

THE IMPACTS OF THE PARTIAL LABOR MARKET REFORMS

A Master's Thesis

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To My Brother, Tolga
To My Sister, Burcu

THE IMPACTS OF THE PARTIAL LABOR MARKET REFORMS

Graduate School of Economics and Social Sciences
of
İhsan Doğramacı Bilkent University

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ABSTRACT

THE IMPACTS OF THE PARTIAL LABOR MARKET REFORMS

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Organization for Economic Co-operation and Development (OECD) countries have started to implement a host of reforms aimed at increasing mobility and flexibility in the labor market. The partial labor market reforms have been processing to change the situation of new hires which are part of the temporary workforce, but making nearly no change in the situation of existing ones, permanent workforce. The aim of the thesis is to analyze the impacts of the partial labor market reforms for workers under temporary and permanent work contracts in an analytical and a descriptive framework. In the descriptive framework, flexicurity concept and its pathways are discussed. As a case study, the reforms and their impacts are investigated regarding of Spain and the Netherlands. Within the analytical framework, I propose the basic overlapping generations (OLG) model with human capital accumulation and heterogeneous agents. The tradeoff between being a temporary worker and permanent worker depends positively on the capacity of the individual, and negatively on the rate of return on capital, the severance payment and the negative productivity shock.

There is a stepping stone effect for unskilled senior labor under the condition of existence of the transition.

JEL Codes: J41, J28, J24

Keywords: Partial Labor Market, Temporary Contracts, Flexicurity, Human Capital Accumulation

ÖZET

KİSMİ EMEK PİYASASI REFORMU ETKİLERİ

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Ekonomik İşbirliği ve Kalkınma Örgütü (OECD) üye ülkeleri emek piyasasındaki mobilitayı ve esnekliği artırmayı hedefleyen bir dizi reformlar uygulamaya başladılar. Kısmi emek piyasası reformları geçici işgücünün durumunu değiştirirken, kalıcı işgücünün mevcut durumunda, neredeyse hiçbir değişiklik yapmadan yürürlüğe girmiştir. Tezin amacı, analitik ve açıklayıcı bir çerçevede, geçici ve kalıcı iş sözleşmeleri kapsamında işçiler için kısmi işgücü piyasası reformları etkilerini analiz etmektir. Açıklayıcı çerçevede, güvenceli esneklik kavramı ve yolları tartışıldı. Bir vaka çalışması olarak; İspanya ve Hollanda'ya ilişkin reformlar ve bunların etkileri incelendi. Analitik çerçeve, örtüşen nesiller (OLG) modelini insan sermayesi birikimi ve heterojen ajanlar kullanarak öneriyor. Geçici işçi ve kalıcı işçi olmak arasındaki tradeoff bireyin kapasitesi üzerine olumlu bağlıdır, kıdem tazminatı ve olumsuz verimlilik şoku üzerine olumsuz bağlıdır. Geçici iş gücünden kalıcı iş gücüne, geçiş varlığı koşulu altında, vasıfsız kıdemli düzey işçilik için bir atlama taşı etkisi vardır.

Anahtar Kelimeler: Kısmi İşgücü Piyasası, Geçici Sözleşmeler, Güvenceli Esneklik, İnsan Sermayesi Birikimi

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CHAPTER 1

INTRODUCTION

Over the past thirty years, the rules of the game for labor market have changed due to globalization, technological changes, pressure on resources and rapid swings in the international division of labor. The labor markets needed to be much more flexible to make possible adjustment for rapidly changing economic conditions. Organization for Economic Co-operation and Development (OECD) countries have implemented a host of reforms aimed at increasing the flexibility of the labor market and mobilizing labor resources. The flexibility has taken place by making temporary work contracts more attractive than permanent work contracts. This flexibility enables employers to have opportunities for higher productivity and profitability, improved competitiveness and greater ability to respond to fluctuations of demand. For employees, more flexible work arrangements improve work-life balance, raise their job satisfaction, increase their skills, and simplify access to the labor market (OECD, 2006, IMF 2008 and EU, 2006).

The reform process on the other hand take place in terms of a sequence of marginal reforms rather than radical reforms, these reforms have been processing to change the situation of new hires which are temporary workforce but making nearly no change the situation of existing ones, permanent workforce. In other words, countries introduced small, albeit, significant, changes in the regulatory framework to increase labor market flexibility only on the hiring side. Higher labor market flexibility with duality may also come at some costs such as by increased employment uncertainty for employees and lower incentives to invest in firm-specific human

capital (Dolado, 2002).

Temporary work contracts are also named as fixed term contracts (FTC), which can be seen as short term jobs with a short duration and little or no protection. Temporary work contracts are usually offered in the entry level jobs. Permanent work is seen as stable and long-term jobs, which benefit from stringent protection named as Employment Protection Legislation (EPL). Most EPL reforms have taken place since the early 1980s for European countries. They attempt to increase labor market flexibility by liberalizing the use of fixed-term (or temporary) contracts, while leaving largely unchanged the legislation on permanent contracts. OECD draw up the employment protection legislation index (EPL)(Table 1) that is based on the strength of the legal framework governing hiring and firing. EPL has been subject to frequent policy changes over the past twenty years. The strictness of EPL changes from country to country and it shows the flexibility of the labor market.

The report from Economists (2010) illustrates the situation of Spain, under the title of "Easy come,easy go". The aim of 1994 reforms is to promote jobs made it easier to hire temporary workforce and led to a sharp rise in their numbers. However, only a small proportion of the temporary workforce move to permanent workforce and most are laid off at the end of their contract. Moreover, in 2008 financial crisis, Spain has experienced a harsh decrease of the share of temporary workers like 7% (The Economist, 2010). Two features of Spain's jobs market share much of the blame: the high cost of firing permanent workers, and a wage system that binds firms to industry-wide pay deals (The Financial Times, 2010). Temporary employment played a critical role in helping Germany in 2009 crisis, as employers were able to quickly respond to ebbing demand by reducing payrolls and temporary work booms in Germany. However, temporarily employed people say that the loosening of regulations in 2003 to allow companies to hire temporary workers has created a vast cohort of poorly paid and treated employees with lower chances of obtaining permanent jobs. Unions are lobbying for legislative changes and raising the issue of temporary workers at contract talks. However, for Germany, the question of

whether a temporary, lower wage job is better than no job at all (The Financial Times, 2011). According to The German Federal Agency study, the temporary employment agencies hire a large proportion of those jobless people, many of whom lack training which draws two-thirds of its new employees from the ranks of the unemployed.

Nevertheless, it is still an open question whether the benefits of the labor market flexibility outweigh its costs. This thesis at first explains the labor market reforms and gives the descriptive analysis of duality of the labor market -temporary and permanent workforce- in the OECD countries. Next, it proposes an overlapping generations model for answering the question that the thesis seek.

The theoretical literature is commonly based on matching model that adopts to regulations for both temporary and permanent workers (Blanchard and Laundier, 2002; Cahuc and Postel-Vinay, 2002; Cahuc and Zylberberg, 2004). Model regulations for the two types of contracts are different from each other in terms of firing costs and the life time expected utility of risk-neutral workers is a function of their instantaneous utility in different labor market status and of the probabilities of moving across them. In this set up, Blanchard and Laundier (2002) figure out that this partial reform might create high turnover in the entry level job but lead to higher unemployment. Even if unemployment rate falls, workers will be worse off by working entry level jobs or many spells of unemployment before obtaining a regular job. Moreover, they claim that young worker will be better off if he is unemployed rather than having a temporary job. Cahuc and Vinay (2002) find out that more flexible regulation on temporary contracts actually destroys jobs, increases unemployment and reduces aggregate welfare especially when firing costs are high. They just evaluate the welfare impact of labor market flexibility under the reform of liberalizing the use of fixed-term contracts, while leaving largely unchanged the legislation on permanent contracts. Modesto (2004) examines the effects of firing costs under an OLG framework and concludes that firing costs increase youth unemployment and decrease old age unemployment. Freeman (2005) studies the effects of these reforms

on labor market performance, but nothing is revealed on the welfare consequences for the employed.

In the empirical framework, Blanchard and Laundier (2002) try to evaluate the welfare effects of the introduction of fixed term contracts in France. They construct a measure of the average expected present value of utility using the available information on income and transition probabilities across different states. There is some evidence on the effect of temporary work contracts demonstrating that the welfare of young workers appear to be negative. Wasmer (2006) finds that employment protection (for permanent workers) is positively correlated with job stress and concludes stricter legal protection reduces workers' wellbeing. Booth (et al.2002) use the data from British Household Panel Survey, even if temporary workers report lower level of job satisfaction, receive less work-related training and are less well-paid than their counterparts in permanent employment, there is evidence that fixed term contracts are a stepping stone to permanent work. Women who start in fixed-term employment and move to permanent jobs fully catch up to those who start in permanent jobs.

In the literature, there is a limited study on the impact of the partial labor market reform for junior and senior worker under flexible labor market. Moreover, these studies only take into account the reform on firing costs while commenting on the welfare consequences of the agent. I also consider the human capital accumulation for the youth agent and comment on the situation of the worker under different type of contracts.

The thesis has two objectives; first objective to discuss pros and cons of the partial labor market reform, understand flexicurity and its pathways, finally within this objective to investigate the Spanish and Dutch reforms and their impacts to the labor market. The second objective is to answer the questions of the thesis seek "Is there any stepping stone effect under this partial labor market reform for unskilled senior worker?", "What is the tradeoff between being temporary employment and permanent employment?", "What is the optimal level of human capital accu-

mulation for the transition?", "What are the wage levels of the junior and senior workers?". To investigate these questions, I set up the basic overlapping generations (OLG) model with human capital accumulation and heterogeneous agents. The OLG framework enables the system to keep track of the education decision of junior worker and its' effects when he is senior.

In the descriptive analysis, from reports of OECD, IMF and EU commission and literature review, one can conclude that the flexicurity would allow temporary jobs to function better as stepping stones into permanent jobs, rather than as traps. In the analytical framework, the model implication yields that the tradeoff between being a temporary worker and permanent worker depends positively on the capacity of the individual, and negatively on the rate of return on capital, the severance payment and the negative productivity shock. Moreover, there is a stepping stone effect for unskilled senior worker under the condition of existence of the transition.

The thesis is organized in the following way. In the chapter 2, the descriptive analysis of the partial labor market reform is presented. The chapter 3 discusses the feature and impacts of the model. The chapter 4 concludes.

CHAPTER 2

THE DESCRIPTIVE ANALYSIS OF THE PARTIAL LABOR MARKET REFORM

Since the 1980s, OECD countries have taken an action to flexibilize the labor market for adapting the changing economic conditions quickly and easily. Nonetheless, the impact of the partial labor market reform changes from country to country; in other words pros and cons always existed regarding of employing reforms and employment challenges that countries face. European Commission features the flexicurity pathways that the country is needed to implement flexibility and security, which is the sole way to have the flexible labor market. Each country has to find its own concept of "flexicurity" using a distinct combination of instruments that fit the national institutional, social and civic context. The Netherlands and Spain are the countries who put so much effort to decrease the rigidities in the labor market with the aim of overcoming the various labor market challenges.

The chapter is devoted to investigate the reforms that countries conduct and their implication to the labor market. The first section gives a brief descriptive analysis about pros and cons of the partial labor market reforms. The second section describes the flexicurity and its pathways, suggestion by the European Commission. The last two sections investigate the implementation of reforms and result as a case study for the Netherlands and Spain.

2.1 Impacts of the Partial Labor Market Reforms

After the European Employment Strategy in 1997, European countries have increasingly implemented a host of reforms so as to increase the flexibility of the labor market and mobilizing labor resources. Various labor market initiatives and reforms have taken place which could qualify as flexicurity strategies; i.e. they have taken an integrative view of flexibility and security. Countries have applied own reforms to make flexicurity reforms by taking considerations on their institutional structure and labor market difficulties. However, the reform process has been characterized by a sequence of marginal reforms rather than focusing on few radical changes. Saint Paul (2002) and Boeri (2003) claim that the process of these reforms has confirmed the view that marginal reforms are subjected to change the situation of temporary workforce while maintaining status-quo of the permanent workforce.

In order to make a quick adjustment for changing economic conditions, the country should increase the labor market mobility, one option that countries use mostly is to enable to enter and exit the workforce easily. The framework of the reforms that Spanish government conducts tend to limit the applicability of FTC and created a new type of permanent contract with lowering firing costs (Güell and Petronogolo, 2001). Italy removed the restrictions on the use of fixed term contracts and introduced temporary agency work without modifying the rules for open ended contracts. Germany's reforms included extending the maximum duration of fixed term contracts from 9 to 12 months and the restrictions on the maximum number of contract renewals were loosened (IMF, 2009). The temporary contracts weren't renewed in France. TC had a fixed duration, from 6 to 24 months and in any case, couldn't be renewed beyond 24 months. If the worker is kept, he or she must then be hired on a regular contract. If the worker is not kept, he or she receives a severance payment equal to 6% of the total salary received during the life of the contract (Blanchard and Laundier, 2002). Overall, the subsequent series of reforms in these countries continue to increase flexibility at the margin, applying only to new hires while leaving unchanged for senior workers.

The OECD countries attempted to increase labor market flexibility by making

marginal changes in Employment Protection Legislation (EPL) and liberalized the use of temporary contracts, while leaving largely unchanged the legislation for permanent contracts. EPL treats differently in groups of workers particularly due to the dismissal regulations, which varies by age, gender, skill, firm size and type of contract. Hence, it creates discrimination across workers in terms of firing costs and wage. The IMF (2009) report indicates that 92 percent of EPL regulatory changes did not apply to workers with permanent contracts. As a result, there has been a partial labor market reform strategy which leads to create dual labor market.

Regarding of EPL index (Table 1), United States and Canada are the countries, which have the most flexible and Turkey has the most rigid labor market among OECD countries. The strictness of overall contract gives a signal that the rigidity of Turkish labor market is nearly the same from 1990 to 2008, which confirms that there is nearly no reform process that took place aimed at increasing the flexibility of labor market. Austria, Finland, Korea, Spain and Portugal are the countries to decrease the rigidities/strictness at most in terms of permanent contracts comparing the years 1990 to 2008 whereas Australia, Germany and France have increased the strictness of the permanent contracts means that the hiring and firing condition for permanent workforce being high. One can also interpret that the transition from permanent workforce to temporary workforce becomes more competitive, which proves the low conversion rate (Table 6). The strictness of temporary contracts has been decreasing at most in Sweden, Netherlands, Germany, Denmark, Italy, Portugal and Greece. The higher decline in the average and the standard deviation of the EPL for temporary contracts relative to the permanent contracts implies that an increase in hiring flexibility was applied by most countries without changing and even increasing the protection of permanent workforce.

<INSERT TABLE 1 and TABLE 6 ABOUT HERE>

An increase in hiring flexibility is achieved by a large majority of countries without changing significantly the protection of permanent employed workers. Moreover,

firms face with significant firing restriction which increases the use of temporary contracts further. The share of temporary work contracts increase for all age groups, especially for those with age below 39 years. In Spain (Cabrales and Hopenhayn, 1997), in Germany (Rogowski and Schöman, 1996) and in France (Blanchard and Laundier, 2002) the use of temporary work contracts is authorized for certain groups of workers such as young and long-term unemployed. More than one fourth of all the young employed in Spain, Poland, Portugal, Germany and Sweden had a temporary contract in 2009 (Table 2). The excessively high share of temporary contracts for youth also used to screen new employees in terms of high firing costs, which also suggests that the transition rate from permanent workforce to temporary workforce is low (Table 6).

<INSERT TABLE 2 ABOUT HERE>

2.1.1 The pros of partial labor market reforms

For the specific segments of the workforce, the reforms successfully raise employment rates and labor market flexibility. Improving the labor markets' utilization to those groups, i.e. women, long term unemployed, new entrants and low skilled, with low participation rates have contributed to the positive developments in the employment and participation rates. The higher flexibility in the labor market has also increased the cyclical fluctuations of employment and participation.

Empirical evidence shows that marginal reforms contribute to increase participation over the cycle and the response of employment, especially of women. Fixed term contracts are effective stepping stones to permanent jobs for women (Booth et al. 2000 and Clark 1996). In the European Monetary Union countries reforms have also increased the response of employment to GDP, particularly female (Arpaia and Mourre, 2010).

An increase in the hiring rate contributed to decrease the long term unemployment rate until 2008 among EU countries (Graph 1). However, due to the partial

liberalization of the labor market, the decrease in the unemployment rate doesn't necessarily lead to lower long term and structural unemployment. Therefore, after the recession periods, like 2008, it is more likely that the long term unemployment rate tends to increase because of the decreasing in the temporary workforce.

<INSERT GRAPH 1 ABOUT HERE>

The change in the labor market behavior is visible in terms of stocks and flows of unemployed people. Boeri and Garibaldi (2009) computed an synthetic index of mobility across labor market states under the ten years period 1985-1995 and 1996-2006 for eleven EU countries (Austria, Belgium, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain). The decline of about five million unemployed people from 1995 to 2007 was accompanied by an increase in mobility across labor market status with a few exceptions, Greece, Luxembourg and France (Graph 2).

<INSERT GRAPH 2 ABOUT HERE>

Two-tier reforms enabled to increase flexibility of the labor market reform on the hiring side via temporary contracts that can easily be terminated at expiration of the contract. There is a positively sloped relationship between the unemployment turnover which is the sum of inflows and outflows and the share of temporary contracts among young workers (Graph 3). This is consistent with the expectation that loose EPL on both the hiring and firing side implies higher job creation and job destruction. The difference between the turnover rate such as Ireland and Spain can be explained by the difference in the proportion of young workers with fixed term contract.

<INSERT GRAPH 3 ABOUT HERE>

2.1.2 The cons of partial labor market reforms

Beside these positive effects of these two tier reforms, the duality has some costs in terms of productivity, workers' career progression and job security. Temporary workforce can have less access to on-the job training and thus acquires less human capital than permanent workforce (IMF, 2010a). Moreover, due to the high turnover rate of temporary jobs and low conversion rates from temporary to permanent contracts, may reduce the incentives to invest in firm specific human capital or on the job training. Jimeno and Toharia (1996) studied the effects of FTCs on labor productivity and find out with shorter employment relationships, firms' and workers' incentives to invest in specific human capital are reduced. Dolado and Stucchi (2008) claimed that one third of fall in TFP in Spanish manufacturing firms during 2001-2005 due to the low transition rate. The situation affects youth employment at most since temporary contracts are widespread in the entry level jobs.

The share of temporary workers to the dependent employment has increased over countries since 1990 and has the highest share in Spain (Graph 4), approximately thirty percent before the Great Recession 2008-2009. Reacting to the global financial crisis and recession, firms revised their expected profits downward and changed their employment policy using all possible margins of adjustment of the labor input. Thus, the flexibility of the labor market creates pervasive dual employment in the economy which is more responsive to output changes. The share of temporary workers to the dependent employment has increased before the Great Recession 2008-2009. Spain and Portugal have the highest temporary workforce share among OECD countries, which also experienced harsh decrease after the recession (observed in Graph 4). However, other countries, which have relatively less share around 10-15 percent stayed at their previous level or experienced a decrease approximately one percent. The temporary workforce has been falling which does indeed explain the situation in Spain, where employment has declined by 20 percent with the vast majority of the job losses having occurred in the temporary workforce (IMF, 2010a). The share

of temporary contracts declined because of decreasing the renewal rate of fixed-term contracts, especially in countries with strict EPL. For example, in Spain employment of temporary workers declined by almost 20 percent (compared with 7 percent for total employment); by almost 10 percent in Italy (compared with 1.5 percent); by 6 percent in France (compared with 0.3 percent); and by 2 percent in Germany (compared with an increase of 0.4 percent in total employment).

<INSERT GRAPH 4 ABOUT HERE>

The two-tier reform system has also implied a deterioration of entry wages, which continue over the career progression. Countries which have a higher share of temporary workers tend to have more disparity in terms of wage and benefits between the permanent and temporary workforce. De la Rica (2004) found an evidence that there exists the wage gap between temporary workers and permanent workers. In case of Spain, permanent workers earn about 10% more than temporary for men and 5 % more for women. Moreover, generally, an increase in the share of temporary contracts leads to increase of the wage premium of permanent workers. Bentolila and Dolado (1994) found that an increase of 1 percentage point in the rate of temporary employment raises the growth rate of permanent workers' wages by about 0.3%. The temporary workforce has some difficulties to access to unemployment benefits when unemployed (IMF, 2010).

The dual employment should deliver benefits during the recovery period as firms would be willing to hire back people on temporary contracts rather than permanent contracts. Even if this would be the case, there are some concerns about the longer run fairness of the system. High turnover of fixed term jobs may lead to longer unemployment spells and skills deterioration, with negative effects on unemployment and average productivity (Blanchard and Laundier, 2002 and Cahuc and Postel Vinay, 2002). On the other hand, Boeri and Garibaldi (2007) showed that the duality may lead to temporary employment gains at the costs of lower productivity due to the decreasing marginal returns of labor, which is so called on honeymoon effect on job creation.

2.2 Flexicurity

Companies need to be able to adapt their workforce to changes macroeconomic conditions and recruit staff with better skills match, who will be more productive and adaptable leading to greater innovation and competitiveness. Individuals increasingly need employment security rather than job security due to the fact that fewer have the same job for life. Flexicurity is the combination of labor market flexibility and security where the former is seen to be in the exclusive interest of the employer and the latter in the interest of the employee. European citizens are willingness to accept the need for adoption and change. 76 % of European citizens agree that lifetime jobs with the same employer are in the past and they consider that being able to change easily from one job to another is a very useful opportunity to find a job in recent days. 88 % of Europeans are sure about regular training improves one's job opportunities. Moreover, 72% of people believe that work contracts should become more flexible so as to create sufficient jobs (European Employment and Social Policy, 2006).

The European Commission and the Member States have reached a consensus that flexicurity policies can be implemented across four policy components; flexible and reliable contractual arrangements, comprehensive lifelong learning strategies, effective active labor market policies, and modern social security system. According to the report of OECD (2006), these four components can improve employment in terms of women, youth, older workers and long term unemployed.

Flexible and reliable contractual arrangements are done through modern labor laws, collective agreements and work organization. Algan and Cahuc (2004) analyze the impact of strict EPL to women, youth, older workers and long term unemployed and find a negative impact, in other words, they face problems of entering into the labor market. The aim of the comprehensive lifelong learning strategies ensure better investment in human resources which is necessary to respond to rapid change and innovation. High participation in lifelong learning increases high employment and decreases the duration of unemployment. High skilled labor gets benefit more

in terms of low skilled worker, workers on temporary contracts, who need the greatest need for learning (EU, 2006). For preventing this occasion, the strategy can be implemented by active involvement of both parties such as governments, social partners, enterprises and individual workers. Effective active labor market policies enable workers to cope with rapid change, reduce unemployment spells and ease to transitions to new jobs. Vinay and Saint Martin (2004) claim that the effectiveness of active labor market policies is positively related to less strict EPL and have a positive effect on the feeling of security among workers. Modern social security system provides income support (unemployment benefits, pensions and healthcare), encourage employment and facilitate labor market mobility. Good unemployment benefits, which is very necessary to offset negative income consequences during job transfers. The empirical evidence of Vinay and Saint Martin (2004) suggests that workers feel better protected by adequate unemployment benefits than by strict protection against dismissal. Overall, good unemployment benefits, effective active labor market policies and dynamic labor markets increase people's feeling of security.

Implementing these four policy components need concrete policies and regulations. Thus, each country has to find its own concept of "flexicurity" using a distinct combination of instruments that fit the national institutional, social and civic context. Netherlands and Denmark are the countries which successfully applied "flexicurity system" into the labor market. These countries proved that a flexible labor market can coexist with generous welfare system to achieve low unemployment. Flexicurity is ultimately about security and sustainability.

2.2.1 Flexicurity Pathways

These four policy suggestions are applied by flexicurity pathways in terms of notifying target group and aim of the policy for each pathway. The employment, security opportunities and options of specific groups in the labor market can be enhanced and productivity and growth boosted.

The first pathway is related to deal with flexibility at the margin of the labor

market. The objective of this pathway is to reduce asymmetries between standard and non-standard contracts by promoting upward transitions in the labor market and by integrating non-standard contracts into collective agreements, labor law, social security and life-long learning systems. In this system, non-standard contracts guarantee basic, however, adequate protection from the start and as the working relationship continues, build up "full" protection. In sum, with the principle of *pro rata temporis*, nonstandard contracts are treated as equal to standard contracts (EU, 2006).

The second pathway of flexicurity is to secure transitions from job to job, which brings the "employer security" rather than "job security". Once the necessities arise, human resource management policies and built-in contractual guarantees should ensure new jobs within the company or outside the company. Vocational training and a strong system of life-long learning enable to switch from inside and outside from the companies easily. Moreover, in order to prevent unemployment, it may be feasible to introduce individualized transition to guarantees to redundant workers, to be borne jointly by employers, social partners and public employment services (EU, 2006). This pathway is rather important to strengthen the internal flexicurity and enhance the employability and skills of workers.

The third pathway is to access to learning and better transitions for all types of workers. The target groups are low skilled, older workers, women and the early school leavers. The purpose is to prevent them from becoming long term unemployed or excluded in other ways (EU, 2006). It recommends strengthening on the basis of existing levels of labor market dynamism, investment in skills and R&D.

The last pathway is devoted to comprehensive social security supporting transitions to regular work. The target groups are currently on social security benefits and working in the informal sector. The aim of the pathway prevents informal sector and increases social security benefiteres because long term welfare depend those. Active labor market programs and social security should offer sufficient opportunities and incentives in terms of increased conditionality of benefits, to return to work and

facilitate this transition. Informal work can be regularized in terms of offering flexi-secure contracts, lower-payroll taxes and skills perspective for these sectors (EU, 2006).

2.3 Netherlands

Netherlands is the most successful country in terms of applying flexicurity pathways among OECD countries. Notwithstanding, the reforms and developments in the Netherlands shouldn't be taken to consider as a flexicurity paradise or utopia. Like any country, the Netherlands faced with various employment challenges and figure out its own pathway with the necessary steps for improvement. The high level of worker mobility supported by a low level of employment protection is a long standing feature of the Danish labor market.

The Danish labor market model is illustrated as a "golden triangle" of flexicurity (Figure 1). The combination of the triangle is high mobility between jobs with a comprehensive social safety net for the unemployed and an active labor market policy. Every year about 25% of all employees are newcomers to the specific employers. The one thirds of the newly hired comes from unemployment or are new entrants to the labor market (Bredgaard et. al. 2003). Mobility, which is measured by job creation, job destruction and average tenure, is very high in the Netherlands in an international comparison. Even if the Netherlands has one of the lowest protections among OECD countries, Danish workers have a feeling of high job security among all subgroups of workers (Auer and Cazes, 2003). Moreover, according to the Eurobarometer (2006), which is the survey on Europeans and Mobility, reports that more than 70 percent of the Danish workers found that it is a good thing to change jobs every few years. In countries like Austria, Germany and Poland, this percentage is below 30 percent. The arrows indicate the flows of people. Netherlands has nearly the highest share of public expenditure on active labor market policies (ALMP) (Table 3) among OECD countries, 1 percent of GDP in 2008. The Danish "Flexicurity model" illustrates two of the most important connection regarding of

ALMP, the qualification and motivational effect. The qualification effect of ALMP is to upgrade the skills of the participants in various programs, thus their chances of getting a job is improved. The motivational effect is to influence the flow from unemployment benefits back to work, also those unemployed who don't actually participate in the active measures. The indication of the success of the ALMP is the long term unemployment rate (Table 4), in 2006, 43.8% whereas in 2008 24.8%.

<INSERT FIGURE 1, TABLE 3 and TABLE 4 ABOUT HERE>

The first pathway of reform considers "atypical" workers (part-time, casual, fixed-term, temporary agency workers, self-employed). Two laws were particularly relevant to fixed-term workers and part-time workers, the Prohibition of Discrimination by Working Hours (WVOA) and the Adjustment of Working Hours Act (WAA). These articles forbid employers to discriminate between employees in terms of different working hours in the conditions under which those employees enter, extend or terminate a contract of employment (EU, 2007). Contractual diversity, including fixed-term work, part-time work and agency work, is high in the Netherlands. In 2009, Netherlands had an employment rate 75.8 % and unemployment rate 3.9%, compared to 64.8% and 8.3% respectively in the OECD countries (Table 5 and Table 6). Working part time is even regarded as a normal and desired type of employment especially for women (75% in Netherlands). A significant amount of part-time workers reported that they voluntarily work in this type of employment (EU, 2006).

<INSERT TABLE 5 and TABLE 6 ABOUT HERE>

With regard to temporary workers, a new approach to labor market flexibility and security was adopted at the end of 1995. It contains an interrelated set of starting points and proposals for modifying the dismissal protection in standard employment relationships and abolishing the permit system for temporary work agencies in respect of their placement activities (Madsen, 2008). The percentage of employees

with temporary contracts was 17% in 2009 (12% in OECD). In the absence of The Foundation of Labor, the Dutch government couldn't reach a consensus regarding of flexibility and security. The Foundation of Labor is an institution, which is remarkable for its strategies of positive sum bargaining and the pursuit of "win-win" strategies and results for both workers and employers (EU, 2006) . On April, 1996, with the help of Foundation employees and employers confederations prepared a detailed agreement on flexibility and security. Besides that, at the same time, the employers' organization, the trade unions and the non-profit making employment agency "Start" reached a collective agreement for five years on regulating the legal position of temporary agency workers. In 1997 and 1999, the new laws abolished, which provides for the cancellation of permits for temporary work agencies and more rights for flexible workforce and slightly fewer rights to core-workers. Thus, these laws are increased the use of fixed-term contracts. In the temp agency sector, the key role was played by the collective labor agreements, and concluded for the periods of 1999-2003 and 2004-2009 (IMF, 2008).

The second and third pathway concerns the specific groups in the Netherlands, which suffer from unemployment at most. Regulations and policies can be implemented in terms of specific groups who are vulnerable in order to strengthen the position in the labor market. In the Netherlands, ethnic minorities and unskilled groups have difficulties entering into and progressing in the labor market, older workers have insufficient transition and employment security, and the career opportunities of women such as pay gaps and lack of women in top management in companies. European commission and OECD recommend to the Netherlands to facilitate the transition from part-time to full-time work, which reduces the gender pay gap, reducing early school-leaving, and increasing overall labor supply. In the Dutch system of dismissal protection, for insiders it is fairly strict however more relaxed for outsiders in the labor market. Furthermore, Dutch companies are willingness to invest in skills and retraining of their older workers compared to young workers. Right now, the Dutch government and non-governmental organizations

try to develop the reform about a general and effective system of transition and employment security that is not limited to large firms (EU 2006, 2007 and IMF, 2008).

2.4 Spain

Various European and Latin American countries attempt to increase labor market flexibility by implementing marginal changes in EPL. These changes have taken place through liberalizing the use of temporary contracts, while leaving largely unchanged the legislation affecting the stock of employees under permanent contracts (Dolado, 2007). In order to examine the different effects of two-tier reforms, Spain provides a fascinating analysis that reforms are mostly based on flexibility rather than security.

In 1980, two main institutional features characterized the Spanish labor market by the approval of "Workers' Statute (Ley del Estatuto de los Trabajadores)", a high degree of employment protection against both dismissals and occupational/geographical mobility, and the prevalence of collective bargaining for setting wages, working hours, and other employment conditions. Temporary contracts solely used to hire workers performing non-regular productive activities such as seasonal jobs in agriculture or tourism and represented 10% of all contracts. Under permanent contracts, firing costs depended on the worker's seniority and on the reasons for dismissal (Employment Action Plan, 1999).

In 1984, due to the oil price shock in the economy, the Spanish labor market suffered from 20% unemployment rate, needed to flexibilize the labor market. Even if labor unions were opposed of altering the status quo, the politically feasible way of implementing significant EPL changes went through by liberalizing the temporary contract, which allowed them to be used to hire employees performing on regular activities. Temporary contracts required much lower firing costs than regular permanent contracts, and their termination could not be appealed to labor courts. Moreover, the temporary contracts (training, under probation, fixed-term proper,

and replacement contracts) could be terminated at no cost. However, permanent contract had a severance payment of twelve days' wages per year of service and a maximum duration of three years within the same firm, after which the employer had to either terminate the contract or convert it into open-ended contract (Employment Action Plan (EAP), 1999). With this reform, as indicated Graph-4, the temporary contracts were boosted, in the early 1990s, were around 35%, which led to a high worker turnover rate, and ended up with the low conversion rates (5% in 1994 where 18% in 1987 as indicated in Graph 5). In order to offset some of the undesirable effects of 1984 reform, a series of countervailing EPL reforms have taken places in the years of 1994.

<INSERT GRAPH 4 and GRAPH 5 ABOUT HERE>

In 1994 reform, the aim is to decrease the use of fixed term contracts and relax the condition of firing costs under permanent contracts except some groups of disadvantaged workers (long term unemployed workers hired by small firms, older than 45 years old, and handicapped) (EAP,1999). As indicated in Graph 4, there was a slight reduction in the temporary employment rate between 1995 and 1997; the conservative government and potential gains from Spain's accession to the European Monetary Union pushed the employers' confederation and the two major unions to agree on a new EPL reform in 1997. The reform is related to create a new permanent EP contract, available for the year of 2001 and entail lower severance payment. Nevertheless, this reform was also based on flexibility rather than security; therefore it created a two-tier nature again. The new contract was only available to hire workers aged 30-44 years old with unemployment spells below one year, which is about 40% of the labor force and 33% of the employment. The government made contributions in social security for firms either directly hiring workers under new permanent contracts or converting temporary into permanent contracts. During the first two years of contracts used to hire youth, long term unemployed and women (IMF, 2005).

In 2001-2002, the time for use of new EP contract expired; however, the government allowed them to remain an effect and extended their use to the specific groups in order not to reduce job creation in the middle of an economic slowdown (IMF, 2005). The extended specific groups are the workers aged 16-30 years old and face spell of unemployment more than six months. By the mid 2000s, the share of temporary jobs was still very high (33.5 %) nonetheless their conversion rate was stable around 4% as Figure-4 indicated. Due to the low transition rate, in 2006, a further EPL reform took place which reopens a window of opportunity for the excluded group of workers, but only transitory. There was a restriction for continuation of temporary contracts to the same employee. Temporary workers under new permanent contract for the age group 31-45 could be hired until the end of 2007. If conversions took place, then there would be tax deductions for hiring permanent employees (EAP, 2003). Since the approval of the 2006 reform, there has been a substantial reduction in the temporary employment rate, 34% in 2006 whereas in 2008 (before the recession) 29.4%. Therefore, one can consider the 2006 reform mostly based on the transition from temporary to permanent workforce. However, the conversion seemed to have been short lived, and mostly concentrated on the time of tax deduction.

Since the 1990s to 2007, Spain had experienced an effectual employment growth, as a result of this unemployment rate had decreased from 25 % in 1990s to 8 % in 2007 (Graph 6). During the 2008 global crisis, Spain experienced a harsh increase in unemployment among OECD countries, ended up 20 % unemployment rate. A very high unemployment rate was among youth, particularly those between 15-24 years old with a low level of education, and youth unemployment rate has been doubled since the end of 2007 (Graph 7). This high level of youth unemployment in Spain as compared to other countries reflects to a high incidence of temporary contracts among young workers. Reducing unemployment among young workers, especially unskilled, should be the first priority regarding of policy design in order to avoid being discouraged workers.

<INSERT GRAPH 6 and GRAPH 7 ABOUT HERE>

The main policy recommendations to reform the labor market in Spain are mostly based on reducing the duality on the labor market, making the labor market more flexible, increasing the employability of the youth, improving the efficiency of the matching process. (OECD, 2010 and Sanguinetti and Wöfl, 2011)

2.5 Conclusion

In the case of the Netherlands, the various labor market challenges were defeated by flexicurity pathways. The share of ALMP (Table 3) is higher in the Netherlands among OECD countries with the low unemployment rates for these vulnerable groups, which suggest that flexicurity model is working well to master the unemployment challenges. In Spain case, which is the country just consider the flexibility in the labor market to cope with high unemployment rates. The labor market enjoys the low unemployment rates under high productivity level, however under low productivity level, due to the lack of security, ending up with very high unemployment rate by harming long term unemployed, youth and women, in other words temporary workers. The flexicurity would allow temporary jobs to function better as stepping stones into permanent jobs, rather than as traps.

The non-flexible countries regarding of EPL index such as Mexico and Turkey, in Turkey the long term and youth unemployment rate in 2009 25.3% whereas 24.2 and 16.7 respectively in OECD. The labor force participation rate of female is 24.2%, the smallest rate among OECD countries. The low capacity to create new jobs, mostly due to the high rigidity, is clearly linked to excessive labor market regulation, with the absence of these regulations, provides incentives for informal arrangements, which in turn hinder productivity growth. Informal firms have less access to finance, cannot efficiently participate in innovation networks and invest less in human capital. Their productivity is therefore much lower than in fully formal firms. Even if there are various labor market challenges, there is no share of ALMP

to GDP as well. The urgent need for labor market reforms is to apply flexicurity pathways in Turkey. Like in Netherlands, the government and Foundation of Labor should perform reforms together. The flexicurity policies make Turkish labor market more flexible and mobile aimed at decreasing the unemployment rate and informal economy by increasing job creation and mobility.

The next chapter focuses on the analytical side of the partial labor market reform by using transition probabilities in an OLG setup.

CHAPTER 3

AN OVERLAPPING GENERATIONS MODEL

The model is set up in discrete time with time spanning from 0 to ∞ . At each point in time, two generations of workers are alive. Young is assumed to be junior workers (18-39) and old is assumed to be senior workers (40-62). Assuming that individuals are born age 18 and die at age 62, I abstract from childhood and old age. The complete model should include three generations in order to comment on the welfare of the retired. However, my main concern is to check out the effects of partial labor market for working generations hence for simplicity I neglect the old age generation. The number of individual's born at time t is N_t . At one date t , total population includes N_t young workers and N_{t-1} old workers.

In the model, there exists two assumption; all junior workers are assumed to be temporary employed and permanent workers can't be fired. Junior workers have two option whether they devote their time further education or they devote this time to work. Each young individual i that is born at t is endowed with one unit of time. θ_{it} is the proportion of this time devoted to further education while $1 - \theta_{it}$ is the proportion of time devoted to work and earn money. Young workers, whose educated right now, study to improve their human capital for getting more money when old. Other young workers are working for getting more money right now. Workers get benefit from their education during their second period of life, when reaching seniority. This modeling choice reflects the idea that the skill premium becomes

much more important after 40 (De la Croix and Lubrano, 2009). The education level of the workers, which is the decision of the worker and the productivity level (A) of the economy are determined the transition of being the temporary worker to the permanent worker.

3.1 Human Capital Accumulation

The human capital accumulation formulation is based on Lucas (1988) and De la Croix and Lubrano (2009). The old generation has an average human capital stock $\bar{h}_t$, which is growing over time at a rate g along a balanced growth path. De la Croix and Lubrano (2009) define human capital under heterogeneous agent. $\epsilon_{it} = (\epsilon_{it}^Y, \epsilon_{it}^O)$ is drawn from a distribution defined over R_+^2 with mean (1,1) and a variance covariance matrix $\sum .\epsilon_{it}^Y$ represents physical strength and working ability when young and ϵ_{it}^O represents intellectual capacities and ability to learn and to make education profitable when we will be old in $t + 1$. Human capital for young agent is such that

$$h_{it}^Y = \epsilon_{it}^Y \bar{h}_t$$

The difference in earnings across young individuals results from differences in abilities and differences in the number of hours worked $1 - \theta_{it}$. A young individual has to decide which proportion $1 - \theta_{it}$ of his time he will work in order to earn

$$(1 - \theta_{it}) w \epsilon_{it}^Y \bar{h}_t$$

where w is the initial wage rate per human capital in efficiency unit.

A young individual also decide which proportion of θ_{it} of his time he will devote to the education in order to increase human capital stock at time $t + 1$ when he will be old.

$$h_{it+1}^O = \epsilon_{it}^O \Psi(\theta_{it}) \bar{h}_t$$

Expected earning in $t + 1$ depends on the productivity level of the economy(A) and transition probability (r) of being temporary worker to permanent worker.

$$\begin{aligned}\bar{w}_{pe} &= w\epsilon_{it}^O\Psi(\theta_{it})\bar{h}_t \text{ with probability } \rho_1 = r \\ \underline{w}_{te} &= w\epsilon_{it}^O\Psi(\theta_{it})\bar{h}_t \text{ with probability } \rho_2 = 1 - r\end{aligned}$$

$\bar{w}$ is the wage of the senior worker when he is permanent worker and $\underline{w}$ is the wage of the temporary worker.

Ψ is assumed to be increasing, concave and satisfies boundary conditions.

$$\begin{aligned}\lim_{\theta \rightarrow 0} \Psi'(\theta) &= +\infty \\ \lim_{\theta \rightarrow 1} \Psi'(\theta) &= 0\end{aligned}$$

This formulation satisfies these conditions which also guarantees an interior solution for all agents and ensures that it is always optimal to spend a strictly positive time span for building human capital.

$$\Psi(\theta) = \left(\frac{1}{\gamma}\theta^\gamma - \theta\right)$$

The average human capital stock for the next generation is

$$\bar{h}_{t+1} = \frac{1}{N_t} \sum_{i=1}^{N_t} h_{it+1}$$

Hence along a balance growth path, we know the engine of growth is human capital, G

$$G = \frac{\bar{h}_{t+1}}{h_t} = \frac{\frac{1}{N_t} \sum_{i=1}^{N_t} \epsilon_{it}^O \Psi(\theta_{it}) \bar{h}_t}{h_t} = \frac{1}{N_t} \sum_{i=1}^{N_t} \epsilon_{it}^O \Psi(\theta_{it})$$

3.2 Income and education decisions

Individuals have to take decisions concerning investment in education (θ_{it}), consumption (c_{it}) and saving (s_{it}). Junior workers are assumed to be temporarily employed. Young individual at time t will either consume or invest. Senior workers type depends on the total factor productivity of the economy and their decision of investment in education. Old individual at $t + 1$, they will consume and will not save any longer; not altruistic and is therefore optimal for them to consume all their wealth when old. With ν probability, the productivity level of the economy is higher ($\bar{A}$) than the threshold level (A), then there exist a transition (r) from temporary employment to permanent employment. If the productivity level of the economy is lower ($\underline{A}$) than the threshold level, then the worker is fired. The firing cost is equal to x percentage of the salary received during the contract. x changes from the law of the country to country such as in France 6%, in Spain 4%.

$$\begin{aligned}\bar{A} &\succeq A && \text{with probability } \rho_3 = \nu \\ \underline{A} &\prec A && \text{with probability } \rho_4 = 1 - \nu\end{aligned}$$

All types of worker start the job as a temporary worker at period t . At period $t + 1$, if the productivity level of the economy is equal or higher than the threshold level, with transition probability (r), temporary junior worker can be transferred to the permanent senior worker or with probability $(1 - r)$ stayed as a temporary which belongs to Type 1 worker. If the junior worker stays as temporary for period t and $t+1$, then s/he is Type 2. If the productivity level is lower than the threshold level, then temporary worker will be fired, which we called type 3.

Type 1	TE	PE	Probability
Income	$w_{it}^Y = (1 - \theta_{it})w\epsilon_{it}^Y \bar{h}_t$	$\bar{w}_{it+1}^O = w\epsilon_{it}^O \psi(\theta_{it}) \bar{h}_t$	$P(r v)$
Type 2	TE	TE	Probability
Income	$w_{it}^Y = (1 - \theta_{it})w\epsilon_{it}^Y \bar{h}_t$	$\bar{w}_{it+1}^O = w\epsilon_{it}^O \psi(\theta_{it}) \bar{h}_t$	$P((1 - r) v)$
Type 3	TE	Fired	Probability
Income	$w_{it}^Y = (1 - \theta_{it})w\epsilon_{it}^Y \bar{h}_t$	$f c_{it} = x((1 - \theta_{it}) w\epsilon_{it}^Y \bar{h}_t)$	$P(1 - v)$

Since preferences don't depend on leisure and capital market is perfect, the individual decision problem can be evaluated separably. I first maximise the life-cycle income to determine the optimal education. Secondly, I maximise utility given income to determine optimal saving and optimal consumption.

The life cycle total income for the young generation; ϖ_{it}

$$\varpi_{it} = P(v)[(1 - \theta_{it}) w\epsilon_{it}^Y \bar{h}_t + \frac{P(r)}{P(r \cap v)} \frac{w}{R} \epsilon_{it}^O \psi(\theta_{it}) \bar{h}_t + \frac{P(1-r)}{P(r \cap v)} \frac{w}{R} \epsilon_{it}^O \psi(\theta_{it}) \bar{h}_t] + P(1 - v)[(1 - \theta_{it}) w\epsilon_{it}^Y \bar{h}_t + x((1 - \theta_{it}) w\epsilon_{it}^Y \bar{h}_t)]$$

Proposition 1

The life cycle total income for worker i is maximized for θ_{it} satisfying

$$\Psi'(\theta_{it}) = R \frac{\epsilon_{it}^Y}{\epsilon_{it}^O} x P(1 - v)$$

Proof. The first order condition corresponds to a maximum due to the fact that the function $\Psi'(\theta_{it})$ is concave. ■

This represents the trade off between temporary employment and permanent employment. The decision depends on the ratio between physical and intellectual abilities, the total productivity level of the economy and the percentage of the severance payment.

The agent maximizes the logarithmic utility function with respect to two budget constraints

$$w_{it}^Y = c_{it}^Y + s_{it}$$

$$d_{it+1}^O = P(r|v)\bar{w}_{it+1}^O + P((1-r)|v)\underline{w}_{it+1}^O + P(1-v)fc_{it} + Rs_{it}$$

Proposition 2

The saving locus is given by:

$$s_{it} = \frac{\beta}{1+\beta}w_{it}^Y - \frac{1}{R(1+\beta)}[P(r|v)\bar{w}_{it+1}^O + P((1-r)|v)\underline{w}_{it+1}^O + P(1-v)fc_{it}]$$

Savings depends on positively on income when young and negatively on the discounted income when old.

3.3 Firms

Firms produce the final good with the following Cobb-Douglas production function:

$$F(K_t, L_{it}) = AK_t^\alpha (L_{it})^{1-\alpha}$$

where K_t is the stock of physical capital, L_{it} is the permanent and the temporary labor input in efficiency units. ϑ belongs to the share of permanent labor and $(1-\vartheta)$ for temporary labor.

$$L_{it} = \vartheta \sum_{pe} L_{it} + (1-\vartheta) \sum_{te} L_{it}$$

$\alpha \in (0, 1)$ is related to the capital share and A is a parameter measuring total factor productivity. Firms make contract with agents before knowing the total factor productivity (A) of the economy. R is the return on capital between two periods; both are constant along a BGP.

The firm's objective is to maximize profit with respect to capital and labor

$$\begin{aligned} \max \quad \pi = & P(v)\bar{A}K_t^\alpha (L_{it})^{1-\alpha} + P(1-v)\underline{A}K_t^\alpha \vartheta (\sum_{pe} L_{it})^{1-\alpha} - w_{it}^Y (1-\vartheta) \sum_{te} L_{it} - \\ & P(r|v)\bar{w}_{it+1}^O \vartheta \sum_{pe} L_{it} - P((1-r)|v)\underline{w}_{it+1}^O (1-\vartheta) \sum_{te} L_{it} - P(1-v)x(w_{it}^Y)(1- \\ & \vartheta) \sum_{te} L_{it} - RK_t \end{aligned}$$

The capital stock is formed by the aggregation of all savings

$$K_{t+1} = \sum_{i=1}^{N_t} s_{it}$$

Labor market clears

$$L_{it} = \sum_{te}^{N_t} (1 - \theta_{it}) \epsilon_{it}^Y \bar{h}_t + \sum_{te, pe}^{N_{t-1}} \epsilon_{it-1}^0 \psi(\theta_{it-1}) \bar{h}_t$$

Assume that capital depreciate fully after one period.

The rate of return of capital and wage rates for permanent worker and temporary worker are given by:

$$\begin{aligned} R &= P(v) \bar{A} \alpha K_t^{\alpha-1} L_{it}^{1-\alpha} + P(1-v) \underline{A} \alpha K_t^{\alpha-1} \vartheta \left(\sum_{pe} L_{it} \right)^{1-\alpha} \\ \bar{w}_{it+1}^O &= \frac{P(v) \bar{A} (1-\alpha) K_t^\alpha L_{it}^{-\alpha} + P(1-v) \underline{A} (1-\alpha) K_t^\alpha \left(\sum_{pe} L_{it} \right)^{-\alpha}}{P(r|v)} \\ \underline{w}_{it+1}^O &= \frac{P(v) \bar{A} (1-\alpha) K_t^\alpha L_{it}^{-\alpha} - (1-\theta_{it}) w \epsilon_{it}^Y \bar{h}_t - P(1-v) x ((1-\theta_{it}) w \epsilon_{it}^Y \bar{h}_t)}{P((1-r)|v)} \end{aligned}$$

3.4 Equilibrium

This section provides a formal definition of the equilibrium. Hence, it is reasonable to define intensive variables:

$$\begin{aligned} \hat{w}_i^Y &= \frac{w_{it}^Y}{h_t} & \hat{w}_i^O &= \frac{\hat{w}_i^O}{h_t} & \hat{s}_i &= \frac{s_{it}}{h_t} & \hat{K} &= \frac{K_t}{h_t} & \hat{L}_{it} &= \frac{L_{it}}{h_t} & \hat{c}_i &= \frac{c_{it}}{h_t} \\ \hat{d}_i &= \frac{d_{it}}{h_t} \end{aligned}$$

- A vector of individual variables $\left\{ \theta_i, \hat{w}_i^Y, \bar{w}_i^O, \underline{w}_i^O, \hat{s}_i, \hat{d}_i \right\}$

$$w_i^Y = (1 - \theta_i) w \epsilon^Y \quad (1)$$

$$\bar{w}_i^O = w \epsilon_i^O \Psi(\theta_i) \text{ with } P(r|v) \quad (2)$$

$$\underline{w}_i^O = w \epsilon_i^O \Psi(\theta_i) \text{ with } P(1-r|v) \quad (3)$$

$$\Psi'(\theta_i) = R \frac{\epsilon_{it}^Y}{\epsilon_{it}^O} x P(1-v) \quad (4)$$

$$s_i = \frac{\beta}{1+\beta}(1-\theta_i)w\epsilon^Y - \frac{1}{R(1+\beta)}[P(r|v)w\epsilon_i^O\Psi(\theta_i) + P((1-r)|v)w\epsilon_i^O\Psi(\theta_i) + P(1-v)x(1-\theta_{it})w\epsilon_{it}^Y] \quad (5)$$

$$c_i = \frac{1}{1+\beta}(1-\theta_i)w\epsilon^Y + \frac{1}{R(1+\beta)}[P(r|v)w\epsilon_i^O\Psi(\theta_i) + P((1-r)|v)w\epsilon_i^O\Psi(\theta_i) + P(1-v)x((1-\theta_{it})w\epsilon_{it}^Y)] \quad (6)$$

$$d_i = \frac{\beta}{1+\beta}[P(r|v)w\epsilon_i^O\Psi(\theta_i) + P((1-r)|v)w\epsilon_i^O\Psi(\theta_i) + P(1-v)x((1-\theta_{it})w\epsilon_{it}^Y) + R(1-\theta_i)w\epsilon^Y] \quad (7)$$

- A vector of aggregate variables $\{G, \hat{y}, \hat{K}, \hat{L}_{it}\}$

$$G = \frac{1}{N_t} \sum_{i=1}^{N_t} \epsilon_i^O \Psi(\theta_i) \quad (8)$$

$$\hat{y} = N_{t-1}[d_i + (1+n_{t-1})c_i] + (1+n_{t-1})N_{t-1}s_i \quad (9)$$

$$\hat{K} = \sum_{i=1}^{N^Y} \frac{s_{it}}{1+g} \quad (10)$$

$$L_{it} = \sum_{i=1}^{N^Y} (1-\theta_i)\epsilon_i^Y + \sum_{j=1}^{N^O} \epsilon_j^O \psi(\theta_j) \quad (11)$$

3.5 Implication of the Model

In this section, I discuss the implications of the model regarding of education, productivity level, wage discrimination and securitization to answer questions the thesis seek. I also comment on how the assumptions in the model affect the implications

and how changes in the assumptions will change implication. Lastly, I evaluate and recommend policies for the Turkish labor market, the strictest among OECD countries.

As proposition 1 indicates, the worker choice for θ depends on the capacity of the individual, the rate of return on capital, the percentage share of the entire salary that the worker gets when firing and the productivity level of the economy. Since ψ is concave function, education is increasing in the ratio of IQ to strength, the skilled labor has tended to invest in education more than unskilled labor, and decreasing in the rate of return on capital, the productivity level of the economy and percentage of the severance payment. During the expansionary period, instead of choosing a higher level of education, individuals have more incentive to work. Individuals prefer to work and receive higher wages while experiencing high rate of return on capital. The higher the severance payment the agent gets the lower to devote time to education. This conclusion can be interpreted within the periods, the junior worker, employed as temporary, to get the higher severance payment when becoming a senior worker, should dedicate to invest in education more. Once the transition from temporary to permanent workforce achieved, then the worker can shift their time education to work. Senior temporary worker need to accumulate more on human capital to get the higher severance payment. In other words, the firing cost depends on the education level that the workers have, which is related with the transition mechanism.

The assumption in the model is that every agent is temporary employed at the junior level, increases job finding rate for long term unemployed, youth and women hence decreases the natural rate of unemployment in the economy which is consistent with the data. For unskilled labor, the temporary workforce enables them to find a job easily, decreases the job finding rate, even if their ability's low, there is still an opportunity to join the permanent workforce but due to the absence of ability, receive lower wages than skilled labor in junior level times. Once the transition occurs, the demand for wage of permanent worker is independent for ability. Hence,

there is a stepping stone effect for unskilled senior labor under the condition of existence of the transition. However, the high incidence of temporary contracts among better educated young cohorts is often detrimental for returns to education due to the frequent underutilization of skills.

In the partial labor market reform, the state of the temporary workforce mostly depends on the productivity level of the economy. Mostly firms and workers are making contracts before knowing the productivity shocks; the transition from temporary to permanent workforce depends on both the education level of the worker and the productivity level of the economy. If the expectation is based on positive productivity in the economy, then the junior temporary worker devotes his time to work and earn higher wages. Since there is a positive productivity, the chance of the worker gets fired is lower. However, if the worker doesn't achieve the optimal θ level, then the transition doesn't occur and stays as temporary. If the expectation is based on negative productivity shocks, the junior worker should devote his time to education in order not to get fired. In the negative productivity shock, the chance of firing the temporary worker increases and the conversion rate is less as we have seen data as well. If one consider the saving locus, in two period overlapping generations model, which depends on the wage of the junior worker and senior worker. As proposition 3 indicates, the wage level of the worker type depends on the productivity level of the economy. If the economy ends up with the low productivity level, the disparity between the wage level of the workers get larger. The saving locus, which roughly is the welfare of the agent in the OLG model, is associated with the wage level. Hence, the duality in the wage level reflects the welfare of the agent directly. Once the economy hit by the recession, the income gap between agents increase, which leads more disparity in the economy.

The securitization is absent in the model, flexibility is achieved by the heterogeneous agent. If we add security to the model as a further work, we have to define the intermediaries, which is the connection between employee, employer and government. The cost of securitization is on government, employer and employee. This

can be decreased the wage of worker, however it definitely increases the transition rate, which reflects the decent work. This mechanism also enables vulnerable group, who is older workers and unskilled workers, to boost their welfare.

The assumption, all junior workers are temporary employed, the model lacks of unemployment, and however the main concern is the condition of temporary and permanent workforce. This assumption deals with this particular and vulnerable group, who has the large share in temporary workforce. Hence, the model tries to measure whether there is any stepping stone effect on vulnerable group, which are long term unemployed people, youth, women and unskilled, in their seniority. The full employment assumption is never realistic however in order to measure the impact of temporary employment, the transition, need this assumption. Without the full employment assumption, one can also consider the change in the level of unemployment rate as well. The better way to analyze this is employing search and matching model in the firm side and overlapping generations model in the consumer side.

CHAPTER 4

CONCLUSION

In the last three decades, the rules of labor market were deregulated to adapt the changing macroeconomic conditions quickly and easily. Countries have started to implement a host of reforms with the initial aim to increase mobility and flexibility in the labor market which boost the productivity in the economy. The most popular reform, which in the literature called the partial labor market reform, have been processing to change the situation of new hires which are temporary workforce but making nearly no change the situation of existing ones, permanent workforce. The aim of the thesis was to analyze and propose the model for the impacts of the partial labor market reforms for junior and senior workers under temporary and permanent work contracts in a descriptive framework and an analytical framework.

In the descriptive framework, the thesis investigated the benefits and costs of the impact of the partial labor market reform, then examining the flexicurity and its pathways, which was the suggestion of the EU commission to countries to have the flexible labor market. As a case study, the thesis started exploring two countries regarding of implementation of reforms and the situation of the labor market, the Netherlands and Spain. The Netherlands and Spain faced with the various employment challenges and overcame these problems in a different way. The Netherlands applied the flexicurity pathway to have the flexible labor market and incredibly successful of conducting the reforms. The reform of Spain, on the other hand, subjected to a marginal changes on the contracts rather than radical changes. The partial re-

forms performed in a good manner until 2008 recession. Within and after the crisis, Spain still has suffered from high unemployment rate, 20%, the same rate before implementing the reforms.

In the analytical framework, the thesis offered the model for investigating the impacts of the partial labor market reforms for junior and senior workers under temporary and permanent work contracts. The model set up the basic overlapping generations (OLG) model with human capital accumulation and heterogeneous agents. The transition from temporary workforce to permanent workforce depends on the optimal level of education and the total factor productivity in the economy. The effects of productivity shock investigated via expectations of the agent. The optimal level of education depends positively on the capacity of the individual, and negatively on the rate of return on capital, the severance payment and the negative productivity shock. Once the transition from temporary workforce to permanent workforce occurs, the demand for wage of permanent worker is independent for ability. Hence, there is a stepping stone effect for unskilled labor under the condition of existence of the transition. However, the high incidence of temporary contracts among better educated young cohorts is often detrimental for returns to education due to the frequent underutilization.

As a final word, the flexicurity would allow temporary jobs to function better as stepping stones into permanent jobs, rather than as traps. The rigid countries immediately implement the reforms related with the flexibility and security. The countries, conducting the partial labor market, should be able to adapt security reforms to protect their temporary workforce under the low productivity level.

For further work, several changes will be made with regard to the modelization. Securitization framework can be added in the model or the firm side of the model can be considered under search and matching model.

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APPENDICES

A. TABLES

Table 1 - OECD Employment Protection Legislation Strictness Index						
	1990			2008		
	All Contracts	Permanent Contracts	Temporary Contracts	All Contracts	Permanent Contracts	Temporary Contracts
Australia	0,94	1	0,88	1,15	1,42	0,88
Austria	2,21	2,92	1,5	1,93	2,37	1,5
Belgium	3,15	1,68	4,63	2,18	1,73	2,63
Canada	0,75	1,25	0,25	0,75	1,25	0,25
Chile	..	..	..	2,65	2,67	2,63
Czech Republic	..	..	..	1,96	3,05	0,88
Denmark	2,4	1,68	3,13	1,5	1,63	1,38
Finland	2,33	2,79	1,88	1,96	2,17	1,75
France	2,98	2,34	3,63	3,05	2,47	3,63
Germany	3,17	2,58	3,75	2,12	3	1,25
Greece	3,5	2,25	4,75	2,73	2,33	3,13
Hungary	1,27	1,92	0,63	1,65	1,92	1,38
Iceland	..	..	..	1,18	1,73	0,63
Ireland	0,93	1,6	0,25	1,11	1,6	0,63
Israel	..	..	..	1,37	1,87	0,88
Italy	3,57	1,77	5,38	1,89	1,77	2
Japan	1,84	1,87	1,81	1,43	1,87	1
Korea	2,74	3,23	2,25	1,9	2,37	1,44
Luxembourg	..	..	..	3,25	2,75	3,75
Mexico	3,13	2,25	4	3,13	2,25	4
Netherlands	2,73	3,08	2,38	1,95	2,72	1,19
New Zealand	0,86	1,35	0,38	1,4	1,56	1,25
Norway	2,9	2,25	3,54	2,69	2,25	3,13
Poland	1,4	2,06	0,75	1,9	2,06	1,75
Portugal	4,1	4,83	3,38	3,15	4,17	2,13
Slovak Republic	..	..	..	1,44	2,5	0,38
Slovenia	..	..	..	2,51	3,15	1,88
Spain	3,82	3,88	3,75	2,98	2,46	3,5
Sweden	3,49	2,9	4,08	1,87	2,86	0,88
Switzerland	1,14	1,16	1,13	1,14	1,16	1,13
Turkey	3,76	2,64	4,88	3,72	2,56	4,88
United Kingdom	0,6	0,95	0,25	0,75	1,12	0,38
United States	0,21	0,17	0,25	0,21	0,17	0,25
Brazil	..	..	..	2,75	1,37	4,13
China	..	..	..	2,65	3,3	2
Estonia	..	..	..	2,1	2,46	1,75
India	..	..	..	2,77	3,54	2
Indonesia	..	..	..	3,68	4,24	3,13
Russian Federation	..	..	..	1,92	2,97	0,88
South Africa	..	..	..	1,25	1,99	0,5
Mean (all OECD countries)	2,3	2,17	2,44	1,93	2,05	1,81
Standard Deviation (all OECD countries)	1,17	0,99	1,7	0,85	0,85	1,2
Source: OECD						

Table 2 - Share of Temporary Contracts by Age Groups

	15-39			40-59		
	1990	2000	2009	1990	2000	2009
EU	..	17	19,9	..	6,1	7,1
Euro area	..	21,5	23,4	..	7	7,6
Belgium	7,2	12,4	12,7	2	4,3	3,9
Bulgaria	..	..	5,1	..	..	3,9
Czech Republic	..	7,5	8,3	..	5,3	4,8
Denmark	15,6	15	14,5	3,6	4,4	3,3
Germany	16,1	19,8	25,9	3	5	5,5
Estonia	..	2,5	4	..	.	..
Ireland	9,5	6,6	10,9	6,2	3,1	4,9
Greece	18,5	17,5	16,1	13,6	8,4	7,4
Spain	39,7	42	33,6	15,1	17,6	16,5
France	15,1	22,9	20,3	3,4	6,9	6,9
Italy	6,7	13,5	18,4	2,9	5,8	7,2
Cyprus	..	13,5	17,1	..	6,8	9,3
Latvia	..	7,6	5,4	..	5,6	3,4
Lithuania	..	5,5	2,6	..	1,8	1,9
Luxembourg	4,8	4,7	11,3	1,1	1,5	3
Hungary	..	8,6	10,7	..	4,7	6
Malta	..	4,7	6	..	.	..
Netherlands	9,7	18,7	27,2	3,3	6,5	8,3
Austria	8,3	11,6	14,8	1,8	2,2	2,9
Poland	..	6,9	33,3	.	4	17,2
Portugal	24,7	25,5	30,7	8,1	10,9	12
Romania	..	4,1	1,3	..	1,9	0,7
Slovenia	..	17,8	26,1	..	5,3	5,5
Slovakia	..	4,6	5	..	2,8	3,4
Finland	24,9	27,3	22,6	8,1	8,3	7,9
Sweden	20,2	21,8	24,8	6,4	7,5	6,6
United Kingdom	6,1	7,7	7,1	3,4	5,1	3,6

Source: OECD

Table 3 - Public Expenditure on Active Labor Market Policies % of GDP								
	2001	2002	2003	2004	2005	2006	2007	2008
Australia	0,4	0,3	0,4	0,4	0,4	0,3	0,3	0,3
Austria	0,6	0,6	0,6	0,6	0,6	0,7	0,7	0,7
Belgium	1,2	1,1	1,1	1,1	1,1	1,2	1,2	1,3
Canada	0,4	0,4	0,4	0,4	0,3	0,3	0,3	0,3
Chile	..	..	..	..	..	..	..	..
Czech Republic	0,2	0,2	0,2	0,3	0,3	0,3	0,3	0,2
Denmark	1,9	1,9	1,8	1,7	1,6	1,5	1,3	1,4
Finland	0,8	0,8	0,9	1,0	0,9	0,9	0,9	0,8
France	1,2	1,1	1,1	1,0	0,9	0,9	0,9	0,8
Germany	1,2	1,2	1,2	1,1	0,9	0,9	0,7	0,8
Greece	..	..	..	..	..	..	..	..
Hungary	0,5	0,5	..	0,3	0,3	0,3	0,3	0,3
Iceland	..	..	..	..	..	..	..	..
Ireland	0,9	0,8	0,7	0,7	0,6	0,6	0,6	0,7
Italy	..	..	..	0,6	0,6	0,5	0,5	0,5
Japan	0,3	0,3	0,3	0,3	0,3	0,2	0,2	0,3
Korea	0,2	0,2	0,1	0,1	0,1	0,1	0,1	0,2
Luxembourg	..	0,3	0,4	0,5	0,5	0,5	0,5	0,4
Mexico	..	..	..	..	..	..	..	..
Netherlands	1,5	1,6	1,5	1,4	1,3	1,2	1,1	1,0
New Zealand	0,4	0,4	0,4	0,4	0,4	0,4	0,4	..
Norway	0,6	0,7	0,8	0,8	0,7	0,6	0,6	..
Poland	0,3	0,2	0,4	0,4	0,4	0,5	0,5	0,6
Portugal	0,6	0,6	0,7	0,7	0,7	0,6	0,5	0,6
Slovak Republic	0,4	0,4	0,3	0,3	0,3	0,3	0,2	0,3
Spain	0,7	0,7	0,7	0,8	0,7	0,7	0,7	0,7
Sweden	1,7	1,6	1,3	1,2	1,3	1,4	1,1	1,0
Switzerland	0,5	0,6	0,7	0,8	0,8	0,7	0,6	0,5
Turkey	..	..	..	..	..	..	..	..
United Kingdom	0,3	0,3	0,4	0,5	0,5	0,3	0,3	0,3
United States	0,2	0,2	0,2	0,1	0,1	0,1	0,1	0,2
OECD-Total	0,7	0,7	0,7	0,7	0,6	0,6	0,6	0,6
Source: OECD								

Table 4 - Unemployment Rates

	2002			2009		
	Unemployment rate (% of labor force)	Long-Term Unemployment Rate (% of total unemployment)	Youth Unemployment Rate (15-24) (% of labor force)	Unemployment rate (% of labor force)	Long-Term Unemployment Rate (% of total unemployment)	Youth Unemployment Rate (15-24) (% of labor force)
Australia	6,5	22,4	12,8	5,7	14,7	11,6
Austria	4,0	19,2	6,2	4,8	20,3	10,0
Belgium	7,6	48,8	17,7	8,0	44,2	21,9
Canada	7,7	9,6	13,6	8,4	7,8	15,3
Chile	9,2	..	21,6	10,0	..	22,6
Czech Republic	7,3	50,7	16,0	6,8	31,2	16,6
Denmark	4,6	19,1	7,4	6,1	9,1	11,2
Estonia	10,5	52,4	17,6	14,1	27,4	27,5
Finland	9,0	24,4	19,5	8,4	16,6	21,6
France	8,9	33,8	20,2	9,1	35,4	22,8
Germany	8,7	47,9	9,8	7,8	45,5	11,0
Greece	10,5	51,3	26,8	9,6	40,8	25,8
Hungary	5,8	44,8	12,6	10,1	42,6	26,5
Iceland ¹	3,2	11,1	7,2	7,4	6,9	16,0
Ireland	4,5	30,1	9,3	12,2	29,0	25,9
Israel ¹	10,5	19,2	20,9	6,2	30,9	12,6
Italy	9,1	59,6	26,3	7,9	44,4	25,4
Japan	5,6	30,8	10,0	5,3	28,5	9,1
Korea	3,4	2,5	8,5	3,8	0,5	9,8
Luxembourg	2,6	27,4	7,0	5,2	23,1	17,2
Mexico	3,0	0,9	5,9	5,4	1,9	10,0
Netherlands	3,1	26,5	5,4	3,9	24,8	7,3
New Zealand	5,4	14,8	11,8	6,3	6,3	16,6
Norway	4,0	6,4	11,5	3,2	7,7	9,2
Poland	20,3	48,4	43,9	8,3	25,2	20,7
Portugal	5,3	34,6	11,6	10,0	44,2	20,0
Slovak Republic	18,6	59,8	37,4	12,1	50,9	27,3
Slovenia	6,4	55,6	16,5	6,0	30,1	13,6
Spain	11,4	40,2	22,2	18,1	30,2	37,9
Sweden	5,3	20,9	12,9	8,5	12,8	25,0
Switzerland	3,0	21,8	5,6	4,2	30,0	8,2
Turkey	10,6	29,4	19,2	14,3	25,3	25,3
United Kingdom	5,1	21,7	11,0	7,8	24,6	18,9
United States	5,9	8,5	12,0	9,4	16,3	17,6
OECD ²	7,0	29,4	13,4	8,3	24,2	16,7

Source: OECD

Note:

1 The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities.

2 Excluding Estonia, Israel and Slovenia

Table 5 - Employment Rates

	2002				2009			
	Employment rate (% of working age population)	Employment rate of women (% of female population (15-64))	Employment rate of older workers (% of population aged 55-64)	Part-time employment (% of total employment)	Employment rate (% of working age population)	Employment rate of women (% of female population (15-64))	Employment rate of older workers (% of population aged 55-64)	Part-time employment (% of total employment)
Australia	69,4	62,0	48,5	24,0	72,0	66,2	59,0	24,7
Austria	68,8	61,2	29,2	13,3	71,6	66,4	41,1	18,5
Belgium	59,9	51,4	26,6	17,6	61,6	56,0	35,3	18,2
Canada	71,4	67,0	50,1	18,8	71,5	69,1	57,6	19,1
Chile	52,6	34,5	47,5	5,2	56,1	42,2	55,4	10,5
Czech Republic	65,7	57,1	40,8	2,9	65,4	56,7	46,8	3,9
Denmark	75,9	71,7	57,9	15,5	75,7	73,1	57,5	18,9
Estonia	62,0	57,9	51,6	6,9	63,5	63,0	60,4	8,4
Finland	68,3	66,1	47,8	11,0	68,4	67,9	55,6	12,2
France	62,2	55,8	39,3	13,8	64,1	60,0	38,9	13,3
Germany	65,3	58,8	38,6	18,8	70,4	65,2	56,1	21,9
Greece	57,5	42,9	39,2	5,4	61,2	48,9	42,2	8,4
Hungary	56,2	49,8	25,6	2,6	55,4	49,9	32,8	3,6
Iceland	82,8	79,8	87,2	20,1	78,9	77,2	80,8	17,5
Ireland	65,2	55,2	48,0	18,4	62,5	57,8	51,9	23,7
Israel ¹	54,8	50,2	49,2	15,2	..	..	..	..
Italy	55,6	42,0	28,9	11,6	57,5	46,4	35,7	15,8
Japan	68,2	56,5	61,6	17,7	70,0	59,8	65,5	20,3
Korea	63,3	52,0	59,5	7,6	62,9	52,2	60,4	9,9
Luxembourg	63,6	51,5	27,9	12,5	65,2	57,0	38,2	16,4
Mexico	59,3	39,5	52,2	13,5	59,4	43,0	52,5	..
Netherlands	73,2	64,8	42,0	33,9	75,8	70,6	52,6	36,7
New Zealand	72,2	65,1	63,2	22,5	72,9	67,4	72,1	22,5
Norway	77,1	73,9	68,4	20,6	76,5	74,4	68,7	20,4
Poland	51,7	46,4	27,9	11,7	59,3	52,8	32,3	8,7
Portugal	68,7	61,4	51,4	9,6	66,3	61,6	49,7	9,6
Slovak Republic	56,9	51,4	22,9	1,6	60,2	52,8	39,6	3,0
Slovenia	63,4	58,6	24,5	4,9	67,5	63,8	35,6	8,3
Spain	59,5	44,9	39,7	7,6	60,6	53,5	44,1	11,9
Sweden	74,9	73,4	68,4	13,8	72,2	70,2	70,1	14,6
Switzerland	78,9	71,5	64,6	24,8	79,2	73,8	68,4	26,2
Turkey	46,7	26,6	35,3	6,6	44,3	24,2	28,2	11,1
United Kingdom	72,3	66,3	53,1	23,2	70,6	65,6	57,5	23,9
United States	71,9	66,1	59,5	13,1	67,6	63,4	60,6	14,1
OECD ²	64,9	55,0	49,4	14,4	64,8	56,7	53,6	16,2

Source: OECD

Note:

1. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities.

2. Excluding Estonia, Israel and Slovenia

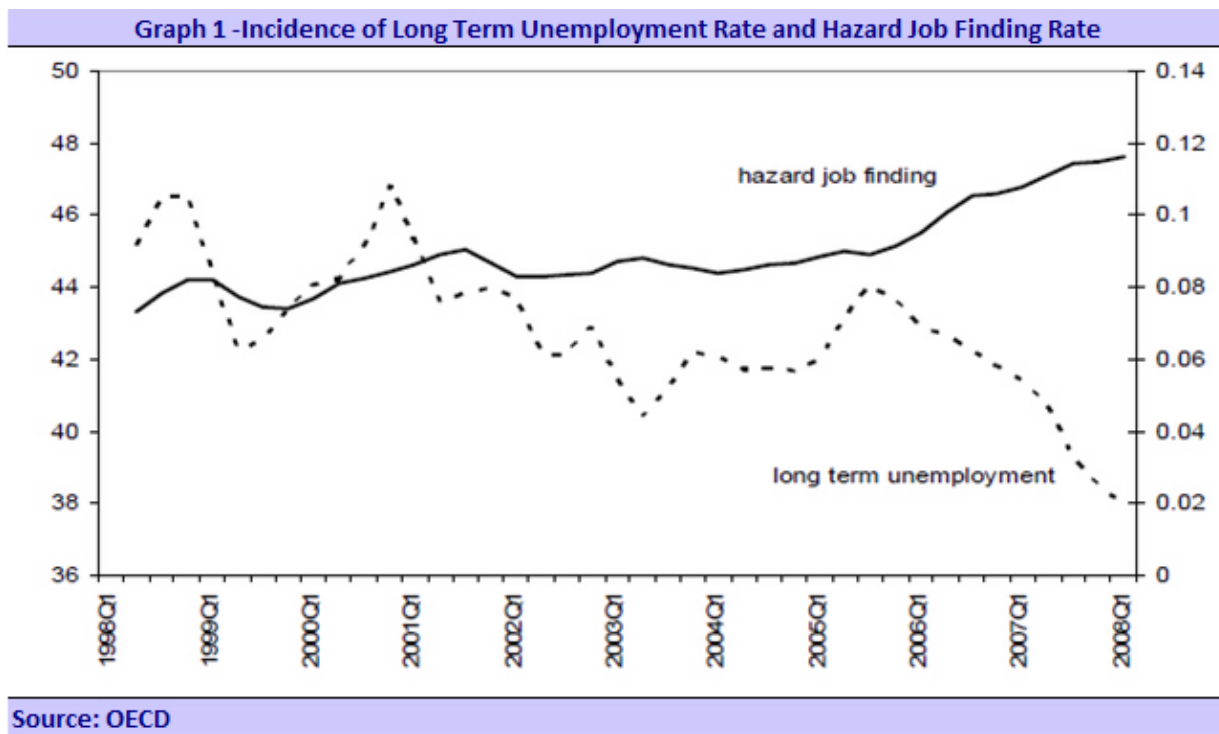
Table 6 - Yearly Probability of Transitioning from a Temporary to a Permanent Contract

Austria	47,4
Belgium	40,4
Denmark	..
Finland	22,7
France	13,6
Germany	..
Greece	31,3
Ireland	46,3
Italy	31,2
Luxembourg	41
Netherlands	..
Portugal	12,1
Spain	28,3
Sweden	..
United Kingdom	45,7

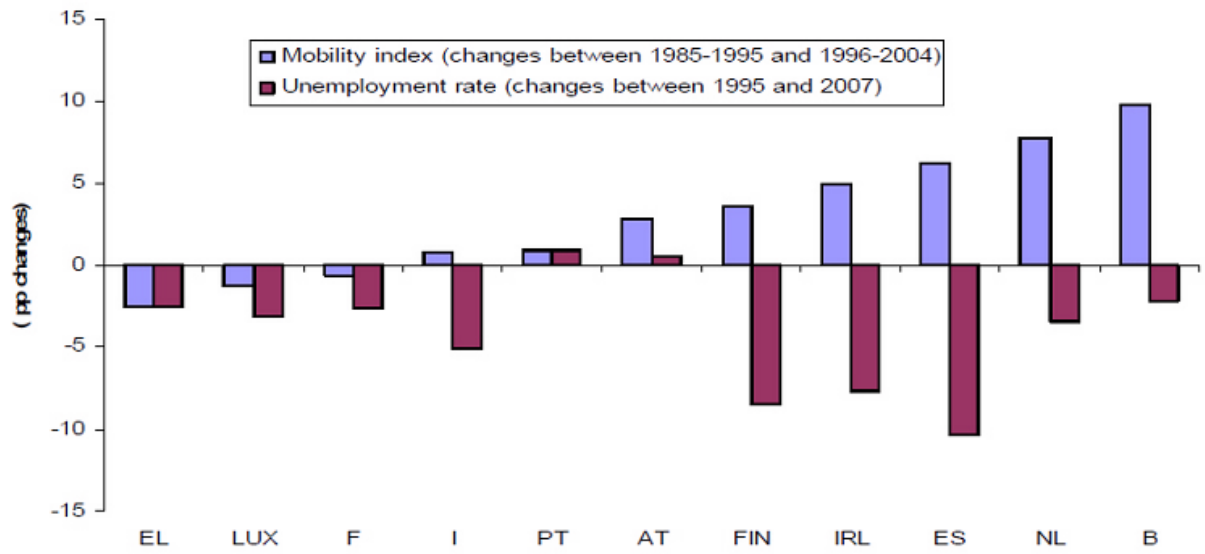
Source: IMF (2010a)

Note: Estimated from matched records of the European Union Survey of Income and Living Conditions for 2004-2007

B. GRAPHS

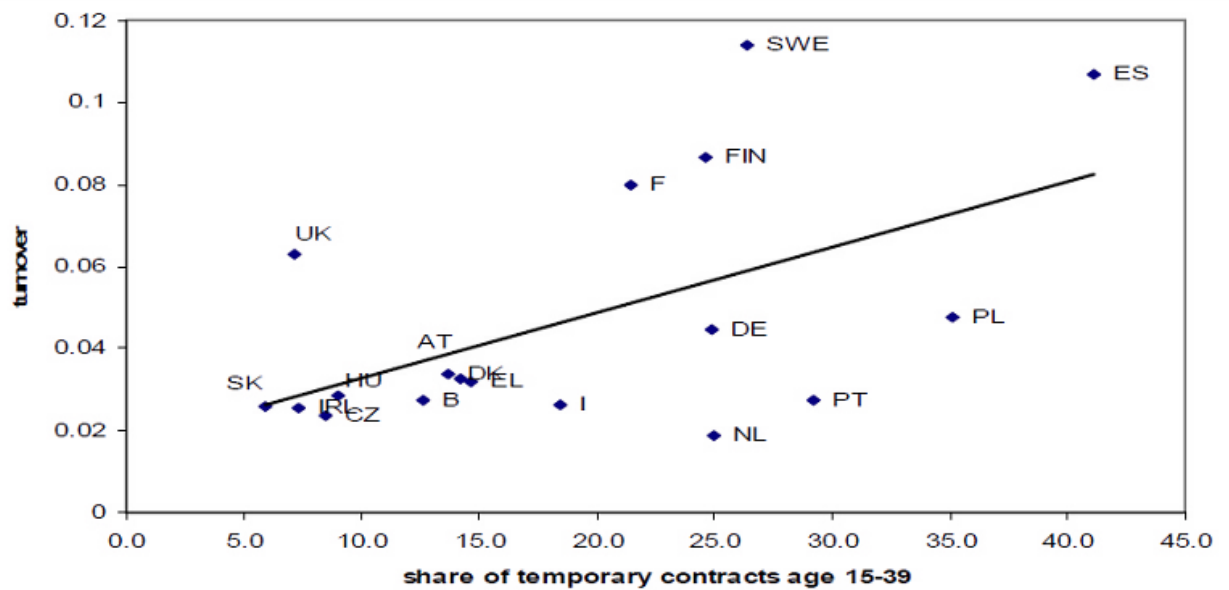


Graph 2 - Mobility Between Unemployment and Labor Market States

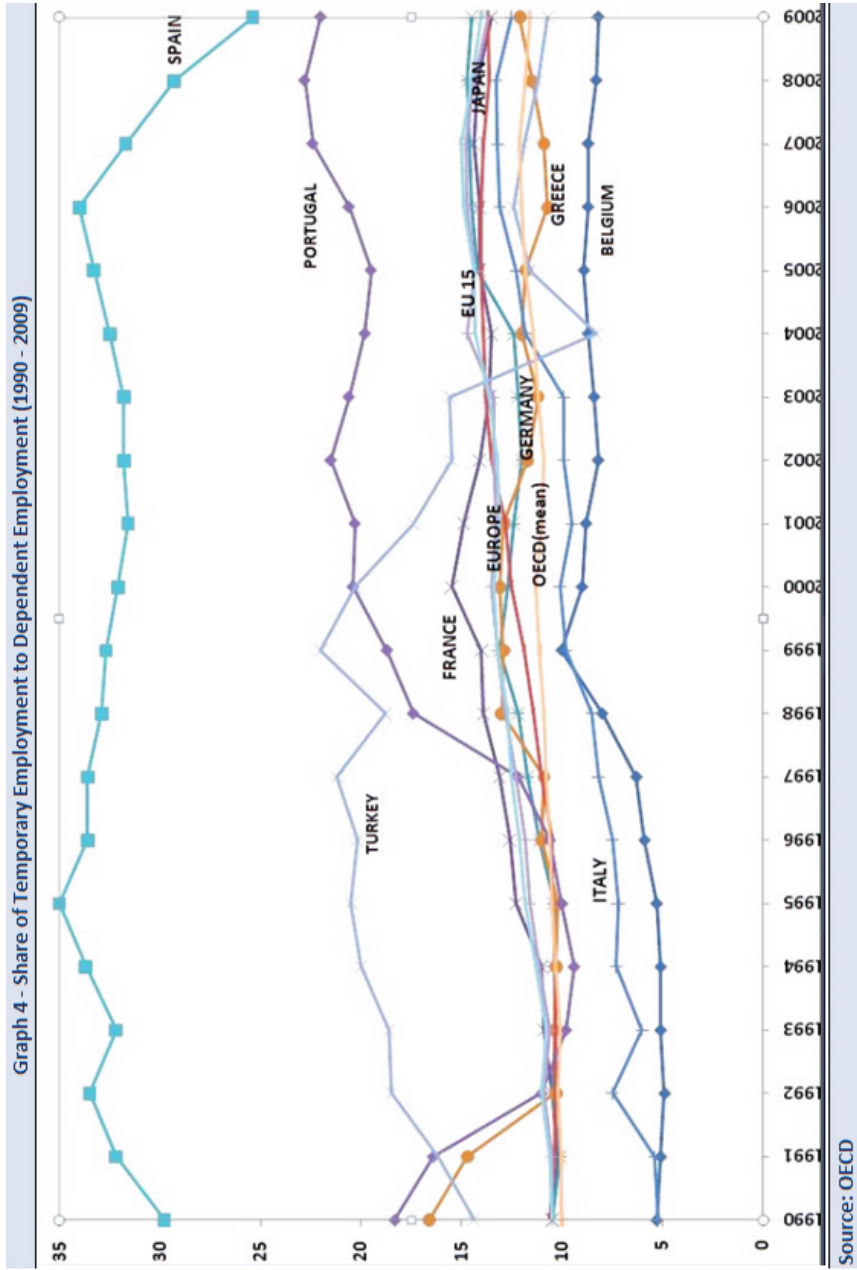


Source: Boeri and Garibaldi (2009)

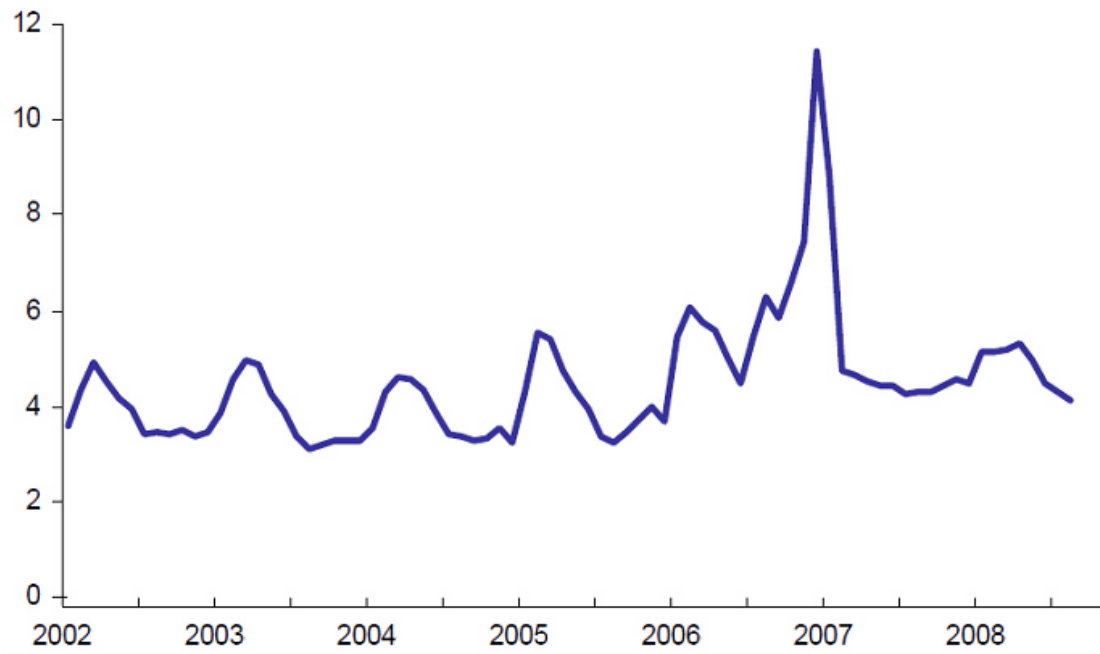
Graph 3 - Turnover and Share of Temporary Contracts Age 15-39 (2005-2007)



Source: OECD



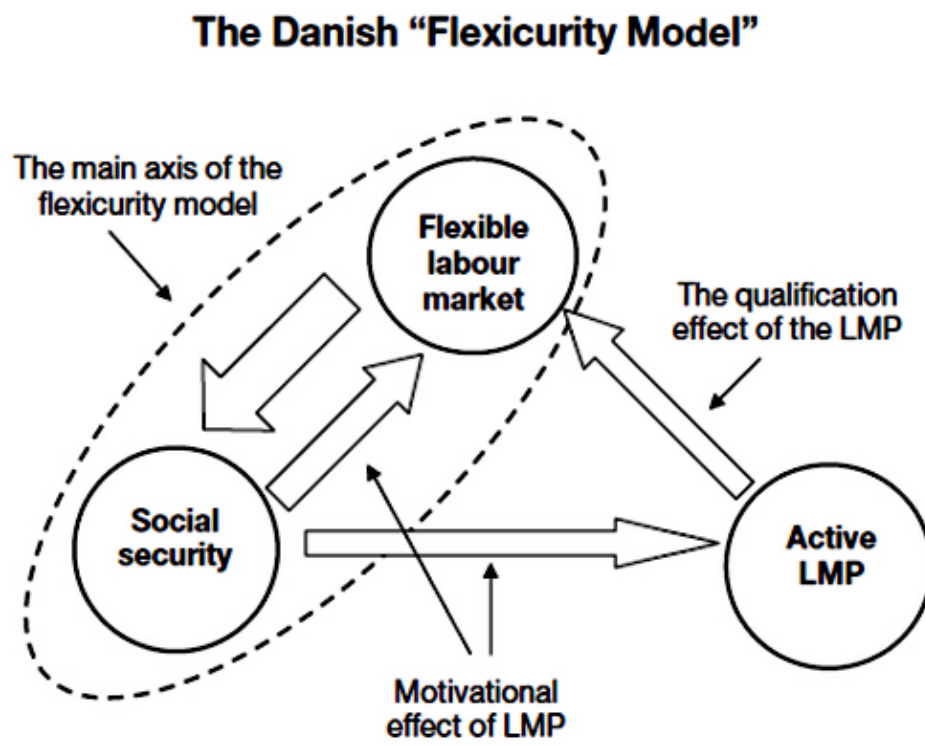
Graph 5 - Conversion Rate of Temporary into Permanent Contracts



Source: Boeri and Garibaldi (2009)

C. FIGURES

Figure 1 - The Danish "Flexicurity Model"



Source: Madsen (2006)