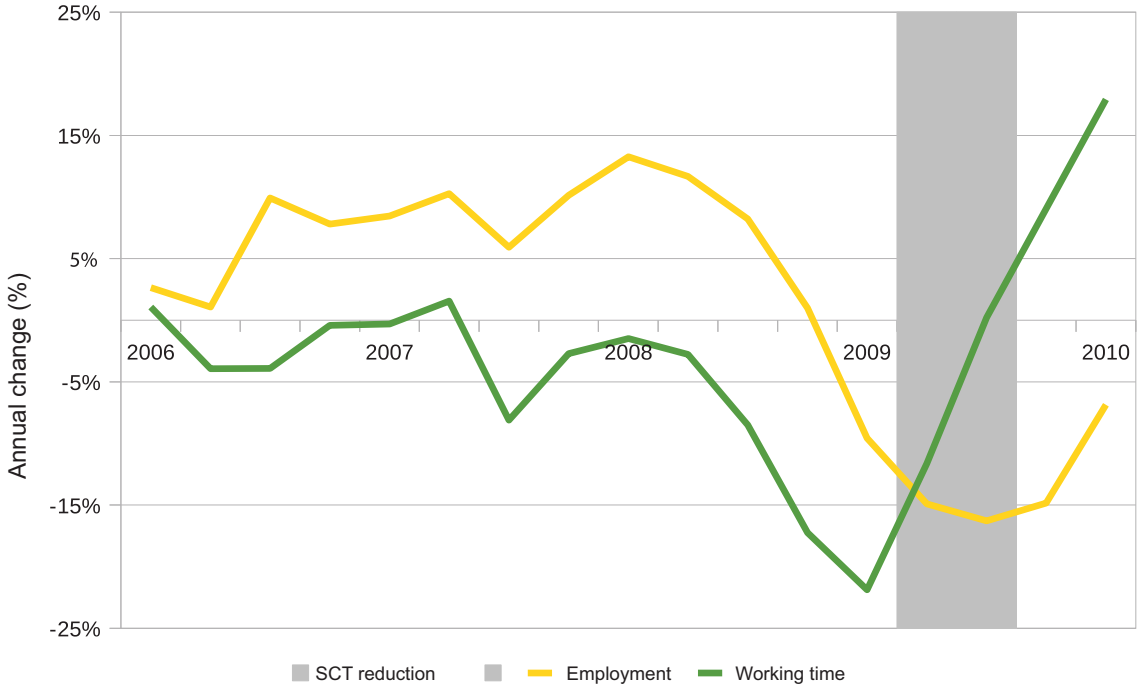


Figure 18. Changes in employment and average working time, coachwork industry

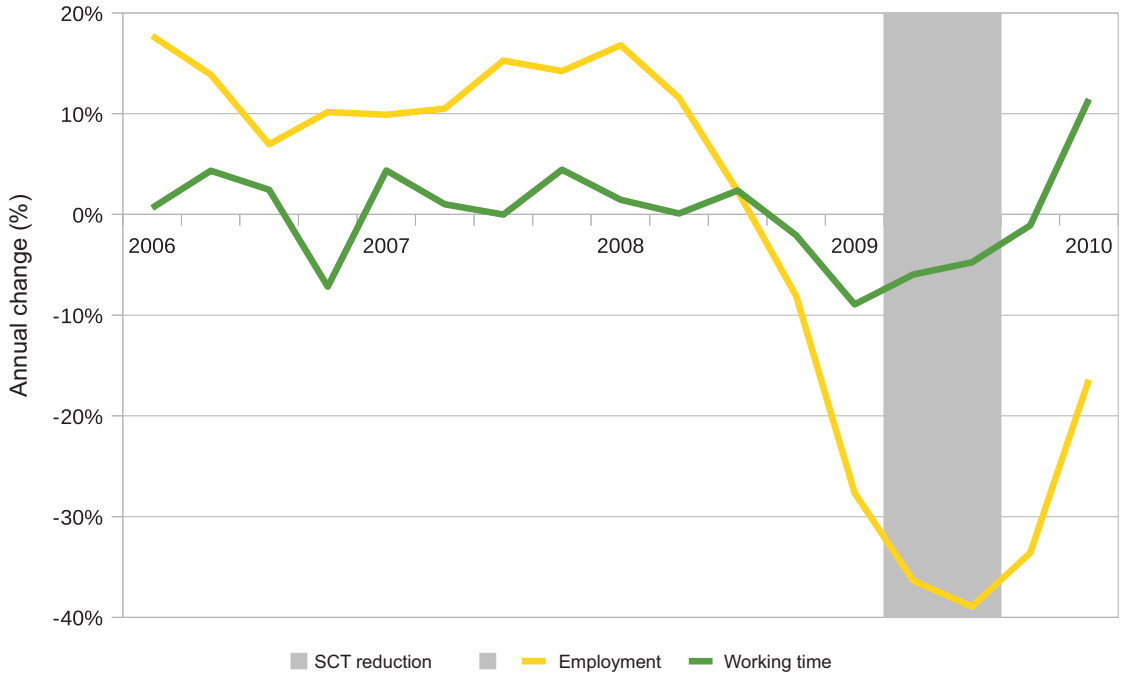


Figure 19. Changes in employment and average working time, parts and accessories industry

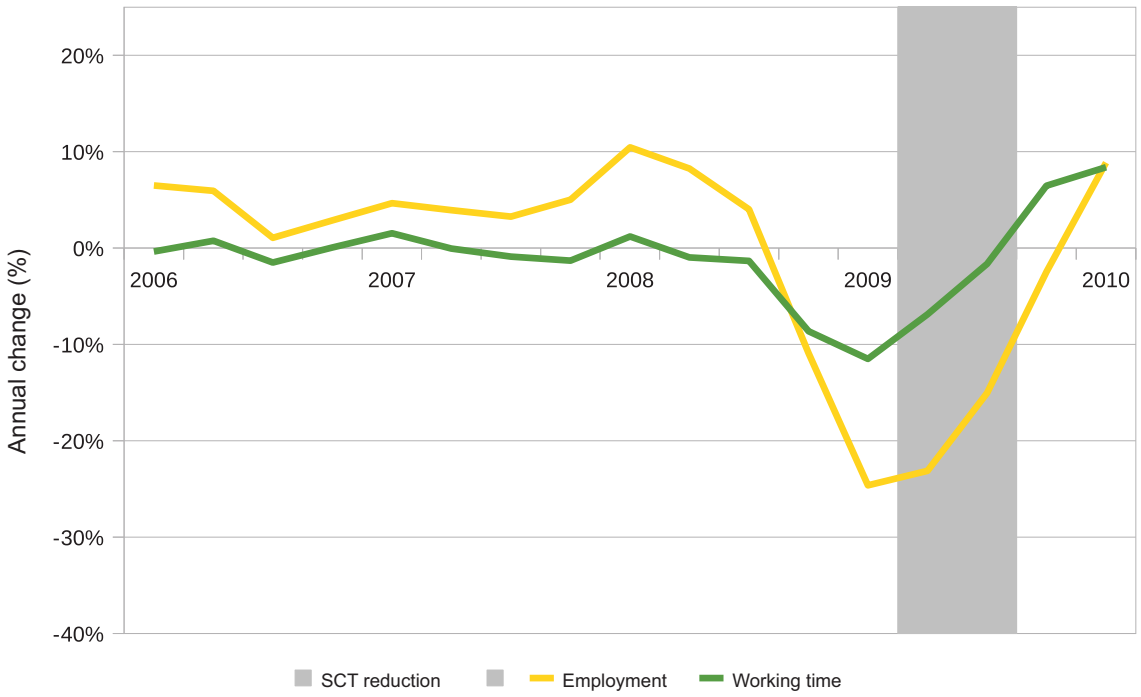


Table 1. Descriptive statistics on the motor vehicles industry (2007)

	Manufacturing industry	341 Automotive	342 Coachwork	343 Parts, accessories	34 Motor vehicles
Number of firms	316596	28	1200	3075	4303
Number of employees	2776303	42493	11490	79277	133260
Number of wage earners	2459904	42479	10356	76281	129116
Average firm size	8.8	1517.6	9.6	25.8	31.0
Output value	414733	25695	1242	11236	38174
Value added	79000	4092	223	3021	7336
Average wage rate	15739	39125	11122	19720	25415
Average productivity	28455	96301	19424	38105	56819
Share in manufacturing (%)					
Firms		0.01	0.38	0.97	1.36
Employees		1.53	0.41	2.86	4.80
Wage earners		1.73	0.42	3.10	5.25
Output value		6.20	0.30	2.71	9.20
Value added		5.18	0.28	3.82	9.29
Relative to manufacturing					
Average wage rate		2.49	0.71	1.25	1.61
Average productivity		3.38	0.68	1.34	2.00

Note: Output and value added in million TL. Average wage rate: average wage rate for wage earners. Average productivity: value added per employee. Average firm size: Number of employees per firm.

Table 2. Special consumption tax reductions in Turkey

	Before 15.03.2009	After 15.03.2009	After 15.06.2009	After 30.09.2009
Passenger cars, <1600 cc	% 37	% 18	% 27	% 37
1601-2000 cc	% 60	% 54	% 60	% 60
>2000 cc	% 84	% 80	% 84	% 84
Light commercial vehicles (pick ups)	% 10	% 1	% 3	% 10
Tucks, trailers, midibuses	% 4	% 1	% 1	% 4
Buses	% 1	% 0	% 0	% 1
Minibuses	% 9	% 2	% 4	% 9
Motorcycles	% 22	% 11	% 16	% 22
White goods	% 6.7	% 0	% 2	% 6.7

Source: Official Gezette, 13 March 2009 and 16 June 2009

Table 3. Vehicles credits by provided financial institutions (average monthly values, million TL)

Period	Total	Consumers	Commercial
2008 January-June	3825	1539	2286
2008 July-December	3878	1533	2346
2009 January-February	3814	1427	2387
2009 March-September	3860	1444	2416
2009 November-December	3816	1498	2318
2010 January-September	4029	1778	2251

Source: BRSA

Table 4. Determinants of motor vehicles production (1988:1-2010:2 period)

	Cars	Cars	Pick ups	Pick ups	Other	Other
Lagged log output (t-1)	0.7028**	0.7319**	0.8168**	0.6242**	0.7665**	0.7646**
	[0.096]	[0.079]	[0.052]	[0.065]	[0.050]	[0.043]
GDP (real, log)	0.8373**	0.5055*	0.7292*	0.3105	1.0031**	0.5862*
	[0.294]	[0.236]	[0.312]	[0.280]	[0.341]	[0.284]
SCT reduction period	0.2174**	0.1683+	0.1941	-0.0315	-0.0192	-0.0777
	[0.068]	[0.087]	[0.130]	[0.133]	[0.109]	[0.080]
Pre-SCT reduction period	-0.023	-0.001	-0.2361**	-0.4135**	-0.8226**	-0.8003**
	[0.067]	[0.055]	[0.065]	[0.091]	[0.051]	[0.040]
Post-SCT reduction period	-0.1055+	-0.1420*	-0.0757	-0.2358**	-0.0771	-0.1179+
	[0.063]	[0.055]	[0.075]	[0.073]	[0.072]	[0.066]
Exchange rate variability		-9.5177**		-11.5344**		-14.3174**
		[1.854]		[3.385]		[1.370]
Inflation rate (CPI)		-0.1707*		-0.3902**		0.0132
		[0.078]		[0.133]		[0.072]
Number of observations	93	90	93	90	93	90
R-square	0.887	0.909	0.981	0.986	0.814	0.894
Adj. R-square	0.875	0.897	0.978	0.984	0.794	0.879
Log likelihood	26.82	38.73	14.72	30.59	21.01	44.29

Nots: Robust standard errors are in parenthesis. All models include the time variable and seasonal dummies.
***** p<0.01, * p<0.05, + p<0.10***

Table 5. Changes in hours worked in manufacturing and motor vehicles industries Germany, Spain and Turkey (2008:3-2009:3)

	Manufacturing industry	Motor vehicles industry
Germany		
I. Number of employees	-0.6%	-2.5%
II. Average working time	-4.9%	-8.5%
III. Total hours worked (I + II)	-5.5%	-11.0%
Contribution of employment change (I / III)	10.2%	22.8%
Spain		
I. Number of employees	-10.8%	-8.3%
II. Average working time	2.5%	-4.3%
III. Total hours worked (I + II)	-8.3%	-12.6%
Contribution of employment change (I / III)	130.4%	65.5%
Turkey		
I. Number of employees	-7.5%	-16.3%
II. Average working time	-2.0%	-5.5%
III. Total hours worked (I + II)	-9.5%	-21.9%
Contribution of employment change (I / III)	78.9%	74.6%

Source: Calculated from Eurostat data.

Table 6. Effects of SCT reduction on tax revenue

	Price elasticity			
	0.5	1	1.5	3.8
Change in domestic sales (%)	7%	15%	22%	57%
Change in SCT+VAT revenue (%)*	-32%	-27%	-22%	0%
Effects of SCT reduction**				
Change in local production (TL)	7	15	22	57
Change in imports (TL)	15	30	45	113
Tax (SCT+VAT) loss /TL)	58	50	41	0

**** Compared to no-reduction case***

***** For each 100 TL of local sales in no-reduction case***

THE IMPACT OF THE GLOBAL FINANCIAL CRISIS ON EMPLOYMENT IN TURKEY1[1]

Hakan Ercan[2]

SUMMARY

In this chapter, the impact of the global crisis on Turkish employment is investigated. The crisis arrived at Turkey rather late but hit swiftly and hard. After the great losses of 2009, there were positive developments in employment and unemployment statistics.

Behind these positive developments, there were three main factors. There was the true recovery component in formal manufacturing employment as exports and production started to pick up. There was the undesired component of unregistered self-employment of women because of the added worker effect, definitely out of line from ILO's decent work framework; and finally the fictitious component of rising unpaid family work in agricultural employment because of the return migration of job losers.

The high unemployment rates observed during the crisis were in the making because of demographic pressures, anyway. A strong case is made within the chapter revealing the dire picture of agricultural employment loss, inadequacy of non-agricultural job creation against this tide (although Turkish non-agricultural job creation level is no slouch), the unskilled rural-urban migrants forming feeder lines into informal employment, and non-participating unskilled migrant women pulling the overall participation rate down. This is the concise background dynamics of the Turkish labour force. With or without the crisis, unemployment rates were climbing in Turkey; the high rates came a few years earlier this way. Given the high cost of providing new employment for one, Turkey will have this net employment creation problem for another generation or so, including the unregistered work problem.

Anti-crisis measures in Turkey were late, even though the crisis was raging abroad for at least three quarters before it hit Turkey in late 2008. The first comprehensive jobs related package was announced in May 2009. Before the crisis, there was also a May 2008 employment package, unrelated to the global crisis, which was meant to be implemented later in the year. This one was addressing the structural problems of women and youth employment through labour cost subsidies. During the recovery, maybe its impact will be felt. By May 2009, however, over a million people had already lost their jobs and budgetary funds dried up because of falling tax revenues. The incentives, therefore, had to be designed as non-cash, in the form of deferred tax burden on new employment as in the May 2008 package. There was hardly any new formal new employment creation during the crisis, so these measures could not really apply. The only significant cash reserve belonged to the unemployment insurance fund but its terms of use are strictly defined by law. That is, the fund is not meant to be a resource to finance general measures (but significant sums from the fund were diverted to infrastructure projects anyway; see Taymaz and Yeldan in this volume for a broad discussion of anti-crisis measures).

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1 This study was prepared for the ILO Ankara Office. The author wishes to express his gratitude to Alena Nesporova, Catherine Saget, Ümit Efendioğlu and Ozan Çakmak of the ILO as well as the participants of conferences organized by the ILO on July 7, September 21 and October 22, 2010, in Ankara, for their very useful comments and suggestions. All views and findings expressed in this study are, however, solely my responsibility.

2 Middle East Technical University, Ankara, hercan@metu.edu.tr, October 2010

1. Introduction

The purpose of this chapter is to consider the character and scale of the impact of the global crisis on Turkey's employment. The recent global financial crisis had an acute impact on the most disadvantaged members of the work force. Even during the recent recovery, not all wage earners who had lost their jobs because of the crisis are back in employment. Note that, Turkey does not have means-tested universal social assistance coverage. This must have caused the social impact to be severe, reducing household wealth.

Although Turkey has been recovering, economic growth may be slow and uncertain, as Turkey's export markets, the EU and the US, will be slow to recover. This has implications for the formal (decent work) component of the labour market. Unemployment may rise again, once free from the double shock absorbers of agricultural employment due to return migration and discouraged workers. Because job losses were not cross-cutting across all job status classifications, the impact of the crisis was felt most on the informal and unemployed (vulnerable) segments of the work force.

High proportion of agricultural employment in Turkey (26%) is the main determinant of informal employment in both rural and urban areas. Agricultural employment (mostly rural) almost totally lacks social security coverage. Rural-urban migrants are uneducated, they form the casual wage and self-employed segment of the urban labour force, where the first is almost fully and the latter is two-thirds informal. There is a strong negative correlation of education and informality in the labour market. The trend is favoring education and formal work, but this is a slow process.

After identifying the main culprit for the undesirable informal employment conditions in Turkey, one should also mention Turkey's very rigid labour regulations (employment protection laws). Temporary and fixed-term employment contracts are widespread because of high severance pay burden (World Bank, 2010). Easiest way to flexibility is to stay on the informal side of employment (unregistered work in full or part in registered establishments; it is very difficult to stay unregistered for a firm). That way, firms avoid non-wage labour costs like social security contributions and unemployment insurance premiums. When such workers lose their jobs, as they did in the current crisis, undesirable self-employment dynamics are unleashed.

Unlike in the rest of the EU, self-employment in Turkey has not been an important driver of entrepreneurship but rather a coping mechanism for the lack of primary segment jobs. It does remain a key part of employment; it is the unattractive part of it. As things turned out from an examination of micro-data from LFS, an employment impact analysis of the crisis was best conducted along the job status and occupation lines, not necessarily on the industrial composition of employment (except broad-brush findings).

The remainder of the chapter is structured as follows. Section 2 presents an overview of the global financial crisis' impact on employment. Section 3 discusses recent labour market trends and crisis impact. Section 4 discusses Turkey's near-term outlook, with a particular focus on implications for employment recovery. Section 5 concludes the chapter.

2. Overview of the Crisis from an Employment Perspective

Low-income households generally have low levels of wealth and they rely heavily on wage income. Losing one's job will have an immediate and severe impact on spending power. Note that, the ones who lost their jobs en masse during the first wave of 'adjustment' in late 2008 were predominantly informal sector employees who had no unemployment insurance coverage.

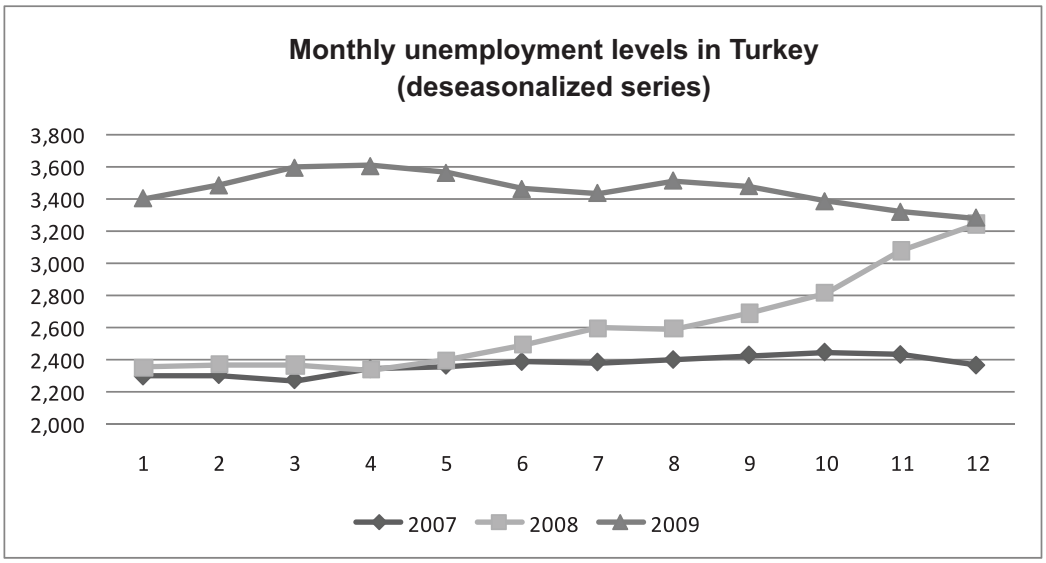
Note that, Turkey did not have a swift policy action in response to the crisis. Nor could it introduce any 'expensive' or radical measures later on. There were only modestly expansionary fiscal

policies as tax revenues already plummeted and there were no resources available with the exception of the unemployment insurance fund, which was put to use in financing infrastructure projects.

Long-term incentives and recent anti-crisis measures have been described elsewhere in this volume by Taymaz and by Yeldan. Some are mentioned below again when pertinent to the narrative. These measures did not promote business creation per se or promote self-employment as an alternative to inactivity or unemployment.

There were, on average, 2.4 million unemployed in Turkey in 2007 (see Figure 1). Starting in June 2008, despite the construction and tourism season, unemployment began to rise, and faster in September. By the end of that year, more than 800 thousand people lost their jobs. It did not stop there. Until it hit its peak in April 2009 at 3.6 million, there were 1.2 million job losses because of the crisis. The highest number of monthly unemployment insurance recipients was reached in May 2009, at 313 thousand. At that time, the number of unemployed was eleven times this number. The total by May 2010 was 190 thousand, with an average monthly pay of 340 TL (€170). The difference of 123 thousand persons is the earliest beneficiary group whose benefit duration expired in the past year, roughly 10% of the employment loss because of the crisis. This figure is in line with the formal segment's proportion in the large private (mostly unionized) sector. (Unionization rate is 7-8% in Turkey.) Public sector employment was not affected.

Figure 1. Deseasonalized unemployment in Turkey, 2007-2009.



Source: TURKSTAT.

There is anecdotal evidence that wage workers, in order not to lose their jobs, had accepted lower pay. In 2009, 508 thousand persons benefited from short-time work allowance and this was the major cash-injection crisis stimulus package for businesses during the crisis. Annual average pay per person was 320 TL (€160); the majority qualified for one month of support. Turkey has provided broad ranging incentives by reducing employment costs for new hires in its anti-crisis measures, but these were not effective as evidenced from the unemployment levels in Figure 1. (The other broad measure was a temporary value added and special consumption tax cut in automobile and consumer durable purchases in the summer of 2009, which did help the sales and stemmed the bleeding of employment in these sectors; see Taymaz in this volume.) The 325,000 drop in unemployment in the last eight months is closely matched by the 350,000-person increase in agricultural employment, which is unregistered employment. (All incentives required formal contracts.)

When the crisis hit Turkey in late 2008, it hit the informal employment component of export manufacturing in smaller sub-contracting workshops (who are paid by the piece in the garment industry). These losses were in the western industrial cities of Bursa and Istanbul. As the demand for Turkish exports in automotive, clothing and textiles, and consumer durables fell in Europe in 2009, industrial job losses continued. Close to 90% of these private sector job losses did not qualify for unemployment insurance.

Employment cost subsidies are a long-standing tool of supporting business creation in Turkey for its underdeveloped regions. These policies have been in effect for the past forty years or so, but regional per capita income levels failed to converge to the national mean. As tax revenues fell, the government did not have the resources to implement extensive cash transfer programs, anyway.

3. Job Growth and Unemployment: Trends And Crisis Impact

3.1. Demographic Background and Deep Trends[3]

The salient feature of the Turkish demographic dynamics is that, the rural-urban transition is still not complete, although Turkey pretty much completed its demographic transition. Turkey reached its replacement fertility rate of 2.1 sometime around 2005 or slightly before. Turkish population is growing because of population momentum. The number of its 0-14 year-olds is declining already.

There are implications of this situation for employment. Turkish urban areas should expect another ten-twelve million or so migrants from its rural areas in the coming two decades. Rural population has stabilized with a slightly declining trend at below eighteen million. Its proportion will diminish, as only the urban population will keep rising until 2050 or so. Turkey will be a country of around 95 million.

Rural-urban migrants are uneducated. They lack the skills to be gainfully employed within the ILO's decent work context. Young male migrants find seasonal work in the large informal segments of the construction and tourism sectors. Young female migrants along with their sisters at the periphery of large cities find jobs in the informal sector. In the textiles industry, they work until an early marriage and drop out of the labour force.

These dynamics and an unusually large agricultural sector employment (relative to Turkey's per capita income) explain the large share (close to 50%) of informal employment in Turkey.

Why has there been such a large share of agriculture in employment in Turkey (which is still close to 30%)? The answer is agricultural subsidies that went on between 1950 and 2000. These subsidies slowed down the flow of population from rural to urban areas that should have started after agricultural mechanization. Agricultural productivity is therefore low in Turkey. Furthermore, Turkish population's average schooling level is six years.

The implications of the above demographic picture of Turkey in its urban labour markets are profound. In addition to informality and low levels of education (hence low levels of labour productivity), participation rates of urban women are very low, about 25%. Turkish production (and per capita income level) clearly suffers from not utilizing much of its working age women. This is a downward spiral, as improvements to technology may not be translated easily into productivity with this kind of a work force composition.

3 This subsection draws freely on Ercan (2007).

Not surprisingly, Turkish Employment Agency's annual survey of establishments reports eight of the top ten occupations as unskilled occupations like bodily work or general (unspecified) services. Long-term supply of skilled occupations depends on urbanization and the resultant increases in schooling levels. This development will also push age at first marriage up and increase women's labour force participation rates eventually.

Without understanding these fundamental dynamics of the Turkish labour market, one may not conduct informed analyses of past and present trends of industrial activity and occupational distribution.

3.2. Recent Trends and Crisis Impact

Turkey grew for six years straight between 2002 and 2007. This sustained economic growth did not reflect itself in an increase in labour force participation. Unemployment rate kept creeping up. Turkish participation rate is falling because women's participation rate is falling. This is because of the ongoing rural-urban migration. Former uneducated unpaid family workers in agriculture do not participate in the urban labour market. This component still dominates the overall participation rate although rising urban education levels are pushing participation rates up at the same time. Unemployment rate is going up steadily because the better educated (high school, median education level is primary) urban younger cohort participate more, but the jobs are not forthcoming at this rate.

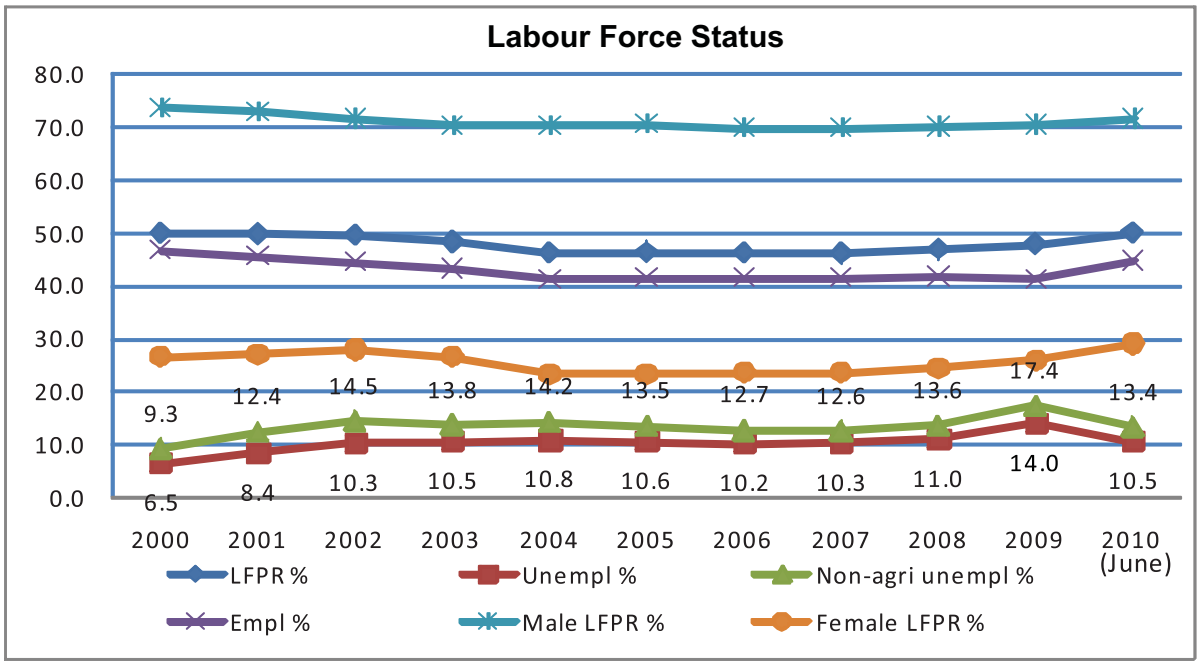
As the agricultural employment exodus will still be important in the coming decade or so, this pattern will drive the participation rate and unemployment patterns in Turkey. This is regardless of the impact of the recent economic crisis. The crisis put the unemployment rate in the first half of 2009 to its historic high. It may have hastened this outcome maybe by a few years, but this outcome was going to arrive anyway. Unemployment levels for urban youth are considerably higher than the general rate. In the coming decade, these would have translated into the overall rate. The across-the board employment support programs in Turkey have not made a difference for urban youth; although there is labour cost support programs that target the youth. This suggests that there are significant barriers that young people face when trying to get a job or remain in one. The issues of low-skills and a general lack of childcare facilities come to mind right away.

In June 2010, non-institutional civilian population of Turkey increased by 800 thousand to 71.3 million people year-on-year (TURKSTAT LFS results). Non-institutional working age population of Turkey went up by 860 thousand to 52.5 million. (Turkish population is increasing because of population momentum; replacement fertility level has been reached five years ago.) Turkish labour force number 26.2 million of which 17.3 million are urban. Employment level is 23.5 million; 15 million are urban. There are 2.75 million unemployed persons, 2.26 million of which are urban. These numbers went down from 3.27 million and 2.67 million, respectively, in one year. Turkey has returned (close) to its pre-crisis levels in some labour market indicators.

Labour force participation rate has increased by 1.2 points to 50% (72% for men and 29% for women, a 1.7% increase). Eighteen per cent of the labour force is young (15-24 years old). Education increases LFPR. Male college graduates' LFPR is 84%, and female college graduates' LFPR is 70%. Headline unemployment rate is 10.5%. This is a misleading figure for international comparisons, because of the high proportion of agricultural employment. Urban unemployment rate is 13.1%, down from 16% last year. Non-agricultural unemployment rate is 13.4%; this is a three-point improvement over the last year. Youth unemployment rates are high: 19% overall and 23% in urban areas, about five points smaller than last year's statistics. Figure 3.1 summarizes the last decade's labour force status picture including the crisis year of 2009 and recovery in 2010 (June values for 2010).

As seen in Figure 2, Turkish employment rate has picked up in the first half of 2010 (it is still a very low 45% in its income group of countries). Women's employment rate was 24% in 2009 (OECD total was 57%, OECD, 2010). There was strong urban employment growth starting in November 2009 and picking up in January 2010 (Figure 3). This performance pulled the unemployment rate (total and non-agricultural, 10.5% and 13.4%, respectively) down to its early 2008 values. EU Unemployment rate may have leveled. EU unemployment rate was 9.6% in May 2010 (Eurostat). US unemployment rate was 9.7% in May 2010. Turkish overall rate seems close to these figures thanks to the high proportion of unpaid family worker women in employment. Non-agricultural unemployment rate is a more realistic indicator for international comparisons.

Figure 2. Unemployment and labour force participation

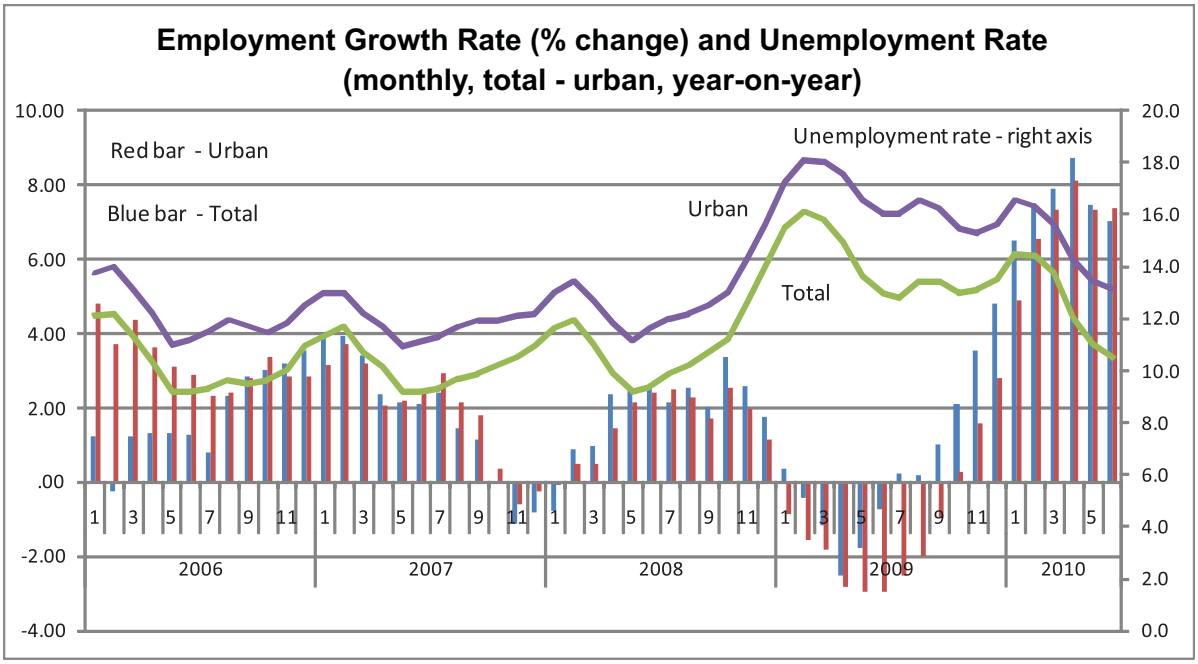


Source: TURKSTAT.

Note that, in the second half of 2009 and early 2010, total employment growth rate far exceeds the urban employment growth rate (it is positive as early as July 2009 while urban employment keeps bleeding for another quarter). This is because of the rural employment increase. Simply put, return migrants were classified as unpaid family workers in agriculture.

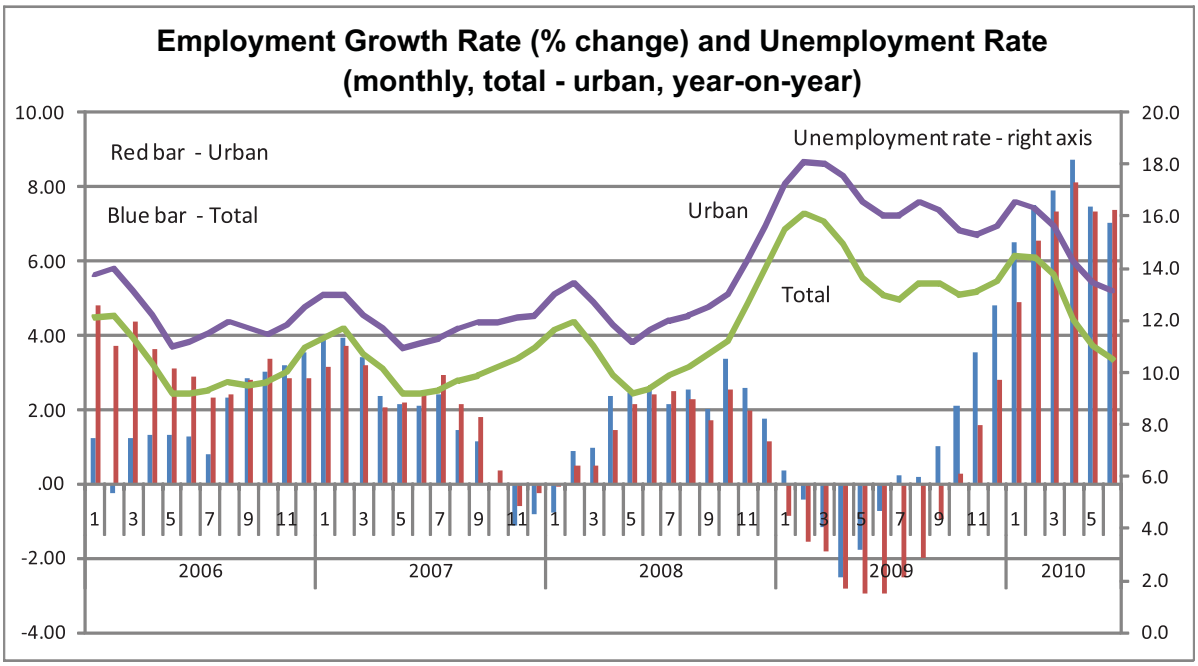
Participation and unemployment statistics for the youth reveal a dire picture (Figures 2.3 and 2.4 for males and females, respectively; young female unemployment rate is shown in both figures). EU and OECD comparisons are best made using non-agricultural statistics, Turkish agricultural employment proportion is high and this makes the overall statistics look better than they are. Non-agricultural unemployment rate for young males hit 28% in 2008 and came back down to its 2006 level in 2009. Young female non-agricultural unemployment rate hit 33% in 2009 and came back down to its 2006 value in 2009. Regardless, these rates are very high (OECD total was 16.4% in 2009, OECD, 2010). Note also that, young women's LFPR is very low at 25% between 2004 and 2008, and a still very low 28% in 2009.

Figure 3. Employment growth rate and unemployment rate (monthly)



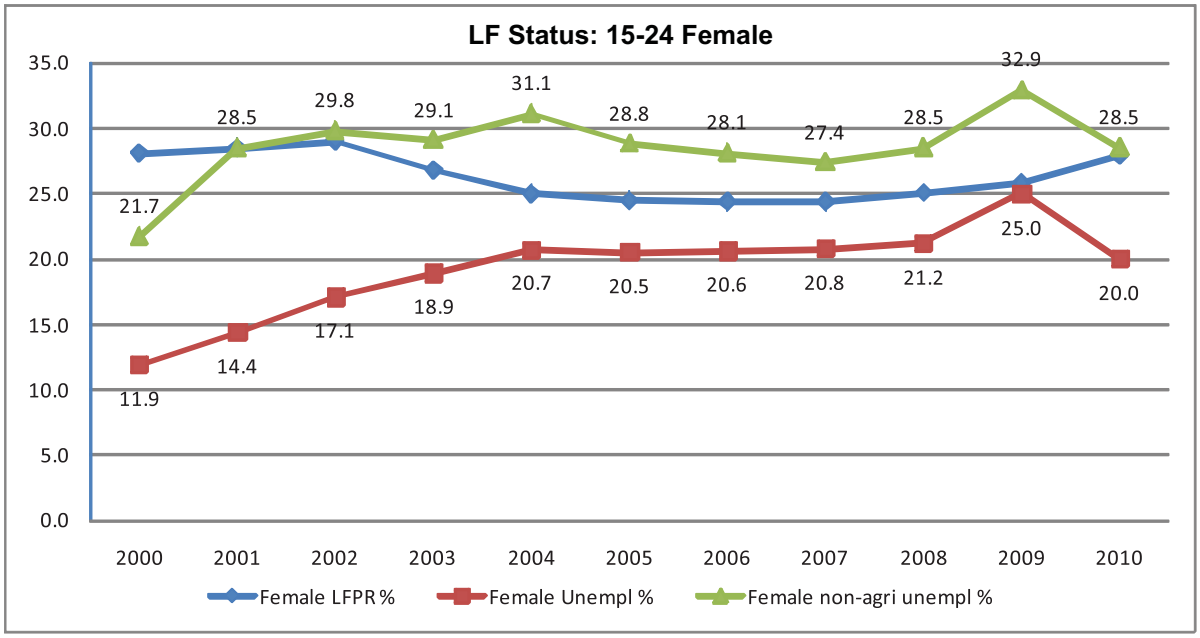
Source: TURKSTAT.

Figure 4. Male unemployment rate (youth)



Source: TURKSTAT.

Figure 5. Female unemployment rate (youth)

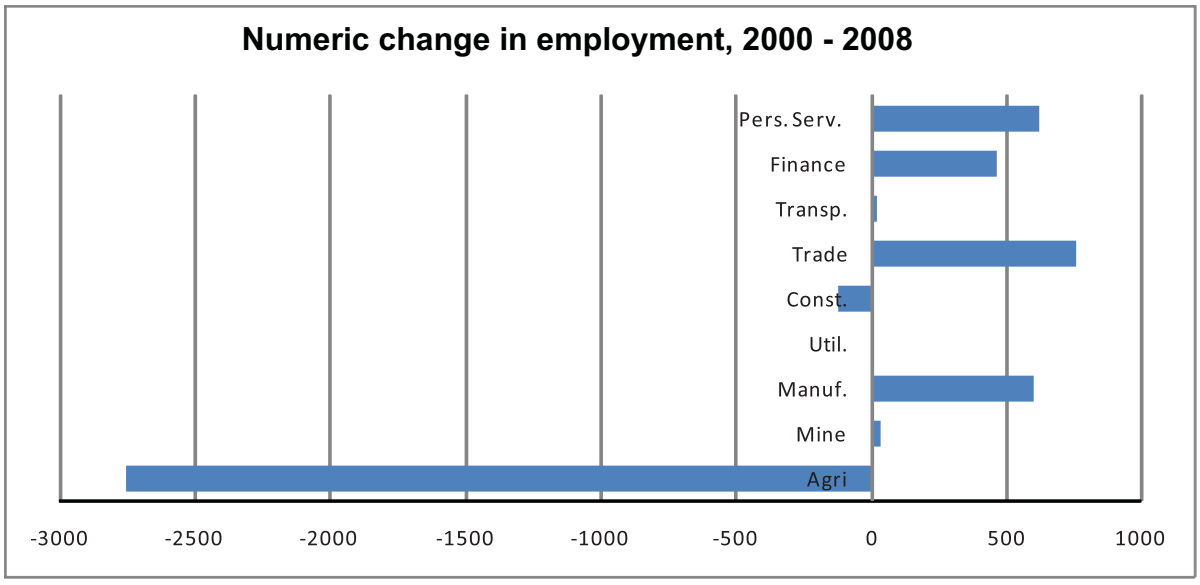


Source: TURKSTAT.

3.3 Employment Trends[4]

Using aggregate data from 2000-2008 LFS, in Figure 3.5, the employment creation dilemma of the Turkish labour market is observed. Agriculture lost 2.75 million workers. The rest of the economy created 2.4 million jobs. This is not even a stalemate. Had the Turkish LFPR, especially for women, not been low, the unemployment problem would have been unbearable. Manufacturing employment gain was 630 thousand during the period. Service sector total job creation was 1.9 million.

Figure 6. Numeric change in employment (2000-2008)



Source: Aggregated TURKSTAT LFS data are used.

4 This subsection draws freely on Ercan (unpublished).

There is no reason not to expect similar patterns to prevail in the coming decade. Agriculture will lose employment. Mining, utilities, construction, and transportation will have the same shares. Service industries will gain what agriculture is losing (with a moderate gain in manufacturing employment proportion as well). These proportions are shown in Table 1.

Tablo 1. Employment share of industries, 2000 – 2020

Year	Agri.	Mine	Manuf.	Util.	Const.	Trade	Transp.	Finance	Pers. Serv.
2000	36%	0%	17%	0%	6%	18%	5%	3%	14%
2008	24%	1%	20%	0%	6%	22%	5%	6%	17%

Source: Aggregated TURKSTAT LFS data.

In Table 2, percentage changes in employment by workgroups are shown between June 2008 and June 2009, and June 2009 to June 2010. Employment losses were borne by men, especially in the young and urban categories. Young women lost jobs during the crisis as well. Increases in women's employment and urban women's employment reflect the increasing share of agricultural employment (unpaid family worker) and an added worker effect during the crisis as men lost their jobs. Women's employment strongly picked up from June 2009 to June 2010.

Tablo 2. Percentage change in employment by workforce group

Year	Agri.	Mine	Manuf.	Util.	Const.	Trade	Transp.	Finance	Pers. Serv.
2000	36%	0%	17%	0%	6%	18%	5%	3%	14%
2008	24%	1%	20%	0%	6%	22%	5%	6%	17%

Source: Calculated from TURKSTAT LFS data.

3.4 Key Impacts on Low-Skilled Workers

One group of participants that one should surmise to be low skilled, is the long term unemployed. Duration of unemployment has been going up in Turkey. Long-term unemployed (more than 12 months) constituted 21% of the unemployed in 2000, a good year for employment indicators (Figure 3.5). By 2005, however, long term unemployed reached 39% of the unemployed. In 2009, LT unemployed proportion dipped down to 25% (not shown, OECD total is 24%). In the recovery year of 2010 (June), it went back up to 31%. What is happening is that, the trend in the long-term unemployed is upwards but during the crisis, they dropped out of the labour force as discouraged workers. Then they came back to the statistics during the recovery and reported their total spell of joblessness.

Part-time employment is not reported in the aggregate statistics bulletins of TURKSTAT, but is reported to OECD. Turkish part-time employment is lower than the OECD average (of 15% in 2008 and 16% in 2009). In 2008, 8.5% of employment was part-time in Turkey. In 2009, 11% of employment was part-time. It is likely that, the proportion went up because full-time employment was hit hard during the crisis. (Hours worked data in the LFS are not reliable and not reported even to OECD after 2004.)

Low skill (education) level in Turkish employment is shown in Table 3.3. The median education level of the Turkish work force is still primary (five years). More than a quarter of the unpaid family

workers have no diploma; 87% have less than high school education. Primary school graduates constitute more than half of the casual wage (daily or seasonal) workers and the self-employed. Median education level of the employers is junior high (eight years). Wage-salary workers are the best educated; their median education is senior high (eleven years). They constitute more than half of the Turkish work force. Table 3 strongly suggests that *self-employed look more like casual wage workers in Turkey, as opposed to employers*. This lends credence to the belief that, failing to obtain regular wage-salary employment because of their poorer human capital stock, this segment of the work force exists in the secondary segment.

Table 3. Education and job status in Turkish employment (2008)

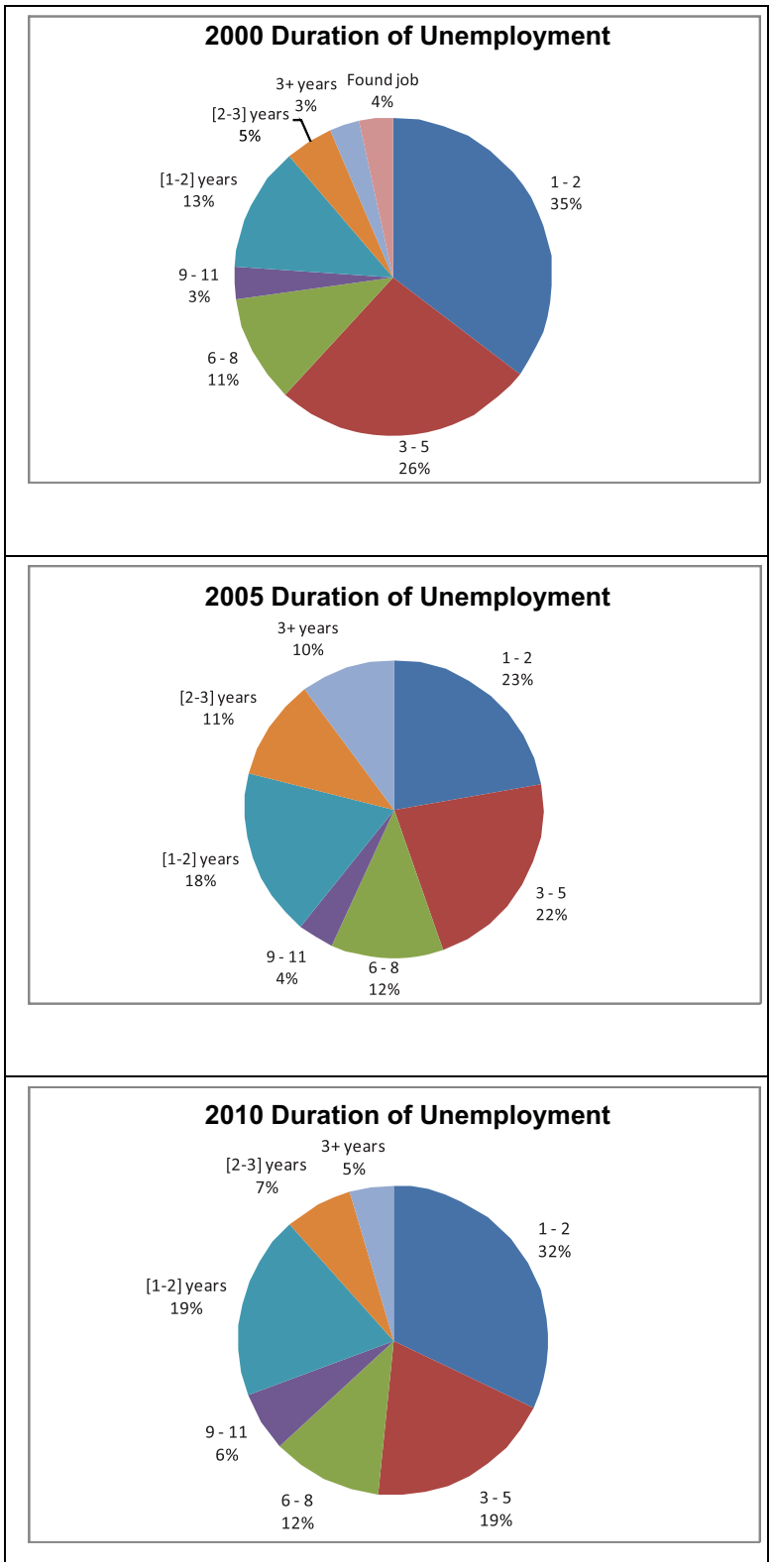
15 + age	Illiterate	No diploma	Primary	Junior high	Senior high	Voc. high	College	Elementary (8 years)		Number (x1000)	(%)
Wage-salary	0.7%	2.0%	29.2%	10.4%	14.2%	14.6%	23.3%	5.7%	100.0%	11527	54.4%
Casual wage	7.6%	8.9%	54.3%	7.9%	6.2%	4.7%	1.4%	8.9%	100.0%	1409	6.6%
Employer	0.7%	1.8%	39.4%	14.1%	14.1%	10.2%	18.9%	0.8%	100.0%	1250	5.9%
Self-employed	7.4%	7.7%	58.5%	10.2%	6.5%	5.3%	3.5%	1.0%	100.0%	4325	20.4%
Unpaid family	16.5%	10.1%	44.2%	4.0%	6.7%	4.1%	1.6%	12.7%	100.0%	2683	12.7%
TOTAL	4.5%	4.6%	39.4%	9.6%	11.1%	10.4%	14.8%	5.5%	100.0%	21194	100.0%

Source: TURKSTAT online database. Row maximums are in red, column maximums in blue. Note: No diploma means literate through adult education, primary is five years, junior high is eight years, and senior high is eleven years of schooling. Elementary means eight years that applies to graduates after the 1996 move to eight years of compulsory schooling from five years. Note also that, schooling levels for the employed are higher than the general population (non-participants, especially women, have lower schooling).

There is a widespread assumption that the informal economy is where formal workers who lose their jobs go. This would suggest that employment in the informal economy might expand during an economic crisis. Not so in this crisis in Turkey, because it was primarily the informal economy workers who lost their jobs. Unregistered employment proportion stayed level in Turkey at 42% in the past three years. It even fell slightly for males, from 37% to 36.4% between 2008 and 2010. One component of unregistered employment has seen a significant rise; non-agricultural self-employed women were 80.6% unregistered in 2008 and 85.7% unregistered in 2010 (March). These women occupy the bottom level of the Turkish labour market after the unpaid family workers in agriculture. They have no social protection. *Self-employment is not a good alternative to salaried employment.* Public authorities are reluctant to address unregistered work including self-employment during crises, lest unemployment rate rise even further. Self-employment constitutes one fifth of Turkish employment.

In summary, women's rising non-agricultural self-employment numbers during the crisis along with the rise in agricultural employment in 2009 (a good year for agriculture) and early 2010 (when people stayed put in agricultural employment as seasonal construction day-labourer and tourism demand for employment failed to materialize) helped the employment picture.

Figure 7. Duration of unemployment

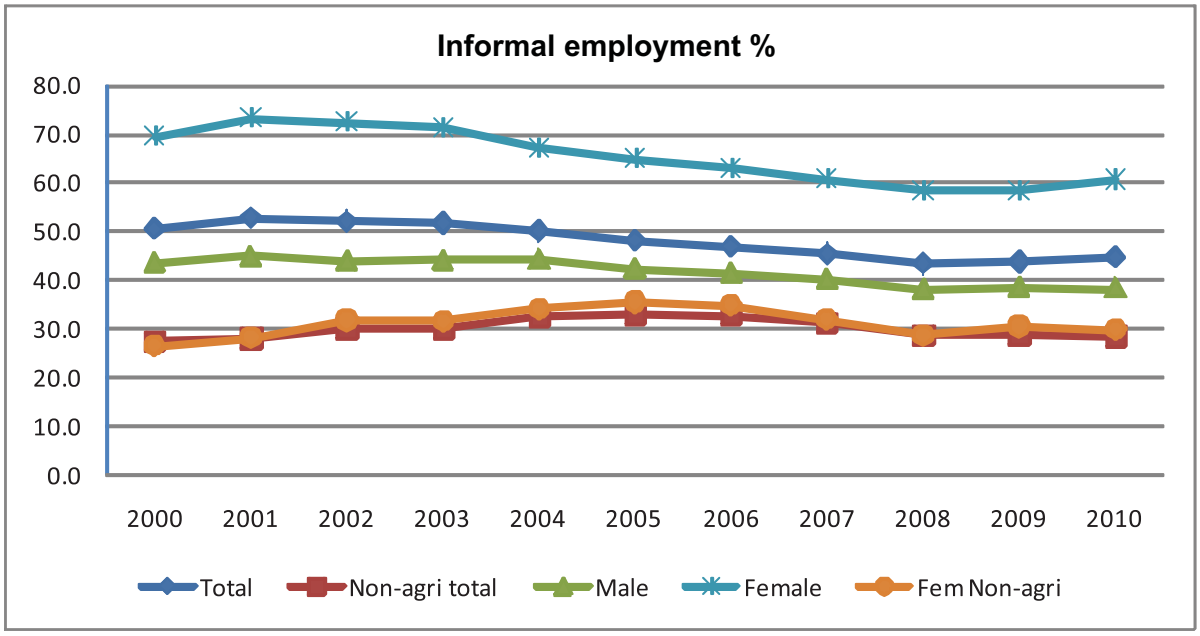


Source: TURKSTAT

3.5. Informal Sector

In Figure 8, the proportion of informal employment is shown. This proportion was 43.5% in 2009, down from 45.4% in 2007. The figure is rising in 2010. This pattern suggests that, job losses were disproportionately higher in this segment during the crisis. The recent rise is driven by the rise in agricultural women's unpaid family worker classification. Male overall, non-agricultural, and female non-agricultural informal employment proportions keep falling slightly.

Figure 8. Informal employment proportion in Turkey



Source: Defined as no social security coverage in current job TURKSTAT - LFS.

3.6. Self-Employment During The Crisis

Self-employment is two-thirds informal employment (not registered in current job) in Turkey. Agricultural self-employment is three-fourths informal employment. For women, self-employment is 90% informal employment. For women in agriculture, almost all self-employment is informal employment. Self-employment not only exhibited resilience through the crisis, it flourished, especially for women. This observation strongly suggests that, self-employment during the crisis was a coping mechanism for the income loss of the household. As the male main bread earner of the household lost some of his income or his job, women stepped in to make ends meet (added worker effect).

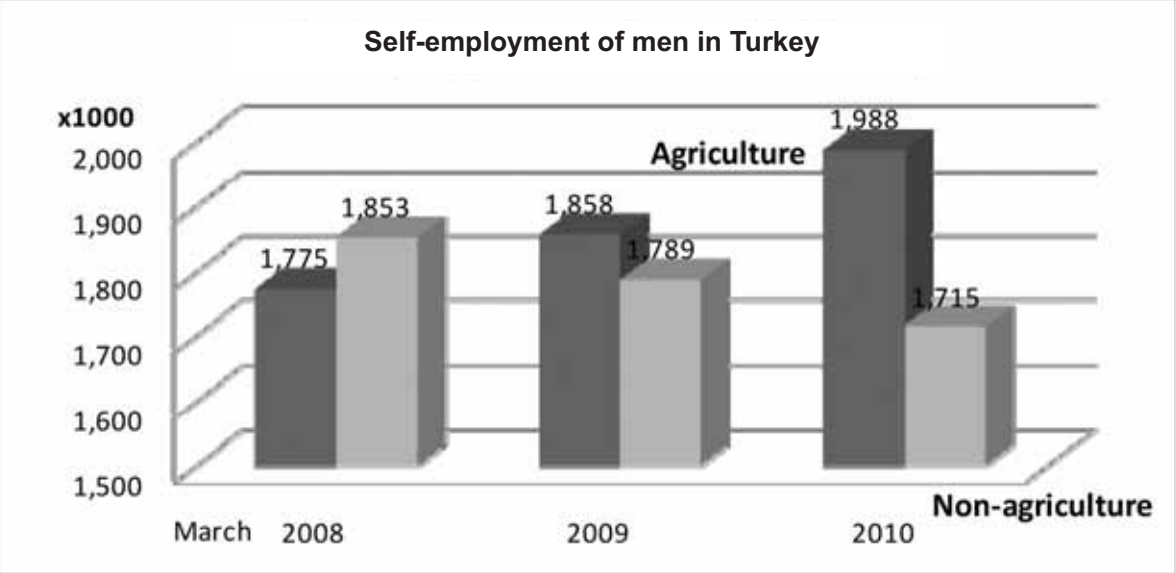
Note that, families in which the main providers are informal workers are frequently totally outside of Turkey's social safety net (World Bank, 2010). At best, some would qualify for health coverage through the so-called Green Card program, a means-tested health care program. Except occasional municipal coal and food aid packages, informal workers generally lack coverage of any public social assistance program. Once the main provider was out of his job during the crisis, his wife or daughter stepped into the informal labour market as self-employed.

The pre-crisis, crisis-trough, and current self-employment statistics are shown in Figure 9(a) for men and in Figure 9(b) for women.

Agricultural self-employment rose during the crisis for men, stayed level for women. (Agricultural employment rose in Turkey during the crisis; 2009 was a good year in agriculture, it helped the employment situation.) Non-agricultural self-employment fell during the crisis for men,

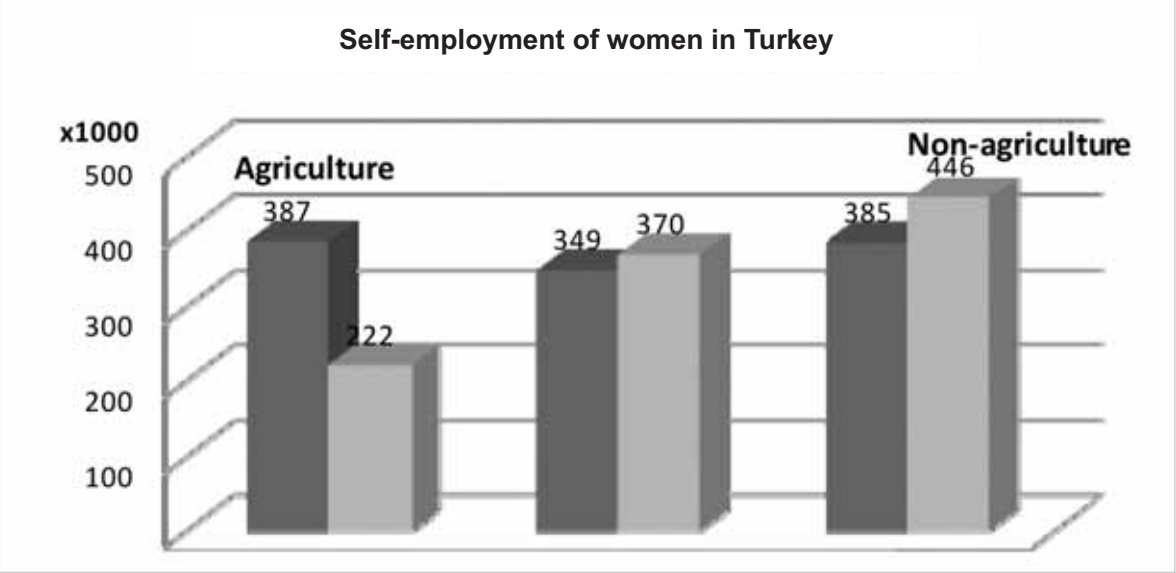
and the slack was picked up by women. The rise is unprecedented. Self-employed women in non-agriculture (low-skilled urban women) more than doubled from 222 thousand in 2008 to 446 thousand in 2010 (March values).

Figure 9(a). Self-employment of men in Turkey, 2008-2010



Source: TURKSTAT

Figure 9(b). Self-employment of men in Turkey, 2008-2010



Source: TURKSTAT

Note that, self-employment in Turkey is close to the casual (daily) wage work, that is, another option after 'failing' to obtain regular wage-salary work. In the framework of the flexicurity agenda of the EU, self-employment in Turkey lies on the flexible side without security for the most part. Labour Law in Turkey regulated social security for the self-employed under a third institution (after government employees and private sector wage employment institutions). This one traditionally had the lowest contribution and highest dropout (payment arrears) rates. There may not be much scope for progress here, because socio-demographic dynamics that cause the undesired outcome will exist for another generation or so.

3.7 Corroborating Evidence from Micro-Data: 2004-2009

In this subsection, personal records from the 2004-09 LFS data are used to obtain a detailed occupational picture (at 2-digit ISCO88 level) for recent years. No comparable micro-data files exist before 2004. The data have 2-digit industry codes as well. However, cross tabulating these two resulted in too few observations in many cells. Occupational distribution revealed a more legible picture and the largest occupations are divided neatly along regular employment and casual wage lines. The picture supports earlier relevant statements and provides richer detail.

Table 4. Education level completed by work status (2008)

Education Level completed	work status		15+		Unemployment rate by education level
	Employed	Unemployed	Inactive	Total	
illiterate	6,064	455	21,918	28,437	7.0%
column %	4.48	2.75	13.74	9.13	
No diploma	6,010	883	13,872	20,765	12.8%
	4.44	5.34	8.69	6.67	
Primary school	54,364	5,633	61,820	121,817	9.4%
	40.2	34.06	38.74	39.12	
Secondary/basic education	20,389	3,161	30,778	54,328	13.4%
	15.08	19.11	19.29	17.45	
General High School	14,667	2,394	17,048	34,109	14.0%
	10.84	14.47	10.68	10.95	
Vocational High School	14,251	1,852	8,426	24,529	11.5%
	10.54	11.2	5.28	7.88	
Tertiary education	19,505	2,161	5,711	27,377	10.0%
	14.42	13.07	3.58	8.79	
Total	135,250	16,539	159,573	311,362	10.9%
%	100	100	100	100	

Source: 2008 LFS micro-data.
Note: Secondary means eight years of schooling. This category unites the junior high and elementary categories in Table 3

In Table 4, education levels by activity status are reported. In the last column, population proportions by education level are shown. As expected, illiterate and no-diploma categories are overrepresented in the inactive population. Median education level in the population is still primary in Turkey. Basic education/ secondary graduates are overrepresented in the unemployed and inactive categories. General high school graduates are overrepresented in the unemployed category. Vocational high school graduates are active, either employed or unemployed. This is similar to the tertiary level of education completion. Overall unemployment rate for the data is 10.9%. Excluding the illiterate category, with the exception of primary and tertiary education levels, at all levels of education unemployment rates are higher than the overall unemployment rate. College graduates constitute the managers, engineers, and professional occupations (that are shown in Table 5). Primary graduates are the bulk of the unskilled or informal employment.

Table 5. Occupation and wages, 2004-2009

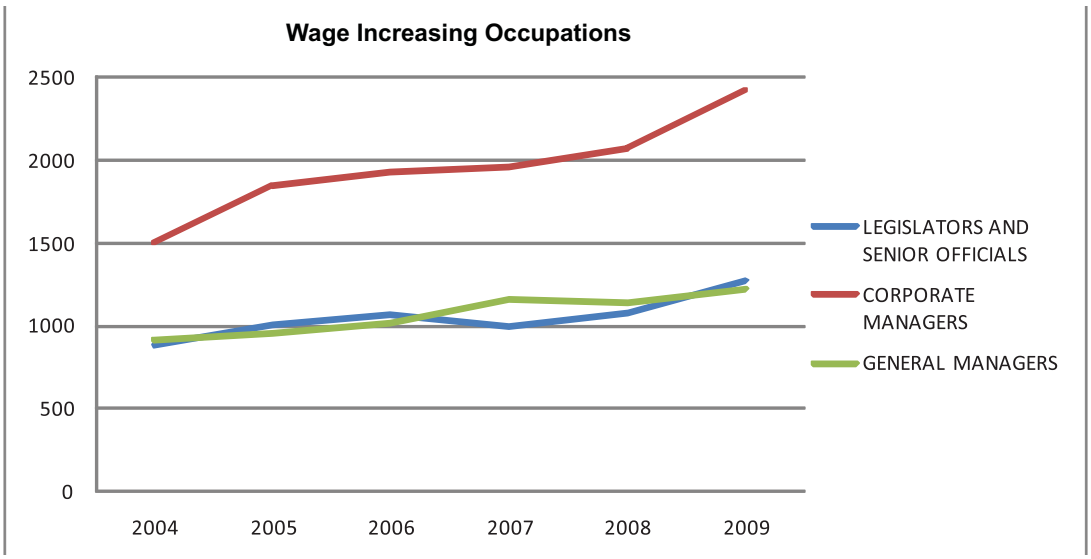
Occupation (ISCO-88)		2004	2005	2006	2007	2008	2009	Proportion casual in 2008	Wage ratio 2008 casual / regular
LEGISLATORS AND SENIOR OFFICIALS	monthly wage in 2009 prices	882	1002	1064	1001	1083	1271		41%
	occupation's proportion	0,8%	0,8%	0,8%	0,7%	0,8%	0,9%	0,2%	
CORPORATE MANAGERS		1499	1842	1930	1964	2073	2420		51%
		2,5%	2,5%	2,4%	2,5%	2,7%	2,8%	0,0%	
GENERAL MANAGERS		913	951	1017	1158	1143	1223		42%
		0,8%	0,9%	0,8%	0,7%	0,8%	1,0%	0,2%	
PHYSICAL, MATHEMATICAL AND ENGINEERING		1350	1492	1601	1836	1993	1889		18%
		1,1%	1,1%	1,3%	1,2%	1,1%	1,3%	0,3%	
LIFE SCIENCE AND HEALTH PROFESSIONALS		1525	1990	2256	2263	2381	2438		
		1,1%	1,1%	1,0%	1,0%	0,8%	1,2%	0,0%	
TEACHING PROFESSIONALS		1159	1213	1229	1340	1355	1453		38%
		6,1%	6,0%	5,7%	5,6%	5,6%	6,0%	0,8%	
PHYSICAL AND ENGINEERING SCIENCE ASSOCI		934	1041	1033	1122	1172	1200		64%
		2,7%	2,8%	2,9%	2,8%	2,8%	2,5%	0,8%	
LIFE SCIENCE AND HEALTH ASSOCIATE PROFE		959	1080	1099	1130	1221	1252		
		1,8%	2,0%	2,2%	1,9%	1,9%	1,8%	0,0%	
OTHER ASSOCIATE PROFESSIONALS		930	1063	1058	1105	1106	1176		51%
		3,5%	3,7%	3,9%	5,0%	5,2%	4,9%	1,7%	
OFFICE CLERKS		814	860	851	868	888	922		53%
		7,1%	6,9%	7,3%	7,1%	7,3%	7,3%	0,5%	
CUSTOMER SERVICES CLERKS		886	899	918	914	942	929		44%
		2,4%	2,3%	2,4%	2,5%	2,6%	2,8%	1,2%	
PERSONAL AND PROTECTIVE SERVICES WORKER		692	726	728	761	776	806		49%
		10,0 %	9,4%	9,5%	9,7%	9,7%	10,1 %	6,1%	
MARKET-ORIENTED SKILLED AGRICULTURAL AN		545	475	494	548	546	484		55%
		0,9%	0,9%	1,0%	1,0%	1,2%	1,1%	46,5%	
EXTRACTION AND BUILDING TRADES WORKERS		614	652	657	695	680	621		64%
		6,3%	6,0%	6,0%	6,1%	5,6%	5,1%	45,6%	
METAL, MACHINERY AND RELATED TRADES WOR		725	756	751	779	782	775		49%
		6,1%	6,1%	5,6%	5,8%	6,0%	5,6%	4,8%	
PRECISION, HANDICRAFT, PRINTING AND REL		453	552	478	514	539	476		20%

	1,1%	1,0%	1,0%	1,0%	0,9%	1,0%	28,6%	
OTHER CRAFT AND RELATED TRADES WORKERS	515	538	536	579	589	591		50%
	6,8%	6,4%	6,0%	5,6%	5,0%	4,8%	7,3%	
STATIONARY-PLANT AND RELATED OPERATORS	749	798	772	811	844	802		57%
	1,3%	1,4%	1,4%	1,3%	1,3%	1,0%	2,3%	
MACHINE OPERATORS AND ASSEMBLERS	613	655	651	662	664	668		47%
	6,5%	6,7%	6,7%	6,4%	6,1%	5,2%	2,4%	
DRIVERS AND MOBILE-PLANT OPERATORS	761	787	781	807	828	825		60%
	6,9%	6,9%	6,5%	6,8%	6,4%	6,2%	7,8%	
SALES AND SERVICES ELEMENTARY OCCUPATIO	559	569	567	575	583	612		48%
	8,3%	8,2%	8,2%	7,9%	8,3%	8,5%	12,4%	
AGRICULTURAL, FISHERY AND RELATED LABOU	331	294	307	294	286	250		47%
	3,3%	3,4%	3,1%	2,7%	2,8%	3,1%	87,5%	
LABOURERS IN MINING, CONSTRUCTION, MANU	543	544	525	552	560	569		65%
	4,9%	5,3%	5,9%	6,5%	7,3%	7,7%	33,8%	
Total	747	799	806	844	862	898		41%
	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	11,8%	

Source: LFS microdata of TURKSTAT

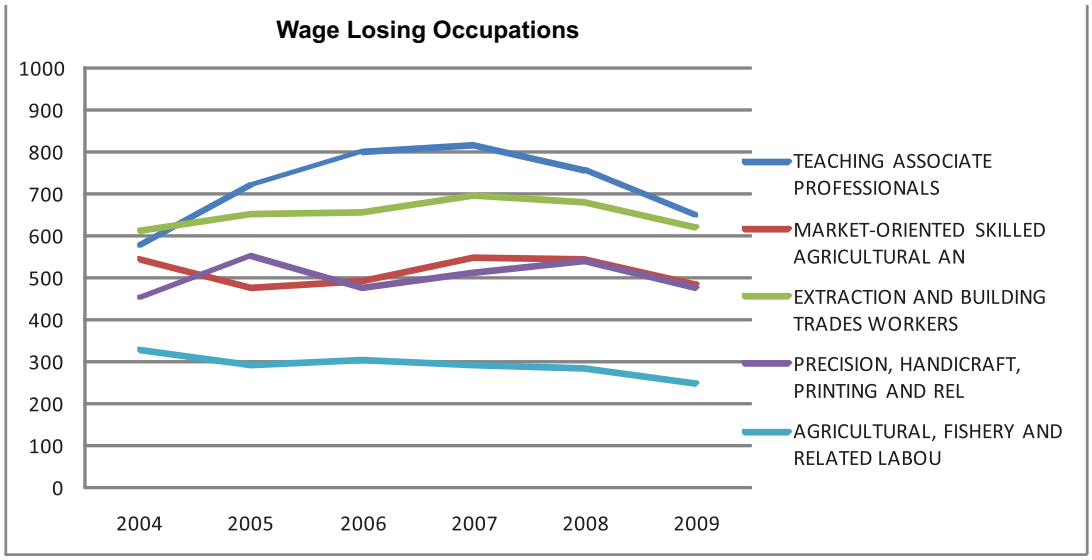
In Table 5, 2-digit occupational classification for wage and casual wage earners is shown for 2004-2009. In 2009, these two wage categories are reported under a single category. The professions colored in green are the ones where wages have gone up from 2008 to 2009 in 2009 prices. In those in yellow, wages had been more or less level. In the orange colored professions, monthly wages have significantly gone down. In the casual proportion column, those occupations with high proportions of casual employees are shown. There are no surprises here. Agriculture, construction workers, and artisans lead. All four sharp wage decline-exhibiting occupations are the ones with high informal employment proportions! Informal wage employment occupations were clobbered during the crisis.

Figure 10(a). Education level completed by work status (2008)



Source: LFS microdata of TURKSTAT

Figure 10(b). 'Bottom' occupations: wages decrease during the crisis (2009 prices)



Source: LFS microdata of TURKSTAT

Note that this table does not even include self-employment. In the top occupations (professionals, managers, engineers, health professionals, and teachers) there is no or insignificant levels of informality. (These occupations map to college or technical vocational high school degrees in the data.) Finally, in the last column of the table, the ratio of casual monthly wage to regular monthly wage is given. Casual wages are significantly lower; they constitute 40% of regular wages for the whole sample.

In Figure 10(a), those occupations whose wages have gone up during the crisis are shown. These are the managers. Corporate managers are paid two and a half times more than the average monthly. They are paid ten times more than the lowest paid profession (Table 3.5). In Figure 3.8b, those occupations whose wages have gone down during the crisis are shown. There are no surprises here. What is striking is that, day-labourers in agriculture work at half the minimum wage! This was not the case in Turkey until recently. Minimum wage was also binding in the informal sector, albeit without social security coverage. This is a troubling development for the Turkish labour market. It would not have been observed with the aggregate statistics as reported by TURKSTAT.

In the following Table 6, occupational distribution proportions are shown for 2008 and 2009. Similar to Table 5, there are green codes and red codes. Green codes are for those whose proportions fell in 2009 (that is, since they kept their jobs in 2008, they constituted a larger proportion of the wage-salary workers; note that TURKSTAT does not report wages for the self-employed or employer categories). The green ones are managers, professionals, and skilled machine operators. The red coded occupations are those whose proportions rose in 2009 (they were hired once more). These are agricultural and sales occupations. Whichever way one cuts or slices the data, the outcome identify the losers of the recent recession.[5]

5 It would have been simpler of course if one constructed a job status matrix for both years and computed the transitions from labour market states from one year to the other. While possible between 2005 and 2008, in 2009 some questions disappeared from the LFS. It is still possible to construct the transition matrix but with a lot more work. Also, TURKSTAT codes for 2009 questionnaire and tabulated values from the microdata set do not match in the answers of some questions for last year's job status (nine classifications expected, eleven found, for example).

A similar table is placed in the Appendix for industrial composition of employment at 2- digit classification for 2008 and 2009. Although detailed, it does not go much beyond the already stated obvious: Agricultural employment has gone up during the crisis (because of return migration, it was argued before in this chapter) and manufacturing employment has declined during the crisis. Using detailed data, the author thus hopes to have made a credible case of examining the crisis impact on the occupation (skill) dimension after a broad-brush verification of industrial employment composition patterns.

3.8 Anti-Crisis Measures: Why Was There No Impact On The Labour Market?

Turkey did not have any inventive labour market policies in the anti-crisis context. Briefly, Turkish government stalled for months in acknowledging the fact that Turkey has even been affected by the crisis. Real thinking into real measures, as opposed to the palliative packages was done in April and May of 2009. By then, budget deficit rose because of plummeting tax revenues.

Table 6. Occupational distribution proportions in 2008 and 2009

Occupation(ISCO-88)	2008	Percent	2009	Percent
LEGISLATORS AND SENIOR OFFICIALS	597	0,4%	677	0,5%
CORPORATE MANAGERS	2378	1,8%	2512	1,8%
GENERAL MANAGERS	8901	6,6%	8859	6,3%
PHYSICAL, MATHEMATICAL AND ENGINEERING	1102	0,8%	1256	0,9%
LIFE SCIENCE AND HEALTH PROFESSIONALS	925	0,7%	1226	0,9%
TEACHING PROFESSIONALS	4574	3,4%	5029	3,6%
OTHER PROFESSIONALS	1851	1,4%	1558	1,1%
PHYSICAL AND ENGINEERING SCIENCE ASSOCI	2392	1,8%	2153	1,5%
LIFE SCIENCE AND HEALTH ASSOCIATE PROFE	1541	1,1%	1480	1,1%
TEACHING ASSOCIATE PROFESSIONALS	349	0,3%	255	0,2%
OTHER ASSOCIATE PROFESSIONALS	5074	3,8%	4893	3,5%
OFFICE CLERKS	6136	4,5%	6252	4,5%
CUSTOMER SERVICES CLERKS	2381	1,8%	2602	1,9%
PERSONAL AND PROTECTIVE SERVICES WORKER	8848	6,5%	9538	6,8%
MODELS, SALESPERSONS AND DEMONSTRATORS	7242	5,4%	7786	5,6%
MARKET-ORIENTED SKILLED AGRICULTURAL AN	24551	18,2%	27315	19,5%
SUBSISTENCE AGRICULTURAL AND FISHERY WO	2765	2,0%	2595	1,8%
EXTRACTION AND BUILDING TRADES WORKERS	5887	4,4%	5726	4,1%
METAL, MACHINERY AND RELATED TRADES WOR	6221	4,6%	5995	4,3%
PRECISION, HANDICRAFT, PRINTING AND REL	1515	1,1%	1907	1,4%
OTHER CRAFT AND RELATED TRADES WORKERS	5394	4,0%	5313	3,8%
STATIONARY-PLANT AND RELATED OPERATORS	1081	0,8%	894	0,6%
MACHINE OPERATORS AND ASSEMBLERS	5425	4,0%	4765	3,4%
DRIVERS AND MOBILE-PLANT OPERATORS	7374	5,5%	7151	5,1%
SALES AND SERVICES ELEMENTARY OCCUPATIO	8596	6,4%	9359	6,7%
AGRICULTURAL, FISHERY AND RELATED LABOU	5957	4,4%	6578	4,7%
LABOURERS IN MINING, CONSTRUCTION, MANU	6191	4,6%	6613	4,7%
Total	135248	100,0%	140287	100,0%

Source: LFS microdata of TURKSTAT

Turkish government did not acknowledge initially that the global crisis would hit Turkey and would hit it hard, as later statistics confirmed. Its unemployment rate climbed up to 16% from a pre-crisis 10% in just six months and its economy contracted by 14% in the first quarter of 2009, a post-war record for the country. Its employment package in May 2009 was lopsided in introducing private sector agencies to provide temporary workers to establishments; the measure went down in June with strong public and social partner opposition.

What could have been done? An ALMP drive across industries that were slowing down: Compensate and train workers on idle company time on company grounds, thus *prevent some layoffs and upgrade worker skills.* İŞKUR announced a program to do so in June with modest goals, almost a year after the crisis affected Turkish production. The policy would have been squarely in line with the two of the three key priority areas for action as identified by the EU, maintaining employment and upgrading skills.

Table 7. ALMP and internship components of the May 2009 crisis package

Policy area	Description of measure	Aims and objectives	Legislative Status	Positions of social partners	Preliminary assessment of the measure against:	
					Criteria for the measure to succeed in the short term	Criteria for the measure to succeed in the long term
Increasing labour productivity	May employment package.	Labour supply and demand (human capital investment for presently employed).	Adopted. Not implemented yet.	Positive.	The target is 200 000 ALMP recipients who are in employment. It should show later in ISKUR (PES) bulletins.	Increased productivity (to be seen in later statistics).
Increasing labour supply	May employment package.	Internship facilitation in firms.	Adopted. Not implemented yet.	Positive.	100 000 young interns are aimed to be supported for internships at firms with financial support from the Turkish Employment Agency.	The proportion in employment after the support measures expire in six months (to be seen).
Investment in human capital, increasing access to employment	May employment package.	Labour supply and demand (human capital investment for the unemployed).	Adopted.	Positive.	The target is 200 000 ALMP recipients in present unemployment rosters. It should show later in ISKUR (PES) bulletins.	Increased productivity (to be seen in later statistics).

Source: Turkish daily newspapers.

Another challenge that Turkey has faced was the sudden bleeding of jobs from November to March, over a million jobs lost, adding four full points to the unemployment rate, as many remained in the labour market. Not even ten percent of these qualified for unemployment insurance, as the requirements for unemployment benefits are stringent when one considers the fact that 45% of Turkish employment is unregistered. Therefore, the government has announced an intention of employing 500 thousand in infrastructure and municipal maintenance projects in April, the number fell to 120 thousand as the budget figures came in, proposed to the parliament as 'an intention, not target' in May, and disappeared quietly, afterwards. The measure would have addressed the third priority area of the

EU, increasing access to employment, as it was planned to have some portion of this new employment allocated to first-time job seekers who have scant hope to find a job in the middle of a crisis.

Social partners were not involved in the preparation of any of these packages. The following measures are listed here in the context of upgrading skills.

Table 8. Industrial composition of employment, 2008 and 2009

Industry-NACE 1.1	2008	Percent	Broad classification	2009	Percent	Broad classification
Agriculture, hunting, related act	32567	24,1%		36017	25,6%	
Forestry, logging, related act	452	0,3%		311	0,2%	
Fishing, hatcheries, fishfarms	200	0,1%	24,6%	198	0,1%	25,9%
Mining of coal, lignite, ext of peat	483	0,4%		489	0,3%	
Extr. of petroleum, gas, serv. act	39	0,0%		50	0,0%	
Mining of metal ores	104	0,1%		68	0,0%	
Other mining & quarrying	301	0,2%	0,7%	203	0,1%	0,6%
Manuf of food prod, beverages	3373	2,5%		3535	2,5%	
Manuf of tobacco prod	109	0,1%		93	0,1%	
Manuf of textiles	3098	2,3%		3850	2,7%	
Manuf of wearing apparel, fur	3719	2,7%		3385	2,4%	
Tanning leather, manuf of luggage etc	636	0,5%		596	0,4%	
Manuf of wood, exp furniture	812	0,6%		768	0,5%	
Manuf of pulp, paper	295	0,2%		297	0,2%	
Publishing, printing media	578	0,4%		514	0,4%	
Manuf of coke, refined petrol	90	0,1%		68	0,0%	
Manuf of chemicals and chemical prod	999	0,7%		662	0,5%	
Manuf of rubber, plastic prod	1132	0,8%		998	0,7%	
Manuf of other non-metallic mineral	1937	1,4%		1906	1,4%	
Manuf of basic metals	1180	0,9%		1044	0,7%	
Manuf of metal prod	1682	1,2%		1477	1,0%	
Manuf of machinery & equipment	1571	1,2%		1369	1,0%	
Manuf of office machinery, computers	15	0,0%		12	0,0%	
Manuf of elec machinery, appartus	502	0,4%		454	0,3%	
Manuf of radio, tv, comm equip	172	0,1%		119	0,1%	
Manuf of medical, precision, clocks	162	0,1%		146	0,1%	
Manuf of motor vechiles	1314	1,0%		1007	0,7%	
Manuf of other transport equipment	437	0,3%		385	0,3%	
Manuf of furniture	1711	1,3%		1734	1,2%	
Recylcing	38	0,0%	18,9%	26	0,0%	17,3%
Electricity, gas, water	573	0,4%		475	0,3%	
Collection, distr, purif. water	119	0,1%	0,5%	102	0,1%	0,4%
Construction	7897	5,8%	5,8%	8220	5,8%	5,8%
Sale, maint, repair motor vechiles	3300	2,4%		3441	2,4%	
Wholesale trade, commission trade	3685	2,7%		3725	2,6%	
Retail trade, repair of pers and hh goo	15378	11,4%		15520	11,0%	
Hotels and restaurants	6356	4,7%	21,2%	6890	4,9%	21,0%
Land transp, tranp via pipelines	4551	3,4%		4753	3,4%	

Water transport	112	0,1%		153	0,1%	
Air transport	103	0,1%		131	0,1%	
Auxilliary transp activities	1235	0,9%		1122	0,8%	
Post and telecomm	762	0,6%	5,0%	814	0,6%	4,9%
Financial intermediation	1061	0,8%		1131	0,8%	
Insurance and pension funding	70	0,1%		73	0,1%	
Auxilliary financial interm	270	0,2%		311	0,2%	
Real estate activities	448	0,3%		679	0,5%	
Renting machinery & equipment	79	0,1%		77	0,1%	
Computer & related act	343	0,3%		333	0,2%	
R&D	36	0,0%		43	0,0%	
Other business act	4434	3,3%	5,0%	5328	3,8%	5,7%
Public admin and defense	8893	6,6%		8927	6,3%	
Education	6324	4,7%		6806	4,8%	
Health and social work	3918	2,9%		4071	2,9%	
Sewage & refuse disposal	84	0,1%	14,2%	215	0,2%	14,2%
Act of membership org	605	0,4%		725	0,5%	
Recreation,cultural,sporting act	994	0,7%		1000	0,7%	
Other serv act	2602	1,9%		2518	1,8%	
Private hh with employed persons	1292	1,0%		1540	1,1%	
Extra-territorial	18	0,0%	4,1%	29	0,0%	4,1%
Total	135250	100,0%		140933	100,0%	

Source: LFS microdata of TURKSTAT

After a few incentive packages and one temporary consumption tax deduction, the government was under pressure to specifically target employment issues directly, which it did with the May package. This came about one year later than similar EU measures.

The government did not revise its program growth rate target of 4% growth for 2009 until April. All expected budgetary targets were off by then. The revision in April was - 4% (note the wild swing). From October to April, therefore, the government did not have an idea about how much money it had to spare for priority areas for action. It turned out to be not much, save for İŞKUR funds. There could have been an early ALMP and internship based skill-upgrading drive with full support of social partners in workplaces, which would have benefited Turkey in the post-crisis era. This measure would necessarily target the formal employment component and would have a post-crisis human capital (productivity) impact.

Two measures had some effect (see Taymaz in this volume). One was a temporary reduction in the special consumption tax that gave a boost to automotive and consumer durable sales that ended in mid-June 2009 and short-time work allowance that maintained some employment.

Turkish Employment Agency, İŞKUR's capacity is severely strained with less than 3000 employees while Turkish labour force was close to 24 million with approximately 3.8 million unemployed at the peak of the crisis. A stellar move by the government would have been direct employment of 50 to 100 thousand persons for İŞKUR only.

One could suggest that, had these measures been not in place, then the employment picture would have been worse. In the next section, the author will argue that the notso- severe employment-unemployment picture resulted from a return migration to rural areas (and increasing agricultural employment) and the rise in the numbers of discouraged workers (the long-term unemployed dropped out of the labour force). The strictly manufacturing impact (judging from the detailed industrial employment numbers from Table A2 in the Appendix) would be limited to about 50 thousand workers at most. Clearly significant, but nowhere near the 1.3 million jobs lost because of the crisis in the last quarter of 2008 and the first quarter of 2009.

3.9. Turkish Dilemma: High Levels Of Undeclared Work

Undeclared workers felt the brunt of the employment losses and their proportion diminished in the workforce. The government did not suggest increased audits against undeclared work, as this could have had a detrimental effect on low-skilled employment during the crisis. Turkish Employment Agency has paid out its record number of beneficiaries in April at 318 thousand, where the number of unemployed was twelve times this level. The official reach is thus fractional and how to design effective policies for the informal unemployed, who are unskilled, remains an open question. Construction and tourism sectors are one or two years away from picking up this slack.

4. Implications for Employment Recovery

One could conjecture that, spending on active labour market policies (ALMPs) would favorably affect job prospects of the subjects during the recovery. Note that ALMP expenditures in Turkey before 2009 were negligible, not even reported to the OECD. Only in 2009 the government allocated 500 million TL (333 million USD at 1.5 TL/$) (and the same amount in 2010 as well) to Turkish Employment Agency's (İŞKUR) training programs. These pay 15 TL (USD 10) per day honorarium for attending the program and thus serve as a cash transfer measure that is a legitimate use of funds as stipulated by İŞKUR regulations. There will also be further training of 200 thousand unemployed in 2010 and 2011, before the elections. Such sums were not spent on ALMPs before and there is no impact analysis yet as İŞKUR did not conduct follow up surveys.

In one sense, Turkey has already recovered in terms of employment. Below Table 4.1 reproduces selected rows of a table from OECD (2010, Chapter 1). Turkey has the best performance after Poland in terms of the number of jobs needed to restore pre-crisis employment rates. It already exceeded them! In the previous section, we have seen that a significant portion of this recovery is due to the rise in agricultural unpaid family work status in women.

Germany has done very well, through a mix of short-time work and flexible labour contracts. It had higher employment in the first quarter of 2010 compared to 2009 (Eurostat).

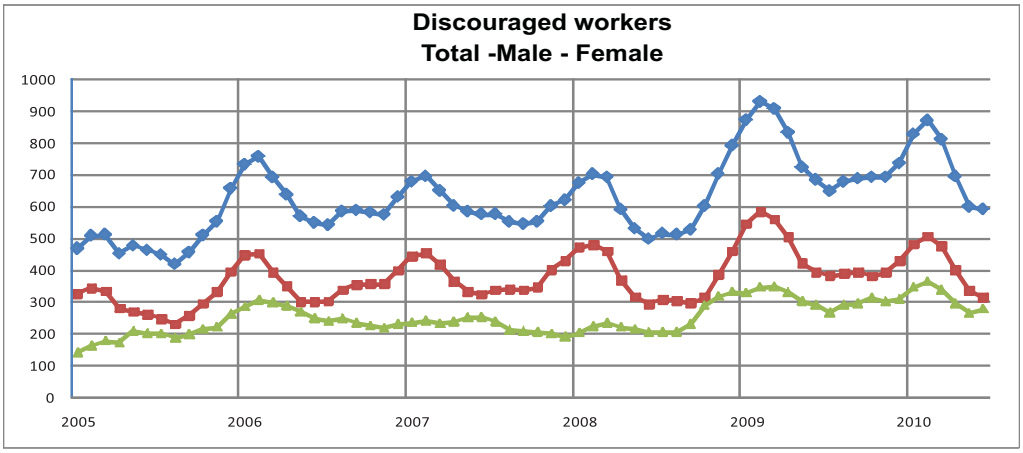
Table 9. Reproduction of an OECD (2010, Chapter 1) Table: Needed jobs to recover

	Increase in unemployment 2007 Q4 - 2009 Q4 (thousands)	Jobs gap in 2009 Q4 relative to 2007 Q4[a]			Projected jobs gap[a] in 2011 Q4	
	(Thousands)	Level (Thousands)	Percentage of the increase in unemployment	Percentage of actual employment in 2009 Q4	Level (Thousands)	Percentage of projected employment in 2011 Q4
	(1)	(2)	(3)=(2)/(1)	(4)	(5)	(6)
OECD	**16,923**	**17,797**	**105.2**	**3.3**	**14,976**	**2.7**
G7	**10,998**	**13,221**	**120.2**	**3.9**	**10,353**	**3.0**
European union	**5,396**	**4,555**	**84.4**	**2.3**	**5,377**	**2.7**
Euro area	**3,915**	**3,651**	**93.3**	**2.6**	**4,341**	**3.1**
Germany	-250	-464	. .	-1.2	-154	-0.4
Ireland	164	318	193.6	17.0	370	19.8
Italy	482	657	136.2	2.9	605	2.7
Japan	830	462	55.6	0.7	-383	-0.6
Korea	90	282	313.8	1.2	-100	-0.4
Poland	20	-270	. .	-1.7	-281	-1.8
Spain	2,415	2,047	84.8	11.0	1,989	10.7
Turkey	916	-576	. .	-2.6	-167	-0.7
United Kingdom	845	780	92.4	2.7	964	3.3
United States	7,988	10,439	130.7	7.6	7,960	5.5

. . Denotes value not shown because the employment rate has increased (i.e. the job gaps is negative). a) The job gaps at a particular date is defined as the increase in employment required to restore the ratio of total employment to the working-age population to its value in 2007 Q4.
Source: OECD calculations based on OECD Economic Outlook No. 87 Database.

The favorable employment and unemployment picture may be a bit tarnished as nonparticipant discouraged worker category is going back to its 'normal' levels (Figure 9). This category of non-participants exhibits a seasonal pattern. Comparing the same months, between February 2008 and February 2009, there was an increase of 230 thousand persons. Between the summers of 2008 and 2009, there was an increase of 150 thousand persons. However, between the summers of 2009 and 2010, the number of discouraged workers went down by 50 thousand. It will go down another 100 thousand to its summer 2008 level because of the recovery. This will not help the unemployment rate to go down; it may have already leveled and a slight upwards movement in unemployment is also expected as agricultural 'employment' would go down with the recovery.

Figure 11. Discouraged workers (total is in blue, male is in red)



Source: TURKSTAT

As evidenced in the chapter by Taymaz (in this volume), the automotive industry is the case study of crisis-related measures in Turkey. Because of the special consumption tax reduction in 2009, this sector survived the crisis year mostly intact. The exception was the smaller suppliers of the large producers, which bled employment. The sector entered 2010 surprisingly powerful. In the first seven months, it grew by 13%. Seven hundred thousand cars will have been sold at this rate by year-end. This is contrary to the expectation that, with the expiry of crisis related measures, the sector was heading for a slow start including rising inventories. Turkish bank loans offer favorable rates to consumers, which boost car sales. Apparently, consumer confidence is back. The losses in formal employment have been recovered in large producers and there is improvement in the feeder industries' employment levels according to the latest manufacturing indices of TURKSTAT.

The sector is the rising star of the Turkish economy as Turkish income level and population are both rising. Turkey has the lowest per capita automobile density in the Central and Eastern Europe region. There is much room for penetration. Average automobile age is 16. This was suitably used in 2003-2004 when there were 680 thousand cars sold with the 'old' car trade-in incentives. During this crisis, this scheme was not repeated. In 2008, 1.1 million cars were produced, and may be produced again by 2012. In 2009, the crisis hit the sector with a 20% reduction in production despite various incentives. Turkey exports 80% of its production. Automotive exports constituted 30% of all exports. Most are destined for Western Europe. Employment may even double from its current 300 thousand to 600 thousand if the growth rate of employment in manufacturing between 2000 and 2008 is any indication.

Here are some precautionary remarks, though. According to the Undersecretariat of the Treasury, there were 2408 incentive documents granted for investments that total 35.4 billion TL (€ 17.7 billion) in the first seven months of 2010. Employment creation was stipulated to be 75 thousand

in these projects. This implies that in order to create employment for one person, one needs to invest 472 thousand TL (35.4 billion TL / 75 thousand persons) (€ 236 000). Excluding an expensive petro-chemical plant investment from this calculation, one still needs to invest 270 thousand TL (€ 135 000) to create employment for one person. This implies that one needs to invest 70 billion TL to reduce the unemployment rate by one point, by approximately 250 thousand persons!

5. Conclusions

The recent crisis has come to Turkey rather late but it hit hard swiftly. Most employment adjustment was over in late 2008 and early 2009 with a ballooning unemployment rate, especially for the young. This problem was awaiting Turkey because of demographic pressures (rural-urban migration) but the crisis skipped the intermediate years.

Good news is that, both the overall LFPR and employment ratio have recovered in Turkey. Unemployment rate and the non-agricultural unemployment rate have deteriorated in 2009 but recovered in 2010. Note however that, there are three reasons for this recovery. The first one is for real. Those (formal sector) workers who have lost their jobs in the last quarter of 2008 and the first quarter of 2009 have received their 10-month (maximum) unemployment insurance benefits. As production and exports started to recover, they (mostly males) are going back to work. Non-agricultural employment has gone up by 1.1 million in June year-on-year. The large increase in self-employment category of women during the crisis also remains in the employment stock.

The second factor in employment recovery is the increase in agricultural employment. There was a 450 thousand-rise in agricultural employment in June. Apparently, job losers have gone back to their villages to weather the crisis. When asked in the household survey, they classified themselves as unpaid family workers.

Finally, the numbers of discouraged workers (those who are ready to start work but not seeking for one) have gone up by 500 thousand between the summer and fall of 2009. This improved the unemployment rate by two points. The long-term unemployed that constituted more than 40% of the unemployed before the crisis have shed its two and three year elements; Turkish long-term unemployment has gone down in the crisis and moved into the discouraged worker category.

Micro-data analysis carried out with the recently obtained LFS data revealed a disturbing trend in wages. Apparently, wage inequality between high paying occupations and low paying occupations has been rising in recent years. The crisis has exacerbated the situation. Beyond the scope of the present analysis, the issue must certainly be analyzed in future research.

This issue ties in with the long-term growth potential of Turkey. Despite an (albeit slowly) increasing supply of college graduates, rising wages for the top occupations indicate a skills ‘shortage’ (in the sense that, demand is rising for top skills in the Turkish economy and supply did not catch with its pace yet). Falling or level real wages at the bottom for a significant portion of the work force may be an indication of Turkey not making the best use of its human resources, that is, it failed to educate much of its population for today’s skill needs.

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