



European Master's Programme in Human Rights and Democratisation

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“Encouraging” Old Workers to Retire Early?

Age Discrimination

at the Exit from Labour Market

Case Study: Luxembourg



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ABSTRACT

This paper investigates the existence of age discrimination on the labour market in Luxembourg through a legal, social policy and empirical analysis. The main concepts used are defined in the first chapter. A legal analysis of the anti-discriminatory legislation was done at three levels: international, European Union and national one and concluded that there are no specific provisions in the Luxembourgish legislation prohibiting age discrimination; moreover Luxembourg failed to implement the EU directives promoting equal opportunities, promoting instead generous incentives for early retirement and it has only recently started to promote active ageing. The empirical analysis (using a linear regression model with dependent variable-early retirement age and predictors: perceived discrimination, socio-demographic variables and job related characteristics) found evidence of a statistically significant difference in the retirement behaviour of those workers who felt discriminated and those who did not. Workers who felt discriminated are more likely to retire earlier, undertaking early retirement schemes at the pressure of their employer. There were no evidences of a double discrimination including age, therefore we consider that age discrimination is generalised among old workers. Active ageing policies had no statistically significant impact on the retirement decision, due to a *deep rooted* early retirement culture in Luxembourg. The paper ends with policy recommendations.

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1. Introduction

All human beings have the right not to be discriminated. Discrimination may occur on different grounds – race, ethnicity and gender being most analysed by researchers in the field. Although it is one of the most common forms of discrimination, as we all could face it at a stage of our life, age discrimination only recently received more attention from public policy makers. In the occurrence of demographic ageing, an active ageing policy becomes a necessity in order to cope with challenges of an increased dependency rate. An increased employment rate for old people can be realised only if we create equal opportunities for all, removing barriers from entering or remaining in the labour market, and by tackling age discrimination.

The fight against discrimination on any ground is a high priority on the European Union's agenda, therefore the EU declared 2007 the "*European Year of Equal Opportunities for All*"¹. Until then, the priority is to implement anti-discriminatory legislation in all Member States and to enforce it through adequate public policies.

The aim of this paper is to analyse if there is age discrimination on the labour market in Luxembourg, more specifically at the exit from the labour market. The research consists in three levels of analysis: a legal one, a social policy analysis, and an empirical analysis. Luxembourg presents an interesting case study, as it is a country with one of the lowest labour force participation rates among older workers in the European Union, but with a particular labour market, in which the ageing burden is compensated by the high participation of cross-border and migrant workers².

In the first, introductory, chapter the major concepts used will be defined: discrimination and, more specific, ageism, dimensions of the discrimination, explanatory models, types of discrimination and the main areas where discrimination can occur on the labour market.

¹ Source : http://europa.eu.int/comm/employment_social/fundamental_rights/index_en.htm
² Source : *Portrait économique et social du Luxembourg*, Statec publication, 2004,
at http://www.portrait.public.lu/en/economic_development/factors/resource_allocation/demography/

The legal analysis of the anti-discriminatory legislation will be done at three levels: international, European Union and national (in Luxembourg in order to see the state of the implementation of the EU legislation in the internal legal order). Social policy analysis will review the first steps towards the European Employment Strategy (EES) at the EU level, focusing on equal opportunities and active ageing policies and the impact of the EES on the participation rate of older workers and average retirement age in the Member States. At the national level the analysis will focus on the policy measures which facilitate the prolongation of the working life, or which, on the contrary, lead towards an early exit, voluntarily or not, through early retirement schemes.

The empirical model will estimate the impact of the firm's policy in terms of perceived age discrimination or active ageing policies towards old workers on their decision to retire early from the labour market. The statistical method used to estimate our model will be a linear regression with the dependent variable - early retirement age and independent variables: perceived firm's policies (**discrimination**, active ageing, neutral), socio-demographic variables (gender, marital status, number of children, nationality, education level) and job related characteristics (activity sector, revenues, private pension, working experiences, age at first work). The results of the model will be discussed in the fifth chapter.

The main research question is: are old workers discriminated at the exit from the labour market, are they "*encouraged*" by their employer to leave as soon as possible undertaking early retirement schemes? The main hypothesis is that the firm's policy has an impact on the decision to retire early from the labour market (before the retirement age): a discriminatory policy will determine them to retire earlier or, conversely, an active ageing policy will encourage them to prolong their working lives.

The findings of the empirical analysis and the conclusions of the legal and social policy analysis will be discussed in the last part of the paper along with some policy recommendations.

II. Age Discrimination on the Labour Market

2.1. Defining Discrimination

Etymologically, “*discrimination*” comes from the Latin word *discriminatio*, which means *to separate*, without a pejorative meaning, still being used in this sense in some fields of statistical procedures or in sciences.

But the concept evolved in time and today, to discriminate has a negative value, not representing anymore only the action of distinguishing between two or more categories, but includes also a judgement of values which ranks them in detriment of some categories - victims of discrimination, as Lochak (1987) was remarking: if “*étymologiquement, discriminer c’est faire une distinction entre des objets*” today, “*ce n’est plus seulement séparer, mais séparer en hiérarchisant, en traitant plus mal ceux qui sont dits victimes de discrimination*”³. Therefore, in this context, the act of discrimination has a negative character and it is in general prohibited by legislation, although it is not guaranteed that it does not occur.

There are several definitions of discrimination; although many studies focused on ethnic and gender discrimination, these definitions apply to a certain extent to age discrimination, as well. The *Encyclopaedia of Social Sciences* defines discrimination as “*unequal treatment to equals*”, which occurs when “*differences in treatment accorded to various categories of persons which are disproportionate to the importance of the marks of differentiation between these categories*”⁴. According to Pollak (1944), discrimination implies the concept of “*unfairness*” and it is related to a “*cultural value system*”⁵.

Heckman (1998) defines race and gender discrimination (but his definition is applicable to age discrimination as well) as: “*discrimination is said to arise if an*

³ Lochak, D., *Réflexions sur la notion de discrimination*, in «Droit Social», no. 11, Novembre 1987, p. 778.

⁴ Hankins, F., *Social Discrimination* in «Encyclopedia of Social Sciences», XIV, New York, Maximilian Co, 1937, p.131-132.

⁵ Pollak, O., *Discrimination against older workers in industry*, in «The American Journal of Sociology», vol. 50, no. 2, Sept. 1944, p. 100.

*otherwise identical person is treated differently by virtue of that person's race or gender, and race or gender by themselves have no direct effect on productivity"*⁶.

Focusing on wage differentials, Stiglitz (1973) considers that we face discrimination on the labour market when "*individuals of the same economic characteristics receive different wages and the differences are systematically correlated with certain non-economical (racial, religious) characteristics of the individual*"⁷. He defines "*economic characteristics*" which make the difference between different treatment and discrimination as: "*anything which affects the net marginal productivity of an individual*"⁸. His definition makes the difference between economical characteristics of the individual, like different productivity which can justify a difference in treatment (regarding the wage level) and the grounds of discrimination, which does not justify it.

In other words, we face discrimination when a provision or a practice disadvantages persons compared with other persons in similar situations, due to their ethnic or racial origins, gender, religion, disability, age, sexual orientation, or any other grounds.

2.2. Ageism

Discrimination can be on different grounds: gender, racial and ethnic ones were most studied, but recently age discrimination received a deserved attention, being considered the discrimination which occurs most often, as all of us can be discriminated on this ground at a stage of our life.

Over time the role of old people changed, and, according to the modernisation and ageing theory developed by Burge⁹ in the '60s, the social status of the elderly

⁶ Heckman, James, *Detecting discrimination*, in «Journal of Economic Perspectives», vol. 12, no. 2, (spring 1998), p. 102.

⁷ Stiglitz, J., *Approaches to the Economics of Discrimination*, in «The American Economic Review», vol. 63, no. 2, May 1973, p. 287.

⁸ Idem 7.

⁹ in Marshall, V., *The state of Theory in Ageing and the Social Sciences*, in Binstock, R, George, L., (Eds.) *Handbook of ageing and the social sciences*, San Diego, Academic Press, 1996, p.15.

decreased in the last century due to several factors, among which urbanisation and industrialisation, the changing in family structure, the new value granted to leisure time and the increased in life expectancy which modified the perspective of ageing. Auer and Fortuny (2000) are talking about a “*juvenilization of the aged, with large cohorts of healthy, employable retirees*”¹⁰. In this context it is necessary to provide them an opportunity to re-enter labour market or to prolong their working life by active ageing policies and combating ageism.

Glover and Branine (1997) defined ageism as: “*a form of prejudice which abuses perceived chronological age in forming judgements about people and age discrimination as acts based on such prejudices*”¹¹. We would add that in most cases, not only perceived but *effective* age counts as grounds for discrimination. The authors emphasise on the danger of considering “*the elderly*”¹² as an objective, scientifically determined category, while it is an entirely social constructed one. Fry (1996)¹³ also wrote about age as a social construction, stressing the fact that the ageing experience differs substantially from a culture to another and it is time-framed.

Age discrimination on the labour market could be defined as: *unfair or unequal treatment of a worker, independent of the individual economical characteristics, and due only to the employee's biological or perceived age.*

Although ageism can refer to a discrimination against any age group, ageism (and age discrimination) is usually focused on two target groups: the youngest and the elderly. The young are discriminated especially during transition from school to employment. The workers can be discriminated by their actual employer, by a potential one (in case that they want to change jobs or to be re-integrated on the labour market after a period of absence) and even by their colleagues at work place, being marginalised.

¹⁰ Auer, P., Fortuny, M, *Ageing of the Labour Force in OECD Countries: Economic and Social Consequences*, Employment Paper No. 2000/2, OECD, available at: <http://www.ilo.org/public/english/employment/strat/download/ep2.pdf>.

¹¹ Glover, I., Branine, M. , *Ageism and the labour process: towards an research agenda*, in «Personnel Review», vol. 26, no. 4, 1997, p.276.

¹² Idem 11, p.276.

¹³ Fry, C., *Age, Ageing and Culture*, in Binstock, R, George, L., (Eds.) *Handbook of ageing and the social sciences*, Academic Press, 1996, US, p.123.

2.3. When a Difference in Treatment becomes Discrimination?

It is important to know where to fix the blurry border between discrimination and justified difference in treatment. Lochak (1987) thinks that in order to consider an act as discrimination from a juridical standpoint, three distinct elements must be analysed¹⁴:

- criteria according to which groups receive different treatment (if it is included in the possible grounds of discrimination stated by the legislation);
- domain of discrimination in which this different treatment occurs (the analysis of this paper is limited only to labour market field);
- justification of the difference in treatment (to be seen in the legislative analysis, as some anti-discriminatory laws have exceptions on the field of applications etc.). We face discrimination when the difference in treatment is not justified by the economical characteristics of the individual or by other criteria specified as exceptions in non-discriminatory legislation.

2.4. Dimensions of Discrimination

Discrimination is a complex phenomenon, with psychological, sociological and economical implications. Feagin and Eckberg (1980)¹⁵ identified five dimensions of discrimination:

- the motivation behind it;
- the discriminatory action in itself;
- the effects of the discriminatory act;
- the relation between motivation and action;
- the relation between action and its effects;
- the immediate organisational context;
- the larger society context in which discrimination occurs.

¹⁴ Lochak, D., *Reflexions sur la notion de discrimination*, in «Droit Social», no. 11, Novembre 1987, p. 778.

¹⁵ Feagin, J, Eckberg, D., *Discrimination: Motivation, Action, Effects, and Context*, in «Annual Review of Sociology», vol. 6, 1980, p.2.

Without underestimating the importance of all these dimensions in explaining discrimination, due to space and time limits, this paper will focus only on the effects of discrimination*in institutional context, more specific at work place.

2.5. Why Discrimination Occurs?

Attempts to explain discrimination were made by several researchers, most of them focusing on racial and gender discrimination. We will review some of the main economical models, with a focus on those which could explain the mechanisms of age discrimination on the labour market.

2.5.1. Neoclassical Models

One of the first theories which bring economics closer to social sciences and even psychology was developed by Gary Becker in the 1950s, in his book *The economics of discrimination*¹⁶. According to his theory, human beings have a “*taste for discrimination*”, which can cause uneconomical costly behaviour and determines losses to employers, employees and consumers. Therefore, firms with a discriminatory policy will have higher costs than the other ones and will be more likely to be eliminated from labour market. Becker considers that in the long run, due to practical and economical reasons, discrimination will be more likely to disappear from labour market. One of the main critics to Becker’s model is the fact that discrimination did not disappear from labour market - as he predicted - although racial discrimination in the US (Becker’s case study) diminished substantially.

2.5.2. Human Capital Theory

Becker (1962) had an important contribution with his **human capital theory** in the explanation of age discrimination.¹⁷ According to his theory, each individual has a personal capital formed by his/her knowledge and experiences which he//she accumulates during his/her work life. The investment in human capital (in education, skills, qualifications gained through training) is increasing individual productivity and

¹⁶ Becker, G, *The economics of discrimination*, The University of Chicago Press, Chicago 1971 (2nd ed.).

¹⁷ Becker, G, *Investment in human capital- a theoretical analysis*, in «The Journal of Political Economy», no. 70, part. 2, Oct. 1962, p. 9-49.

people can have access to better jobs and higher salaries. Advancing in age, marginal productivity is decreasing, therefore investments in human capital at an advance age are not so profitable; according to Becker, this could explain age discrimination as far as it regards access to training, education, and even a better position in the firm. In other words, it does not *pay back* to invest in old workers. His theory is contradicted by the latest policy approach in the field of employment from a life long learning perspective: investing in workers training and education during all their working life, including at latest stages.

2.5.3.. Statistical discrimination theory

Edmund Phelps (1972)¹⁸ developed the theory of statistical discrimination based on the presumption of imperfect information on labour market. In order to maximise its expected profit, the employer will discriminate against certain categories (in his case was gender and race discrimination in US) based on stereotypes and beliefs. These stereotypes and beliefs could be the result of its "*previous statistical experiences*"¹⁹ with the two groups (the discriminated and non-discriminated one) or just pure sociological and personally beliefs that one group is performing better than the other, in average, and it is costly to determine individual performance of potential candidates to a job. This model explains the employer's behaviour through an economically rational choice, although based on *irrational* stereotypes. The society at large plays an important role in the creation of these stereotypes. Age stereotypes are a particular type, as Dirk and Jochen (2003) highlighted in their paper,²⁰ because there is a transition from stereotyping to stereotyped groups during an individual's life time.

Arrow (1998)²¹ contributed to the development of the statistical model adopting an interdisciplinary approach to discrimination (racial in his case study). He is adding a sociological perspective to the statistical model, stressing on the importance of social interactions and networks in creating beliefs and preferences. It drops attention on some specific cases - in social networks of acquaintances,

¹⁸ Phelps, E., *The Statistical Theory of Racism and Sexism*, in «The American Economic Review», vol. 62, no. 4, Sept. 1972, p. 659-661.

¹⁹ Idem 18, p. 659.

²⁰ Dirk, W., Jochen, B., *Age Stereotypes in Younger and Older Women: Analyses of Accommodative Shifts with a Sentence-Priming Task*, in «Experimental Psychology», vol. 50 (1), 2003, p. 16-26.

²¹ Arrow, J. K., *What has Economics to say about Racial Discrimination?*, in «The Journal of Economic Perspectives», vol.12, no. 2 (spring 1998), p. 91-100.

discrimination is not costly anymore, by contrary, it has “*social rewards*”. He considers that the “*network model*” can better explain discrimination on labour market and that every action on the labour market has behind “*direct social influences*”²².

2.5.4. Lazear's theory: discrimination as a result of decreasing individual's productivity during life time

At the end of 1970s, Edward P. Lazear's (1979)²³ developed a model of efficient long-term incentive contracts, according to which employers impose involuntary retirement based on age. His theory is based on the relation between wage growth and individual productivity: at early stages of their carrier, workers are paid less than the value of their marginal productivity, but, while their marginal productivity is decreasing in time due to deterioration of the human capital, the wage is increasing with the seniority and it compensates for the previous payment gap. Therefore, through the end of their carrier, old workers will be paid more than the value of their marginal productivity. These *Lazear contracts* at different payment constitute a long-term incentive for workers to perform better, especially in the first part of their working life, stimulated by a wage increase. In order to be considered efficient for firms as well, Lazear considers that it is necessary to end this type of contracts through a mandatory retirement for old workers, established at a “*social and private optimum*”²⁴.

A main critique to Lazear's theory is the fact that the age of an individual is not a direct predictor of his/her individual productivity (only if his/her work requires physical strength). Human capital does not deteriorate progressively in time, but it also accumulates through education, training and work experience. Therefore a mandatory retirement age is not compulsory; on the contrary, there were recent discussions among policy makers about removing the compulsory retirement age²⁵.

In conclusion, discrimination can be determined by two kinds of factors: either by discriminatory preferences, which are totally subjective and depend on the *taste* of

²² Idem 21, p.98.

²³ Lazear, E. *Why Is There Mandatory Retirement?* in «Journal of Political Economy», 1979, vol. 87, no.6, p. 1261-1284.

²⁴ Idem 23, p. 1283.

²⁵ see Taylor, Ph., *New Policies for old workers*, University of Cambridge, UK, 2002, p. 22.

the individuals (intentional discrimination), or by evaluation of old workers' productive capacities from employers' side (statistical discrimination).



2.6. Types of Discrimination

We already talk about **statistical** and **intentional** discrimination. Discrimination can be direct or indirect as well. Indirect discrimination is more frequent, being more subtle. **Direct discrimination** occurs when due to racial or ethnic origins, religion, disability, age, sexual orientation or other possible grounds; a person is treated less favourable than another one in a similar situation.

Indirect discrimination occurs when *“an apparently neutral provision, criterion or practice would put persons having a particular religion or belief, a particular disability, a particular age, or a particular sexual orientation at a particular disadvantage compared with other persons”*²⁶, unless the practice can be objectively justified by a legitimate aim (and exceptions are stated in legislation).

Positive discrimination exists as well, and it occurs when a provision, criteria or practice favour a person belonging to a certain ethnic or racial minority or having a disability or a certain age (or on other grounds). Positive discrimination was used to compensate for past discrimination which created a situation of under-representation of certain groups on the labour market (or in other fields). It was used in gender policies, in order to increase women's participation at all levels of society. This kind of practice is not considered discrimination in the legal sense, and it is promoted through public policies in order to achieve a fair representation of all members of the society. A quota system for minorities for accession to education is an example of a positive discrimination.

In their study about the racial and ethnic discrimination in the US, Feagin and Eckberg (1980) distinguish four types of discrimination:

²⁶ Source: Directive 2000/78/EC, Art. 2, at:
http://europa.eu.int/comm/employment_social/fundamental_rights/pdf/legisln/2000_78_en.pdf

1. **isolate discrimination**, defined as “*intentionally harmful actions by a dominant-group individual against members of a subordinate group, when that action is not embedded in a large-scale institutional or organisational setting*”²⁷;
2. **small-group discrimination**, which occurs when: “*intentionally harmful actions by a small group of dominant-group individuals against members of a subordinate group, without the immediate support a large-scale institutional framework*”²⁸;
3. **direct institutionalized discrimination**- same as direct discrimination, when it takes place in a large-scale organizational context and
4. **indirect institutionalized discrimination**.

Feagin and Eckberg (1980) distinguish between 2 types of indirect institutionalized discrimination: “*past-in-present discrimination*” and “*side-effect discrimination*”²⁹. **Past-in-present indirect discrimination** occurs when a neutral practice has a negative effect due to a prior discriminatory policy. For example, if women’s access to education was restricted in the past due to a discriminatory practice, in the present they will not fulfil the requirements of some job positions. **Side-effect discrimination** occurs when a neutral provision or practice has an adverse effect because it is linked with a practice from another policy area. For example if old workers are discriminated in the access to training and education, they will not fulfil educational or training requirements for some types of jobs.

There are many types of discrimination; we can add the distinction based on the motivation of those who discriminate, between **intentional** and **unintentional discrimination**. It is important to understand these possible types, grounds and situations in which discrimination can occur in order to be able to recognize when such a practice is used, to condemn it and in the same time not to unintentionally discriminate against others. That is why information campaigns are so important. At present, there is an important EU campaign called *Stop Discrimination*³⁰, whose main

²⁷ Feagin, J, Eckberg, D., *Discrimination: Motivation, Action, Effects, and Context*, in «Annual Review of Sociology», vol. 6, 1980, p. 11.

²⁸ Idem 27, p.11.

²⁹ Ibidem 27, p. 12.

³⁰ Source: <http://www.stop-discrimination.info>

aims are disseminating information and raising awareness about equal opportunity for all.

2.7. Fields of Possible Discrimination on the Labour Market

In his paper on *Combating Age Discrimination at the Work Place*³¹, Walker (1999) analyses good practices during the main dimensions of age management in an organisations:

- at job recruitment (both for young and old workers);
- in training, development and promotion;
- in ergonomics and flexible working practice;
- in job design;
- in changing attitudes towards ageing workers and
- in exit policies from the labour market.

Although discrimination main occur in all these levels - Walker and Taylor (1998) found "*evidence of widespread discrimination in all areas of employment*"³²-, this paper will only analyse the exit policies from labour market, investigating the impact of discriminatory firm policies on old workers' decision to withdraw from labour market.

Walker (1999)³³ identifies three main factors which could determine a firm to adopt an anti-discriminatory policy, and it is interesting to know what can motivate a firm to change its policy. These factors are:

- particularities of local economy in which the firm is operating (in Luxembourg this can not play an important role in the short term run, because the effects of population ageing are lessen by the important participation on labour market of cross-border and immigrant workers);
- changing in public policies (we will discussed them in the second chapter, in particular early exit schemes in Luxembourg);

³¹ Walker, A., *Combating Age Discrimination at the Work Place*, in «Experimental Ageing Research», no.25, 1999, p. 370.

³² Taylor, P., Walker, A., *Employers and old workers: attitudes and employment practices* in «Ageing and Society», no.18, 1998, Cambridge University Press, UK, p. 644.

³³ Idem 31 p. 371-372.

- the organisational culture, defined by Walker (1999) as “*HR traditions, current personnel policies, and management style which, together, may support and encourage the development of good practices or, alternatively, favour the creation and retention of age barriers*”³⁴.

Other researches were done on the effects of attitudes and employment policies on prolongation of working life. By analysing the data of a qualitative survey in UK, Taylor and Walker (1998) found evidence of an “*institutionalised ageism*”³⁵, age discrimination through firms’ human resources policies. Such data are not yet available in Luxembourg³⁶, therefore our analysis is limited by the nature of the quantitative database. Taylor and Walker’s study provides evidence of a social exclusion of older workers at work place. This exclusion is based on negative stereotypes, with implication in access to jobs, training and advancement in the firm as well as on workers’ capacity to keep their position in the firm.

These findings are supported by Lindeboom (1998) who found evidence in a study case in the Netherlands³⁷ of pressure from the part of employers towards old workers to undertake early retirement schemes.

Taylor and Walker (1997)³⁸ stress the importance of public policies in tackling age discrimination at work place, focusing on the necessity of a comprehensive anti-discriminatory legislation - although the authors are reserved as far as the impact of legislation on firm’s culture is concerned. Their conclusion is supported by Adams’ (2003) findings³⁹ regarding the impact of anti-discriminatory laws on prolongation of working life. According to his analysis (case study -US), the effects of laws promoting active ageing policies are significantly decreasing early

³⁴ Ibidem 31, p.372.

³⁵ Idem 32, p.646.

³⁶ In 2005 two surveys were done on discrimination issues in Luxembourg, one interviewing human resources managers in firms and another one with interviews with leaders of trade unions, but the data are not available yet to the public (by July 2005).

³⁷ Lindeboom, M, *Microeconomic Analysis of the Retirement Decision: The Netherlands*, OECD Working Papers No. 207, ECO/WKP(98)20, 1998, at : <http://www.oecd.org/dataoecd/55/35/1867079.pdf>.

³⁸ Taylor, P, Walker, A, *Age Discrimination and Public Policy*, «Personnel Review», vol. 26, no.4, p. 307-318, Cambridge University Press, UK, 1997.

³⁹ Adams, S., *Age discrimination legislation and the employment of old workers in «Labour economics»*, no.11, 2004, p.219-241.

retirement, but not significantly removing entry barriers. In the next chapter we will analyse Luxembourg's legislation in this field; however, we find it too early⁴⁰ to do an empirical analysis on the effects on prolongation of working life and on the changing of discriminatory practices at firm level. This could be the path for a further analysis.

The next chapter will analyse anti-discriminatory legislation at international, European and local level, as well as Luxembourg's state of ratification of international legislation and the state of transposition of the European legislation into internal legal order.

3. Legislative Analysis

3.1. Age Discrimination in the International Legislation

Human rights are universal, therefore civil, political, economic, social and cultural rights belong to all human beings, without exception. The right of individuals not to be discriminated on any grounds, including age, racial or ethnic origin, religion or belief, disability and sexual orientation, has been recognised by international organisations, like the United Nations, The International Labour Organisation (ILO) and the European Union and its Member States. Non-discrimination principle on any grounds is explicitly set out in the Universal Declaration of Human Rights, the International Covenants and other international human rights Treaties and Declarations.

If some of these treaties prohibit explicitly age discrimination, others contain only general non-discriminatory provisions, as the **Universal Declaration of Human Rights** (1948): *"Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status"*⁴¹. *"Everyone has the right to work, to free choice of employment, to just and*

⁴⁰ By July 2005 specific legislation prohibiting age discrimination was not adopted yet in Luxembourg; this issue will be discussed in the third chapter of the paper.

⁴¹ Universal Declaration of Human Rights (1948), Art. 2, at: <http://www.un.org/Overview/rights.html>

favourable conditions of work [...] Everyone, without any discrimination, has the right to equal pay for equal work"⁴².

The prohibition of discrimination on any grounds can be found in the Article 2 of the **International Covenant on Economic, Social and Cultural Rights** (1966): "*The States Parties to the present Covenant undertake to guarantee that the rights enunciated in the present Covenant will be exercised without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status*"⁴³. A very similar provision contains Article 2 of the **International Covenant on Civil and Political Rights** (1966): "*Each State Party to the present Covenant undertakes to respect and to ensure to all individuals within its territory and subject to its jurisdiction the rights recognized in the present Covenant, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status*"⁴⁴.

UN General Assembly's **Proclamation on Ageing** from 16th of October 1992, proclaims the necessity of implementing the active ageing policy which should be incorporated in the national policy framework of every nation: "*The General Assembly[....] urges the support of national initiatives on ageing[...] so that: appropriate national policies and programmes for the elderly are considered as part of overall development strategies*"⁴⁵.

One of the first international convention which is mentioning age among the grounds of discrimination is the **International Labour Organisation's Convention No. 111** concerning *Discrimination in Respect of Employment and Occupation* (1958), with regards to equal access to occupations and professions, including training: "*Any Member may, after consultation with representative employers' and workers' organisations, where such exist, determine that other special measures*

⁴² Idem 41, Art. 23.

⁴³ International Covenant on Economic, Social and Cultural Rights(1966), Article 2, available at: http://www.unhchr.ch/html/menu3/b/a_ceschr.htm

⁴⁴ International Covenant on Civil and Political Rights (1966), Art. 2, at http://www.unhchr.ch/html/menu3/b/a_ccpr.htm

⁴⁵ UN General Assembly's Proclamation on Ageing (1992), Art.2,lit.b, at: <http://www.un.org/documents/ga/res/47/a47r005.htm>

designed to meet the particular requirements of persons who, for reasons such as sex, age, disablement, family responsibilities or social or cultural status, are generally recognised to require special protection or assistance, shall not be deemed to be discrimination"⁴⁶.

As we can see, international legislation is prohibiting age discrimination explicitly, like the ILO Convention No. 111, or implicitly - being included in "*any other grounds*" of discrimination prohibited. The international conventions and treaties exemplify the commitment of the international community to guarantee respect for the right to non-discrimination. The next section will analyse the European legislation in this field.

3.2. Age Discrimination in the European Legislation

At the regional level, the most important convention, the **European Convention on Human Rights** (1950) - ratified by all Member States of the Council of Europe - contains in Article 14 a general non-discriminatory provision, *without* mentioning the age among the grounds of discrimination: "*The enjoyment of the rights and freedoms set forth in this Convention shall be secured without discrimination on any ground such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status*"⁴⁷. Its **Protocol Nr.12**, signed at Rome, in 2000 reinforces the anti-discriminatory principle extending it at all the possible grounds in the enjoyment of all rights granted by law (not only by the provisions of the Convention): "*The enjoyment of any right set forth by law shall be secured without discrimination on any ground such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status*"⁴⁸.

⁴⁶International Labour Organisation's Convention No. 111 (1958), Article 5, at: <http://www.ilo.org/ilolex/english/convdisp1.htm>

⁴⁷European Convention on Human Rights (1950), Art. 14 at : <http://conventions.coe.int/treaty/en/Treaties/Html/005.htm>

⁴⁸ Protocol 12 of the Convention for the Protection of Human Rights and Fundamental Freedoms , Art.1 at: <http://www.humanrights.coe.int/Prot12/Protocol%2012%20and%20Exp%20Rep.htm>.

At the European Union level, an anti-discriminatory provision was included in the **Treaty of Amsterdam** (1997), which entered into force on 1st of May 1999. Article 13 of the Treaty granted the Community new powers to “*combat discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation*”⁴⁹. As we can see age is specified among the grounds of discrimination.

EU’s commitment to non-discrimination principle was reinforced in the first **EU Charter of Fundamental Rights and Freedom**, drafted at the Nice summit, in 2000. Article II-81 states that “*Any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited. Within the scope of application of the Constitution and without prejudice to any of its specific provisions, any discrimination on grounds of nationality shall be prohibited*”⁵⁰.

The Charter was included in the Treaty Establishing a Constitution for Europe, but for the time being, its ratification is uncertain due to the negative votes in the popular referendum in France (29th of May 2005) and The Netherlands (1st of June 2005).

More specific non-discrimination provisions are included in the Directive 2000/78/EC, known as the **EU Framework for Equal Treatment Directive**, which was adopted as a general tool for eliminating discrimination and putting into effect the principle of equality of opportunity and treatment in employment, with particular focus on older workers. It applies on access to employment, vocational training, employment and working conditions, and membership in workers’ organizations. The specific discrimination on the age ground is mentioned: “*any direct or indirect discrimination based on religion or belief, disability, age or sexual orientation*”⁵¹.

⁴⁹ Treaty of Amsterdam (1997), Art. 13, at: <http://europa.eu.int/abc/obj/amst/en/>

⁵⁰ EU Charter of Fundamental Rights and Freedom, Article II-81, Nice, 2000, at: <http://europa.eu.int/eur-lex/lex/en/treaties/dat/12004V/htm/C2004310EN.01004101.htm>

⁵¹ Directive 2000/78/EC, Art. 1, para.12, at: http://europa.eu.int/comm/employment_social/fundamental_rights/pdf/legisln/2000_78_en.pdf

The directive distinguishes between **direct** and **indirect discrimination** and defines them: "*indirect discrimination shall be taken to occur where an apparently neutral provision, criterion or practice would put persons having a particular religion or belief, a particular disability, a particular age, or a particular sexual orientation at a particular disadvantage compared with other persons*"⁵². The prohibition of discrimination is applying also to nationals of third countries with some exceptions (Art. 1). The directive prohibits harassment as well.

In the next chapter we will discuss the state of transposing the directive in the Luxembourgish law. The directive represents an important tool in combating indirect discrimination in particular, the most common form of age discrimination.

The prohibition of discrimination on any grounds, including age, is clearly stated in international and European legislation. Nevertheless, this is not sufficient on its own. The EU legislation must be transposed into national one and implemented in every Member State. The policy in the field must be adapted as well; that is why EU established a **Community Action Programme to combat discrimination (2001-2006)** in parallel with the adequate legislation, in order to enable people to build their own actions to tackle discrimination at a more effective local level. The policy initiatives will be analyse in the next chapter.

The last section of this chapter will analyse the national legislation in the field of discrimination and the state of the transposition of the European legislation into the national one in Luxembourg.

3.3. Non-Discrimination Principle in the Luxembourgish Legislation

Luxembourg signed and ratified the Universal Declaration of Human Rights (1948), the two Covenants on Civil and Political Rights and the one on Social, Economical and Cultural Rights (1966). Luxembourg had signed and ratified the European Convention on Human Rights (1950) and its later protocols as well, which

⁵² Idem 51 Art. 2.

are directly applicable to court cases in Luxembourg. The ILO Convention No. 111 of 25 June 1958, which was ratified by Luxembourg in 2000, is also directly applicable in domestic case law.

In national legislation, an attempt to define the principle of equal treatment can be found in Article 10 bis of the **Luxembourgish Constitution**, promulgated on 17th of October 1868, according to which “*Les Luxembourgeois sont égaux devant la loi*”⁵³. Even if it is understood to be a general principle of law, implying equality for all inhabitants, however, in *stricto sensu* this principle applies only to the Luxembourg nationals and not to foreign citizens, which represent up to 40% of the population⁵⁴. Actually, this distinction is highlighted in the next paragraph of the Constitution: “*Ils sont admissibles à tous les emplois publics, civils et militaires; la loi détermine l’admissibilité des non Luxembourgeois à ces emplois*”⁵⁵.

The principle of non-discrimination is regulated by the **Luxembourgish Criminal Code**, which provides also a definition of the discrimination in its Art. 454 “*Constitue une discrimination toute distinction opérée entre les personnes physiques à raison de leur origine, de leur couleur de peau, de leur sexe, de leur orientation sexuelle, de leur situation de famille, de leur état de santé, de leur handicap, de leurs mœurs, de leurs opinions politiques ou philosophiques, de leurs activités syndicales, de leur appartenance ou de leur non appartenance, vraie ou supposée, à une ethnie, une nation, une race ou une religion détermine*”⁵⁶.

As we can see age is not among the grounds of discrimination prohibited by the Penal Code. Actually, age discrimination is not specifically covered by national legislation. Therefore a new legislation must be adopted as soon as possible in order to prohibit discrimination on all grounds (including age), as well as indirect discrimination and harassment (as stated in the 2000/78/CE Directive).

⁵³ Luxembourgish Constitution, Art. 10 bis, at: <http://www.igp.public.lu/legislation/constitution.pdf>

⁵⁴ Source: www.statec.lu.

⁵⁵ Idem 53.

⁵⁶ Luxembourgish Criminal Code, Art. 454, at: http://www.legilux.public.lu/leg/textescoordonnes/codes/code_penal/cp_L2T08.pdf

Luxembourg has not transposed yet the EU **Directive 2000/78/CE regarding Equal Opportunity in Employment**, neither the 2000/46/CE regarding Racial and Ethnical Discrimination. Employment Equality Framework Directive's provisions had to be implemented in the national legislation of all Member States by 1st of December 2003, with a possibility to obtain a delay of maximum 3 more years for the provisions on age and disability discrimination, if such a delay is justified by legitimate reasons. In case that a state chooses to use this additional time period, it is obliged to report annually to the European Commission on measures taken in order to eliminate age discrimination and on the results of their implementation.

In a survey done by the Commission regarding the transposition state of the "Lisbon" directives into national law of the Member States at 1st of June 2005⁵⁷ Luxembourg is on the last place in EU 25. In this survey, under the framework of "Lisbon" directives were analysed 63 directives⁵⁸ regarding employment relations, among which Directive 2000/43/CE concerning racial and ethnic discrimination⁵⁹. Luxembourg transposed only 60.3% of EU legislation in the field of employment (38 of 63 directives), a very poor performance, far behind all the other Member States. The Nordic countries are leaders of the list, Denmark being the first one with 96.8% of the EU directives transposed in national law, followed by Finland with 95.2%.

Actually, the Luxembourgish delay in implementing EU directives was criticised by the Commission several times. In the **Equality and Non-Discrimination Annual Report for 2004**⁶⁰, the Commission criticized Luxembourg for its slow progress in implementing European legislation, considering that it does not have a clear timetable concerning implementation of the directives. Even if it has a draft law project, it lacks the provisions for setting up a specialized body in charge with the implementation of non-discrimination policy.

⁵⁷ Available at: http://europa.eu.int/growthandjobs/pdf/transposition_directives_en.pdf

⁵⁸ The 2000/78/CE Directive is not included in this survey.

⁵⁹ At 1st of June 2005 the Directive 2000/46/CE was implemented in 21 member state. The States which did not fulfil their obligations are: Luxembourg, Czech Republic, Germany and Austria.

⁶⁰ Available at

http://www.europa.eu.int/comm/employment_social/news/2004/jul/annualrep2004_en.pdf



Because the recommendations were not effective on 19th of July 2004 - the first deadline for transposition of the Directive 2000/46/CE on Equal Treatment for Nationality and *Race, the European Commission took legal action (pre-judiciary procedure) against six Member States (**Luxembourg**, Austria, Germany, Finland and Greece) - as they failed to transpose the two anti-discrimination directives, the Racial Equality Directive and the Equal Employment Framework into their national legislation. The Commission intended to start legal proceedings at the European Court of Justice and gave them a two months term to present the reasons for their delay in implementing the Directives, after which they would have faced the next step of referral to the European Court of Justice. The Commission brought Luxembourg before the European Court of Justice on 14th of February 2005⁶¹, for failing to fulfil its obligation of transposing the Directive 2000/78/EC into national law. At beginning of July 2005 case no. C-70/05, *Commission against Grand Duchy of Luxembourg* was still pending at the Court.

Law project No. 5249 of 10th of December 2003⁶², which is transposing the two Directives, is still in discussion in the Luxembourgish Council of Ministers; it has not been adopted yet⁶³. Following the terms of the Directives, the project is defining direct and indirect discrimination. First Article defines the equal treatment principle as being: *"l'absence de toute discrimination directe ou indirecte en matière d'emploi et de travail, fondée sur la religion ou les convictions, l'handicap, l'âge, l'orientation sexuelle, la race ou l'origine ethnique"*⁶⁴. It is the first time when age is mentioned among the grounds of prohibited discrimination in the national legislation. The draft bill is prohibiting harassment as well, both sexual and moral⁶⁵.

Article 2 of the draft bill defines the application field of the future law only to private employers, interns, trainees and apprentices (*"statut d'ouvrier et d'employé privé....stagiaires, apprentis et personnes bénéficiant d'une mesure en faveur de l'emploi comportant un travail et/ou formation en entreprise"*⁶⁶), a limitation in

⁶¹ Case number C-70/05, Commission against G.D. of Luxembourg, available at: http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_082/c_08220050402en00230023.pdf

⁶² Law project No. 5249, available at: <http://www.chd.lu/servlet/DisplayServlet?id=28067&path=/export/exped/sexpdata/Mag/001/001/030319.pdf>

⁶³ As it was the situation in beginning of July 2005.

⁶⁴ Idem 62, Art 1.

⁶⁵ Ibidem 62, Art. 1 para.3.

⁶⁶ Idem 62, Art. 2.

contradiction with the European Directive which, in its Art. 3 defines the field of application of the Directive to "*toutes les personnes, tant pour le secteur public que pour le secteur*privé, y compris les organismes publics*"⁶⁷. This exception is undermining the very aim of the Directive - equal treatment for all employment - creating a new discrimination on the basis of the statute of the employer (public or private). This decision is even more alarming, because it is not changing the existing age discrimination in the Luxembourgish legislation, for public sector. The share of public sector is an important one in the Luxembourgish economy, 40% of the Luxembourgish nationals are working for public administration⁶⁸.

Law of 19 May 2003⁶⁹ is fixing the upper age limit for the employment of public servants at 45, which constitutes clear age discrimination at the entry on labour market. Furthermore, the Law of 24 December 1985⁷⁰ is establishing at 40 years the upper limit for employment of public servants in the local administration (*communes*). This discriminatory legislation is in contradiction with the European directives (but not with the Luxembourgish draft bill which is transposing them, thus only partially, into national legislation). Therefore, national legislation must be modified as soon as possible in order to promote equal opportunities principle.

Draft bill N. 5249 can still be improved. We have already highlighted above some issues. Another one, stress as well by the Commission, is the fact that it does not provide for setting up a specialised body in charge with the implementation of anti-discriminatory legislation. These facts were also criticised by the State Council (*Conseil d'Etat*), which has to be consulted by the Deputy Chamber (*Chambre des Députés*) on any draft bill. The State Council formally opposed Draft bill no. 5249 on

⁶⁷ Directive 2000/78/EC, Art. 3.

⁶⁸ Source : OECD Report: *Vieillesse et politiques de l'emploi: Luxembourg*, OECD publication, 2004.

⁶⁹ *Loi du 19 mai 2003 sur la réforme du statut des fonctionnaires de l'Etat*, at : <http://www.legilux.public.lu/leg/a/search/resultHighlight/index.php?linkId=1&SID=3831d5a359fd4149adaa60b5de2ee13d>

⁷⁰ *Loi du 24 décembre 1985 fixant le statut général des fonctionnaires communaux*, at : <http://www.legilux.public.lu/leg/a/archives/1985/0842712/0842712.pdf?SID=af45da8c8757cc1d94e71e1c025f1e50#page=2>

24th of December 2004⁷¹, considering that it did not accurately transpose the two anti-discriminatory directives⁷².

A positive legislative measure is Law of 28 July 2002⁷³, which promotes active ageing policies, encouraging re-insertion through economical incentives (the cumulus of pension and wage is permitted without any reduction of the first, even more the aged worker has the right to ask for reimbursement of pension assurance tax on his/her wage. The cumulus is not allowed in case of early retirement). We will discuss more about national legislation when analysing early retirement schemes and active ageing policies in Luxembourg (second part of third chapter).

The first part of the next chapter will analyse the policy approach towards discrimination and the emergence of the active ageing policies at the European Union level, considered a priority in each member state.

4. Policy Initiatives Combating Age Discrimination and Promoting Active Ageing

As part of the European Union, Luxembourg has to comply with the targets set by European Commission in the framework of the European Employment Strategy, and it has to rise employment rate with focus on increasing women's and older workers' participation on the labour market. Raising the participation of older workers is not an easy task, due to the need for changing not only economic, but also certain cultural and social factors, including unfavourable attitudes towards older workers in employment. The declining labour force participation of the elderly is brought about by a complexity of factors, ranging from a voluntary early withdrawal caused by a recent increase in living standards, from incentives to early retirement in the social security systems⁷⁴ to inflexibility of the labour market and age discrimination. In the

⁷¹ source: European Antidiscrimination Law Review, no. 1, April 2005, at: http://www.stop-discrimination.info/fileadmin/pdfs/Nationale_Inhalte/lawrev1_en.pdf

⁷² According to the last developments (July 2005) another draft bill will be proposed to replace the Draft bill no. 5249, but its content is not public yet.

⁷³ Law of 28 July 2002, at: <http://www.impotsdirects.public.lu/legislation/legi02/>

⁷⁴ Kotowska, I., *Older Workers in the Labour Market and Retirement Policies*, in «European Paper Series» no. 9, Council of Europe, 2003, p. 2.

followings we will briefly analyse the way in which developed active ageing policies at the EU level were incorporated in the framework of the European Employment Strategy.

4.1 Incentives for Prolonging Employment of Older Workers in the European Union

Aware of the fact that prolonging working life increases financial sustainability of pension systems and helps combating unemployment and other difficulties arising from recent demographic trends (population ageing), policies in EU Member States have been recently directed towards fostering the participation of older workers in the labour market. The re-insertion of older workers has been more and more in the focus of EU policy makers' activity since mid-1990s.

Before the nineties, policies in several European states had been focused on lowering the statutory pension age in certain EU countries, due to increasing unemployment pressures. For example, Ireland, Greece, Norway, France and Sweden had reduced the age of eligibility to old-age pension by 2-5 years. However, most of these countries recognized in early nineties the necessity to increase the statutory retirement age in order to improve the dependency ratio and eliminate gender differences.⁷⁵ Therefore, Italy has increased the statutory retirement age for both men and women, while Luxembourg, Belgium, and Portugal only for women.

The problem of early retirement is still persistent in several European states. Public policies have to be changed in order to make possible and desirable the prolongation of working life. This goal is highlighted in Walker and Taylor (1998)'s report as "*combating age barriers*" and ensuring a working environment where "*each*

⁷⁵Fortuny, M., Nesporova, A., Popova, N., *Employment Promotion Policies for Older Workers in the EU Accession Countries, the Russian Federation and Ukraine*, Employment paper no. 2003/50, International Labour Office, Geneva, at:
<http://www.ilo.org/public/english/employment/strat/download/ep50.pdf>

individual is able to achieve his or her potential without being disadvantaged by age"

⁷⁶. To this end, specific labour market policies have been designed at EU level.

Since the effective age of retirement is far below the statutory requirement in all EU countries, setting a higher retirement age in the law does not itself solve the problem. In order to encourage longer working lives, several concrete policy measures have been envisaged and so far applied in the European Union. They pursue two main goals: to improve access to employment and working conditions for older workers and to make early retirement financially discouraging. Such measures include:

- introducing flexible retirement arrangements, including removal of the statutory retirement age and allowing for flexible part-time working arrangements;
- affirmative actions for promoting the recruitment and professional advancement opportunities of the elderly;
- removing early retirement schemes;
- introducing actuarial reductions for early retirement;
- introducing additional contributions for individuals if they want to retire early;
- restricting eligibility conditions for a disability pension, extended unemployment benefit or unemployment pension.

We will analyse as follows how the active ageing policies emerged at EU level and were incorporated in the European social policy.

Active measures policies were on the EU agenda at the Council of Essen (December 1994)⁷⁷. One of the first concerns regarding old workers was made in the five guidelines designed in order to improve employment situation:

1. improving employment opportunities for labour force by promoting investment in vocational training and long-life learning;

⁷⁶ Walker, A., Taylor, P. (Eds.), *Combating Age Barriers in Employment: A European Portfolio of Good Practice*, European Foundation for the Improvement of Living and Working Conditions, Office for Official Publications of the European Communities, Luxembourg, 1998.

⁷⁷ European Council (1994) ; Source for all Council's Conclusions:
http://ue.eu.int/cms3_fo/showPage.asp?lang=en&id=432&mode=g&name=

2. increasing of employment incentives (more flexible labour markets);
3. reducing non-wage labour costs;
4. improving effectiveness of labour market policies focusing on the active ones ;
5. improving measures to increase the employability of groups at risk such as young people, long term unemployed and **older employees**.

The following French Council (June 1995)⁷⁸ draw the first political declaration in the field of old workers: *Resolution on the Employment of old workers* (1995) which proposes measures to adapt professional training and conditions of work to elderly labour force, as well as the prevention of age discrimination on the labour market.

It was for the first time at the Luxembourg Jobs Summit⁷⁹ (November 1997) when EU concentrated entirely on employment and introduced the European Employment Strategy (EES). The EES is designed as a tool to provide and ensure a certain direction and possibility of coordination of employment policies among Member States, through a framework of objectives and targets commonly agreed. The main tools through which this coordination is done are:

- Employment Guidelines (annual commonly agreed set of priorities and direction of action in the field of active labour policies);
- National Action Plans (annual reports on the state of implementation of the Employment Guidelines in national labour market, submitted by each Member State);
- Joint Employment Reports;
- Country Specific Recommendations given by the Commission to each Member State; they represent a kind of *soft community law*, Member States should implement them in their national policies, but they do not have the legal obligation to do so (as they have in the case of directives).

⁷⁸ European Council (1995).

⁷⁹ European Council (1997).

The first European Employment Guidelines (1998)⁸⁰ defined four pillars of action for European Employment Strategy (EES):

1. improving employability (with special focus on **old workers**);
2. developing entrepreneurship;
3. encouraging adaptability for employers and employees;
4. strengthening equal opportunities (reducing age discrimination as well).

The 1998 Vienna Council⁸¹ defined elimination of age discrimination as one of the basic tools for the reintegration of elderly workers into labour market. As a result, Directive 2000/78/EC, analysed in the previous chapter, together with 2000/43/CE Directive, against the Ethnic and Racial Discrimination, were adopted as general tools for eliminating discrimination on all grounds. The two directives were accompanied by a *Community Action Plan Program to fight discrimination*, adopted in November 2000. The Action Plan supports activities aiming at the elimination of all forms of discrimination in occupation and employment, including differential treatment based on age. The program priorities are: analysis and evaluation, developing organizations' and workers' capacity to combat and prevent discrimination and to raise awareness about it.

The Council of Lisbon⁸² (March 2000) introduced the Open Method of Coordination (OMC), applied also in EES and, in order to fulfil the goal of full employment, established as target an overall employment rate of 70% by 2010. Furthermore, the Council of Stockholm⁸³ (March 2001), which addressed demographic challenges, established a specific target for the employment rate of old workers: 50% by 2010. But the Lisbon and Stockholm targets were ambitious (especially for some states like Italy, Greece, Spain, Luxembourg and Belgium⁸⁴, the gap was difficult to overcome) and the results of most Member States were under expectations.

⁸⁰ Source: http://europa.eu.int/comm/employment_social/employment_strategy/98_guidelines_en.htm

⁸¹ European Council (1998).

⁸² European Council (2000).

⁸³ European Council (2001).

⁸⁴ See Figure 1, Employment rates in the Member States and the EU targets in 2001.

At the Barcelona Council (March 2002)⁸⁵, it was criticised the slow progress of Member States in several areas, including:

- active ageing policies;
- reform of benefit systems in order to provide an incentive to work;
- labour market efficiency;
- female participation rates.

In order to achieve the targets set at Lisbon in 2000, the importance of the implication of all social actors was highlighted, and especially the involvement of workers in changes affecting them. The Council also stressed the importance of *qualitative* aspects of work, and in particular health and safety dimension, which are very important in active ageing policies.

One of the outcomes of Stockholm Council was the Commission's Report on the "*Increasing labour force participation and promoting active ageing*"⁸⁶. The main challenges for future EU policy, as set by this report are: to rise overall labour participation with a special attention on incentives for keeping the old workers in order to meet the employment target rates set at Lisbon and Stockholm by 2010. The report adopts the *dynamic-lifecycle approach* with focus on active ageing policies. The paper criticises the modest progress of Member States in raising old workers participation and drops attention on the strong impact and long term effects of a "*deep rooted early retirement culture*"⁸⁷ favoured by maintaining early retirement schemes, which, in some cases, in a contradictory policy mix, coexist with active ageing policies. Another essential factor highlighted by the report was the importance of changing negative attitudes of the employers, trade unions and even policy makers towards old workers.

At the Brussels Council⁸⁸ (March 2004), acknowledging the low performance of Member States in increasing their employment rates, the Lisbon Strategy was re-launched, by refocusing on growth and employment, long life learning, knowledge economy and job creation, in order to attract more people on the labour market. The

⁸⁵ European Council (2002).

⁸⁶ Commission's Report on the "*Increasing labour force participation and promoting active ageing*" at: http://europa.eu.int/comm/employment_social/news/2002/feb/com_2002_9_en.pdf

⁸⁷ OECD Report, 2004, p. 23.

⁸⁸ European Council (2004).

importance of the implication of all social actors at all stages of the implementation of the reform was stressed.

The Commission Communication on "*Strengthening the implementation of the European Employment Strategy*"⁸⁹ from April 2004 is revising the EES with new guidelines and priority for member states, among which:

- increasing adaptability of workers and enterprises (important in the case of active ageing policies);
- attracting more people to labour market and making work a real option for all (with a special focus on old workers and young retired);
- investing more and more effectively in human capital in a life long learning perspective

The conclusion of the paper states that the framework of good governance should maintain no barriers for participation on labour market on any discriminatory grounds.

The Green Paper on "*Equality and non-discrimination in an enlarged European Union*" (June 2004) is analysing the progresses made the previous five years by the EU and Member States in tackling discrimination on the "*grounds of sex, racial or ethnic origin, religion or belief, age, disability and sexual orientation*"⁹⁰. The Green Paper provides guidelines for future policy action, with a focus on the new challenges of the enlargement process, highlighting the fact that non-discriminatory principle is a part of the political criteria established at the Copenhagen European Council⁹¹ in 1993. Known as the Copenhagen criteria, these are the conditions *sine qua non* for the states which want to adhere at the EU. Age discrimination in particular is an "*unfamiliar concept*"⁹² in most of these states therefore legislative and policy measures must be taken in order to implement the *aquis communaitaires*.

⁸⁹ Source: [http://europa.eu.int/eur-lex/lex/LexUriServ/LexUriServ.do?uri=CELEX:52004AR0152\(01\):EN:HTML](http://europa.eu.int/eur-lex/lex/LexUriServ/LexUriServ.do?uri=CELEX:52004AR0152(01):EN:HTML)

⁹⁰ Green Paper on *Equality and non-discrimination in an enlarged European Union*, p.7, at: http://europa.eu.int/comm/employment_social/fundamental_rights/pdf/pubst/grpap04_en.pdf

⁹¹ European Council (1993).

⁹² Idem 90, p.20.



The latest EU publication in this policy area is the Green Paper "*Confronting demographic change: a new solidarity between generations*" (March 2005). According to this, the main goals of EU policy should be finding «a new place for the "elderly people"»⁹³, especially in the labour market. The recommendation for pension scheme reform is to promote more "*flexible bridges between work and retirement*"⁹⁴.

Acknowledging the poor performances of Member States in meeting the Lisbon targets and the difficulties of a highly bureaucratic implementation process (over than 300 annual reports⁹⁵) in 2005 the Commission decide to reform the process. In order to facilitate the tasks of the Member States and to assist, with their implication at a new re-launch of the Lisbon process, it therefore introduced a unique National Growth Programme and one EU Growth Plan.

As it is stated in the 2005 Commission's Report "*Working together for growth and jobs*"⁹⁶, the new focus of the EES is on productivity and employment with several priority areas. The first priority area is **to attract more people into employment** and to modernise the social protection systems through active labour market policies, providing incentives to people to become active on labour market and to stay longer, postponing the retirement (active ageing). One of the policy measures at the EU level under this objective is to promote equal opportunities (including for the elderly) in order to increase the participation rate. Trying to put more realistic targets, the Commission is recommending to Member States to set their own national employment targets in line with the EU targets, without imposing them the figures to be reached. Still, the aim of the strategy is to reach full employment on the long run.

Actually this more flexible strategy could give better results and we consider that it could be more successful and more realistic to impose a yearly percentage growth to the employment rate of each member States than to ask some of them to double their employment rate only in a couple of years for categories of people like old workers and women. This is rather an utopian target, since it is known that a

⁹³ Green Paper "*Confronting demographic change: a new solidarity between generations*" p. 9, March 2005, at: http://europa.eu.int/comm/employment_social/news/2005/mar/comm2005-94_en.pdf

⁹⁴ Idem 93 p.19.

⁹⁵ Source : EU Commission web site at: http://europa.eu.int/growthandjobs/index_en.htm#news

⁹⁶ Commission's Report "*Working together for growth and jobs*" , 2005, at: http://europa.eu.int/growthandjobs/pdf/SEC2005_192_en.pdf

participation culture to labour market is not possible to change overnight and, as well, the economic growth in terms of job creation is limited in short time framework.

Another priority in this area is to **develop active ageing strategies** - therefore Member States should remove early labour market exit incentives, especially the public aid for pre-retirement schemes. As we will see in the next chapter, Luxembourg has still several very attractive early retirement schemes, although the access became more restrictively lately. Other incentives encouraging active ageing can be of financial nature, allowing the retired cumulus of pension benefits and wage⁹⁷.

Others central policy priorities in this framework are: to improve **the adaptability of workers and enterprises** and the **flexibility of the labour markets** and to **increase investments in human capital** from a life long learning approach. These objectives are very important from the perspective of old workers, because it creates better conditions for their participation on labour market.

The new Lisbon strategy is more realistic and probably has more chances to be a success, but it is too soon to evaluate its impact. Thereby, in the next section we will analyse the progresses Member States made in implementing the strategy as it was first design in Lisbon in 2000- focusing on its impact on employment rate of old workers.

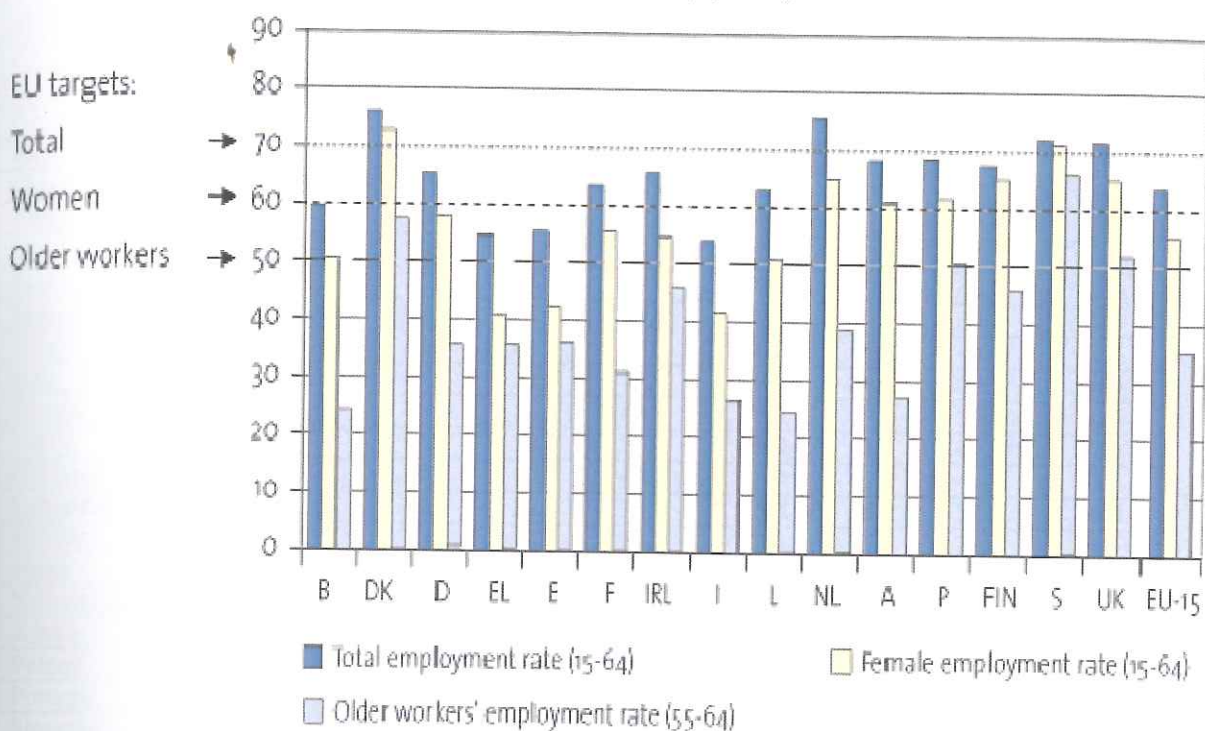
4.2. Impact of the EES on Employment Rate of Old Workers

at EU Level

The Lisbon Strategy established the targets for employment rates at 50% for old workers, 60% for women and 70% overall by 2010. As we can see from **Figure 1**, in 2001 only Denmark, Portugal, Sweden and UK met the established targets for employment rate. Luxembourg lacks behind at all three categories, and especially at old workers participation on labour market.

⁹⁷ Law of 28 July 2002 allows cumulus of wage and pension benefits in Luxembourg.

Figure 1. Employment rates and EU targets (2001) (in %)



Source: EUROSTAT (Labour Force Survey).

In 2004 the EU25 employment rate of old workers (55-64) was of only 40.5%, far below the Lisbon target, with a overall progress of only 4.8% since 1997 (see **Table1**). The participation rate in the EU 25 was lowered by low employment rates of the new Member States, EU 15 has an employment rate of 41.9 %, with an increased of 5.5 points since 1997.

We can not analyse yet the effects of the implementation of the EES in the new Member States, which for years used extensively early retirement schemes in order to face very high youth unemployment; thereby it is more appropriate to compare Luxembourg's performance with the ones of old Member States of the EU15.

Table 1. Participation rate of old workers (55-64) in EU countries 1997-2004

	1997	1998	1999	2000	2001	2002	2003	2004
EU (25 countries)	35.7	35.8	36.2	36.6	37.5	38.8	40.2	40.5
EU (15 countries)	36.4	36.6	37.1	37.8	38.8	40.2	41.7	41.9
Belgium	22.1	22.9	24.6	26.3	25.1	26.6	28.1	30.0
Czech Republic	-	37.1	37.5	36.3	37.1	40.8	42.3	42.7
Denmark	51.7	52.0	54.5	55.7	58.0	57.9	60.2	60.3
Germany	38.1	37.7	37.8	37.6	37.9	38.9	39.5	39.2
Estonia	-	50.2	47.5	46.3	48.5	51.6	52.3	52.4
Greece	41.0	39.0	39.3	39.0	38.2	39.2	41.3	39.4
Spain	34.1	35.1	35.0	37.0	39.2	39.7	40.8	41.3
France	29.0	28.3	28.8	29.9	31.9	34.7	36.8	37.3
Ireland	40.4	41.7	43.7	45.3	46.8	48.0	49.0	49.5
Italy	27.9	27.7	27.6	27.7	28.0	28.9	30.3	30.5
Cyprus	-	-	-	49.4	49.1	49.4	50.4	50.4
Latvia	-	36.3	36.6	36.0	36.9	41.7	44.1	47.9
Lithuania	-	39.5	40.9	40.4	38.9	41.6	44.7	47.1
Luxembourg	23.9	25.1	26.4	26.7	25.6	28.1	30.0	30.8
Hungary	17.7	17.3	19.4	22.2	23.5	25.6	28.9	31.1
Malta	-	-	-	28.5	29.4	30.1	32.5	30.9
Netherlands	32.0	33.9	36.4	38.2	39.6	42.3	44.3	45.2
Austria	28.3	28.4	29.7	28.8	28.9	29.1	30.1	28.8
Poland	33.9	32.1	31.9	28.4	27.4	26.1	26.9	26.2
Portugal	48.5	49.6	50.1	50.7	50.2	51.4	51.6	50.3
Slovenia	21.8	23.9	22.0	22.7	25.5	24.5	23.5	29.0
Slovakia	-	22.8	22.3	21.3	22.4	22.8	24.6	26.8
Finland	35.6	36.2	39.0	41.6	45.7	47.8	49.6	50.9
Sweden	62.6	63.0	63.9	64.9	66.7	68.0	68.6	69.1
United Kingdom	48.3	49.0	49.7	50.8	52.3	53.5	55.5	56.2

Source: EUROSTAT, available at <http://epp.eurostat.cec.eu.int>

In 2004 Luxembourg had one of the lowest participation rates of old workers from EU, with 30.8%, being situated on the 19th position in EU 25 and on the 12th position among the EU 15 countries (only Belgium, Italy and Austria perform worse in this field). Even if the employment rate of the old people is low and far behind the Lisbon target, we have to note that there was a significant increase of 6.9 percentage points of the employment rate of old people in Luxembourg between 1997 and 2004.

The country with the lowest employment rate of old people in EU 15 is Austria, with 28.8%, and with one of the poorest progress since 1997, only 0.5 percentage points increase. The second from the end of the list is Belgium, with 30% employment rate, but we have to note a significant increase since 1997 of 7.9 percentage points, following the same trend as Luxembourg. In the BENELUX region the best performance is done by The Netherlands, with an employment rate of 45.2 and an important increase since 1997 of 13.2 points. We also have to note that the worse performance in absolute in the EU 15 was the one of Greece: since 1997, the

participation rate of old people decreased by 0.6 percentage points (from 41% in 1997 to 39.4% in 2004)⁹⁸.

Nordic countries are ranked at the top of the list: Finland, Denmark and Sweden. Sweden has the highest employment rate of old workers of all EU, 69.1%, an incredible performance, but the merits can not be entirely attributed to implementation of the European Employment Strategy, since the progress since 1997 was of only 6.5 points. Sweden had in 1997 a very high employment rate of old people, 62.6%, sign of a late retirement culture, due also to good national policies that were implemented in time. Finland had the most spectacular progress since 1997: an increase in the employment rate of the old workers by 15.3 percentage points (from 35.6% to 50.9% in 2004) and its success story is often use as an example of Good Practices in the implementation of the EES for other Member States.

As we can see the EES had a different impact on Member States. We can distinguish four categories:

1. countries with a late retirement culture (Denmark, Sweden, UK and, to a certain extend Portugal and Ireland) and with some increase in the participation rate of old people from 1.8% in the case of Portugal⁹⁹ to 9.5 points in the case of Ireland;
2. countries with a low retirement culture and an initial low participation rate of the old workers (**Luxembourg**, Belgium, France, Spain) which registered a significant progress: between 6.3 percentage points in the case of France to 7.9 points in the case of Belgium;
3. countries with low participation rate of the old workers and on which EES had no significant impact : Austria, Greece, Germany, Italy (lower that 2% increase);

⁹⁸The Greek statistics should be interpreted with some reserves, because of the large share of the underground economy in the national one, up to 30% according to some estimation, being the largest in Europe. Many retirees still work undeclared in the family business, especially in the handcrafting and trade and service sectors; see for ex. Bovi, M, *The Nature of the Underground Economy. Some evidence from OECD countries*, Istituto di Studi e Analisi Economica (ISAE), Rome, June 2002, at: http://www.isae.it/Working_Papers/wpbovi26.pdf

⁹⁹ Although the increase in employment rate was modest in Portugal, 50.3% participation rate for old workers in 2004 is meeting the Lisbon target; therefore we decided to include Portugal in the category of countries which performed well.

4. countries with an initial medium participation rate and a significant increase due also to the implementation of the EES: Finland and The Netherlands, with a important progress of 13.2 points in The Netherlands and 15.3 percentage points in the case of Finland.

In conclusion, we can see that the initial employment rate of old workers (before the implementation of the EES in the Member States) is significant in determining some trends, therefore we could say that the impact of the active ageing policies it is strongly influenced by existing culture of early or late retirement in each country, culture which was created in long years of implementation of national policies (early exit schemes or active ageing policies). This could be the path for a further policy analysis.

Another indicator for assessing active ageing policies is the average (effective) retirement age. As we can see from the **Table 2**, the effective retirement age in EU in 2003 is 61 years, and 61.4 in EU 15. Because there are no data available for Luxembourg for 2003 in the EUROSTAT database, we will take 2002 as reference year for cross-country comparison.

Table 2. Average retirement age in EU 15 in 2001-2003 (in years)

Year	2001	2002	2003
EU (25 countries)	59.9 (e)	60.4 (e)	61.0 (p)
EU (15 countries)	60.3	60.8 (e)	61.4 (p)
Belgium	56.8	58.5	58.7
Denmark	61.6	60.9	62.1
Germany	60.6	60.7	61.6
Greece	59.4	61.8	63.2
Spain	60.4	61.5	61.4
France	58.1	58.8	59.6
Ireland	62.8	62.4	64.4 (p)
Italy	59.8	59.9	61.0
Luxembourg	56.8	59.3	:
Netherlands	60.9	62.2	60.4 (p)
Austria	59.2	59.3	58.8
Portugal	61.9	63.0	62.1
Finland	61.4	60.5	60.3
Sweden	61.7	63.2	63.1
United Kingdom	62.0	62.3	63.0

(:) Not available

(e) Estimated value

(p) Provisional value

Source: EUROSTAT, available at: <http://epp.eurostat.cec.eu.int/>

We can see from **Table 2**, that countries from the first group (the Nordic countries, UK, Ireland and Portugal) have high retirement age, with Sweden having again the best performance (in accordance with the previous indicator), with an average retirement age of 63.2 years. Luxembourg had an average retirement age of 59.3 in 2002, close to the EU average of 60.4, thus still one of the lowest in the EU 15, sharing the 12th position with Austria, followed by France with 58.8 years and Belgium, with the lowest retirement age in EU15, 58.8 years.

We have to note the important progress made by Luxembourg between 2001-2002, an increase of 2.5 years in the average retirement age, which represents an encouraging trend, though it is still far below the statutory retirement age (65 years). Since 1950, the average retirement age in Luxembourg decreased with 6.5 years (from 65.8 in 1950 to 59.3 in 2002)¹⁰⁰. It is a positive development that in the last years the decreasing trend is, although slowly, reversing.

The next section will analyse the active ageing policies in Luxembourg and the early retirement schemes.

4.3. Active Ageing Policy in Luxembourg

Luxembourg employment policy followed the same historical trend as elsewhere in European Union. In the 80's, fearing high youth unemployment, they favoured early exit for elderly in order to "make place" for the young people through national programs fighting poverty and focusing on the insertion of young people on the labour market.

The shift to active ageing policies came from European level, as it was highlighted in the previous chapter at the Luxembourg Summit, in 1997, with the new European Employment Strategy - which had an effect on national employment policies in Luxembourg, as well. There were practical reasons that produced this change in policy approach:

¹⁰⁰ Source: Auer, P., Fortuny, M, *Ageing of the Labour Force in OECD Countries: Economic and Social Consequences*, Employment Paper No. 2000/2, OECD, p.14, at: <http://www.ilo.org/public/english/employment/strat/download/ep2.pdf>

- the strategy of replacement of old workers with the young ones did not had the expected results, to diminished substantially the unemployment of the young people because there was no perfect job mach between the two generations;
- in the same time with the mass retirement of the baby boom generation, dependency rate increased and endangered the inter-generational contract on which are based the Pay As You Go (PAYG) pension systems.

If in Luxembourg there is not yet a big concern regarding the sustainability of the pension system, this is only due to the contribution of the foreign workers (cross-border and migrant residents). They raised substantially the overall employment rate, including the one of the old workers, as we can see in **Table 3**.

Table 3: Activity rate- old of people (55-64) in Luxembourg 1997-2003 (%)
by nationality and gender

Category	1997	1998	1999	2000	2001	2002	2003
Total Population	23.8	25.0	26.6	27.4	24.9	28.0	30.9
Nationals	21.2	23.5	26.0	25.1	20.7	24.6	26.3
Foreigners	31.3	29.2	28.1	31.9	36.1	35.5	38.8
Men	35.6	35.1	35.4	38.1	35.4	37.6	39.1
Women	12.4	15.3	18.2	17.0	14.5	18.4	20.9
National Men	32.7	34.0	34.6	36.1	28.4	32.9	34.6
Foreigner Men	43.8	38.0	37.5	41.6	52.7	47.5	49.3
National Women	10.3	13.5	17.9	15.1	13.4	16.6	18.3
Foreigners Women	19.0	20.6	18.9	21.1	17.7	22.5	27.6

Source: Luxembourg National Action Plan 2004, available at:

http://europa.eu.int/comm/employment_social/employment_strategy/nap_2004/nap2004lu_fr.pdf

As we can see, the overall employment rate for old workers in Luxembourg is rather low, 39.3% in 2003, with an increase of 7 percentage points since 1997. But there are substantial differences between the activity rate of nationals compare with foreigners and between women and men. The foreign men have the highest activity rate 49.3%, close to Lisbon target. Their activity rate was high in 1997 as well, and it increased by 5.5 percentage points (compare with the activity rate of nationals, which increased only by 1.9 percentage points for the same period, the poorest progress of all). The participation rate for old women increased between 1997-2003 by 8 percentage points for both nationals and foreigners, but the difference between them

is still significant: 18.3% for Luxembourgish women (the lowest employment rate of all) compare with 27.6% for foreign women in 2003.

The explanation is that, for years, workers were leaving the labour market at earlier ages, benefiting of different policy measures which facilitated their early exit (e.g. early retirement and invalidity). The number of persons who benefited on these policies increased constantly until 1997, when the official policy changed.

This national policy encouraging early retirement was often criticised in international reports¹⁰¹. In the Commission's Communication on "*Strengthening the implementation of the European Employment Strategy*" from April 2004, on country specific recommendations, the only critic address to Luxembourg concerned low participation rate of old workers, therefore the Council recommended to "*develop a comprehensive strategy for active ageing, notably in the private sector and strengthen recent initiatives to retain workers longer in employment by removing early retirement schemes*"¹⁰². Furthermore, the OECD Report (2004) considers that this practices were maintained even between 1998-2000, after the implementation of the EES, because of the particularities of the Luxembourgish micro-economy, with high yearly grow rate (8%) and with replacement labour force resource represented by cross-border workers (they represent 40% of the workforce)¹⁰³.

The next section will present the main early retirement measures in Luxembourg (invalidity and early retirement schemes), as well as the active ageing policies implemented more recently.

¹⁰¹ see OECD Report (2004) and the *National Recommendations* in the framework of the EES in the Joint Employment Reports, 2004.

¹⁰² Commission's Communication on "*Strengthening the implementation of the European Employment Strategy*", April 2004, at: [http://europa.eu.int/eur-lex/lex/LexUriServ/LexUriServ.do?uri=CELEX:52004AR0152\(01\):EN:HTML](http://europa.eu.int/eur-lex/lex/LexUriServ/LexUriServ.do?uri=CELEX:52004AR0152(01):EN:HTML)

¹⁰³ Source: OECD Report (2004), p.11.

4.4. The Main Measures for Early Retirement in Luxembourg¹⁰⁴

Public pensions system in Luxembourg is based on a compulsory insurance, having at the origins the Bismarckian¹⁰⁵ model. The applicable statutory bases for retirement in Luxembourg are regulated by the 3rd Book of the Social Insurance Code (*Code des Assurances Sociales*), following the terms of the Law of 27 July 1987¹⁰⁶. The compulsory social insurance includes self-employed as well. Therefore, the system covers all the retired from a professional activity in Luxembourg with the exception of those who worked as public servants or in the railway sector, who have their own professionals schemes. Another special exception from compulsory insurance is made for those who worked only occasionally with short term contracts, which last no longer than 3 months each year. Exceptions from compulsory insurance make those with work revenue which do not exceed 1/3 of social minimum wage (*salairé social minimum*)¹⁰⁷. Additionally to public compulsory insurance, the insured can optionally contract private old age insurance (second pillar). The pension system in Luxembourg includes: invalidity pension, old age pension, survival allowance and different schemes of early retirement. In the next section we will analyse only the last category, namely early retirement schemes.

4.4.1. Early retirement schemes (*La Préretraite*)

According to the OECD Report (2004), one of the main causes for the introduction of early retirement schemes was the iron and steel industry crisis, because Luxembourg had one of the biggest steel factories in Europe (ARBED). This was a way to hide unemployment under an early retirement, but it had very high costs and long term effects. Also due to these measures, the steel and iron sector reduced its employers from 34.000 in 1974 to only 6.400 in 2004¹⁰⁸. According to OECD

¹⁰⁴ Main source for this chapter: the official site of the *Organisme du Securite Sociale*, Luxembourg.
<http://www.secu.lu/legis/index.html>

¹⁰⁵ Source: Luxembourg: Rapport sur le système de pension; Inspection Generale de Securite Sociale, 2002

¹⁰⁶ Loi du 27 juillet 1987 concernant l'assurance pension en cas de vieillesse, d'invalidité et de survie, at :

<http://www.legilux.public.lu/leg/a/search/resultHighlight/index.php?linkId=2&SID=09a6b9fa436378532a610c5467e3f367>

¹⁰⁷ Source: MISSOC Report 2004, for more details on pension system in Luxembourg, see Annex 1.

¹⁰⁸ Source: STATEC, at: <http://www.statec.public.lu/>

estimations¹⁰⁹, if in 2000 in Luxembourg, the cost of early retirement was 12.6% of GDP, in 2010 will increase at 15.1% of the potential GDP, compare with an OECD average of 7.1% for 2000 and an estimated of 9.1 % for 2010.

The 2004 OECD report on *Vieillissement et politiques de l'emploi*¹¹⁰, drops attention on the fact that history repeats itself, especially in financial sector, which represents an important share of Luxembourgish economy. In order to face recent depression (although hidden behind different policies) many firms decided to give financial incentives to old workers to leave the labour market, with the intention to replace them in the future with younger workers. Therefore, age discrimination, often hidden under different policies it is still applied in different sectors.

The first early retirement measures were adopted in 1978¹¹¹ and concerned at the beginning only the iron and steel industry. Starting with the Law of 24th December 1990¹¹², early retirement schemes were open to workers from all sectors of activity. This law stipulates the conditions of eligibility for early retirement:

- the worker must be at least **57** years old on condition that 480 months of effective insurance can be proved or **60** years old on condition that 480 months of effective insurance or assimilated periods can be proved;
- the employee must have the right to an old age pension (according to the years worked) or the right to receive it at latest 3 years after early retirement. According to this provision, the period accorded can not be longer than 3 years (Art.2).

The amount of the early retirement pension is equal with¹¹³:

- first year - 85% of monthly gross wage received in the last three months;

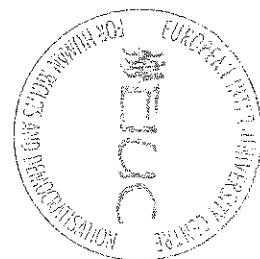
¹⁰⁹ Herbertsson, T., Orszag, M., *The Early Retirement Burden: Assessing the Costs of the Continued Prevalence of Early Retirement in OECD Countries*, July 2003, IZA Discussion Paper No. 816, at: http://www.iza.org/index_html?lang=en&mainframe=http%3A//www.iza.org/en/webcontent/publications/papers&topSelect=publications&subSelect=papers, p.10

¹¹⁰ OECD Report, 2004, p.37.

¹¹¹ *Loi du 30 novembre 1978 réglant les pensions des fonctionnaires de l'Etat*, at: <http://www.legilux.public.lu/leg/a/search/resultHighlight/index.php?linkId=5&SID=c7c8c9507e03ad36b1cc289d2ed15110>

¹¹² *Loi du 24 décembre 1990 sur la préretraite*, at: <http://www.legilux.public.lu/leg/a/search/resultHighlight/index.php?linkId=1&SID=4fa4f4058f7b70253ede88e568f67738>

¹¹³ For more details regarding the computation of the pensions in Luxembourg see Annex 1.



- second year - 80% of the monthly gross wage;
- third year only - 70 % of wage, after which is transformed in old age pension.

This replacement rate is rather high for an early retirement schemes, thereby it makes it even more attractive for old workers.

The 24th December 1990 Law establishes three types of early retirement schemes: the solidarity scheme, the one adapted for structural changes in the sector of activity - the reorganisation scheme, and that designed for those who work in difficult conditions (shifts and night work).

A. The Solidarity early retirement scheme (*La Preretraite Solidarité*):

It is used when there is a causal connection between retirement of an old worker and the employment of a new (young) one. The old worker manifest his willingness to leave at least three months earlier and the employer is presenting a demand at the National Employment Administration (ADEM), which sends qualified candidates for the job from those on their lists (unemployed or apprentices). In this way, there is a subventioned replacement exit. The scheme is very advantageous for the employer who is reimbursed for 70% of the costs of early retirement and in the same time it is "refreshing" its staff, therefore some old workers may be pressured to undertake this scheme. The fact that the replacement is numeric and not post by post, constitute another big advantage for the employer in case that he/she wants to make some structural changes in the firm.

B. The Reorganisation early retirement scheme (*La préretraite ajustement*) :

It is used in case of bankruptcy or closure of the firm or in order to avoid unemployment caused by reorganisations at the firm level due to technological changes. In these cases the employer can apply at the Employment Administration for a reorganisation early retirement scheme for its personnel (entirely or only for some of its workers). In this case, the costs of the early retirement are entirely reimbursed by the Employment Administration through the Funds for Employment.

C. The early retirement scheme for hard work conditions (shifts and night work): (*La préretraite travail posté ou en poste fixe de nuit*)

The early retirement for hard work conditions is applying when the applicant can demonstrate that he/she worked at least 20 years in shifts or by night. In this case as well, the costs of early retirement are entirely reimbursed by the Funds for Employment.

D. Progressive early retirement scheme (*La préretraite progressive*)

It is the most recent introduced measure, being regulated by the Law of 31 July 1995¹¹⁴. The same conditions as in the solidarity scheme apply, with the difference that old workers change their work contract from a full-time one to a part time one. The aim is to remain in the firm for a transitional period in order to transfer know-how to a young worker or apprentice. The employer must justify the hiring of a new worker (from the unemployed or apprentices on the ADEM's lists) with long term contract (*contrat à durée indéterminée*). Another important condition in order to be reimbursed by the Funds for Employment for the costs of early retirement is that the employer must keep the new worker for at least a period of 5 years after the retirement of the old worker (Art 16-3). These conditions rather complicated to fulfil make the measure less attractive for both, workers and employers, as we can see from

Table 4:

Table 4: Use of different types of early retirement (number cases/year)

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Solidarity	150	186	196	179	158	147	139	172	196
Hard work	112	119	142	139	125	116	113	133	193
Reorganisation	1.240	1.112	978	933	884	977	932	927	918
Progressive	-	-	4	2	1	2	-	1	2
Total/year	1.502	1.320	1.320	1.235	1.168	1.242	1.184	1.233	1.309

Source: Annual Activity Reports of Ministry of Work and Employment (MTE) 2003 and 2004
Available at: http://www.gouvernement.lu/publications/rapportsactivite/rapports_activite_2004/travail/index.html

Since it was introduced, in 1996 and till 2004, the progressive retirement was used only by 13 persons in Luxembourg. One of the explanations of this low use of the measure is that the application is a rather complicated bureaucratic process and the

¹¹⁴ *Loi du 31 juillet 1995 relative à l'emploi et à la formation professionnelle* at : <http://www.legilux.public.lu/leg/a/archives/1995/0651108/0651108.pdf?SID=056091c367ace5aa35cb9d5d2c4961d3#page=2>

condition of five year commitment for the employer with the new worker. Another explanation could be that it is more convenient for an employee to go in early retirement with a high pension level than to take a part time job (some of them have difficulty in accepting this) and to transmit the know how to a young worker. We think that a possible explanation is also the fact that in Luxembourg there are not well defined transitional paths in the labour market from a stage (employed) to another (pensioner). The Luxembourgish labour market is rather rigid, as an OECD Report (2001)¹¹⁵ highlighted.

Based on the same principle of the rotation of personal as progressive retirement, but without the exigent conditions of the latest, the solidarity retirement had more success, with a increase during the years (since 1996) of 30.66%. The most popular one remains the reorganisation scheme, because many times, especially in case of bankruptcy, the early retirement is "collective". Still, we can observe a decreasing trend by 26% between 1996 and 2004.

Unfortunately, as the OECD Report (2004)¹¹⁶ is stressing, no policy evaluation was ever made on the efficiency of these measures, with the aim to improve the system. Therefore, further and in depth research is necessary in the field. According with the EES and the OECD Report (2004), these measures are enhancing age discrimination on labour market with the exception of the case when early retirement is entirely a voluntary decision. Even if the decision is a voluntary one, the measures are still against the principles of EES: promoting active ageing policies and prolongation of working life even after retirement age.

4.3.2. Invalidity (*L'invalidité*)

Invalidity is a common exit measure in EU in case of work incapacity. In Luxembourg it is regulated by the Chapter III of Social Assurance Code (*Code des Assurances Sociales -C.A.S.*). The definition of invalidity, according to the law, is: *"Est considéré comme atteint d'invalidité l'assuré qui, par suite de maladie prolongée, d'infirmité ou d'usure a subi une perte de sa capacité de travail telle qu'il*

¹¹⁵ *Etude économique de l'OECD: Luxembourg*, OECD publication, 2001.

¹¹⁶ OECD Report 2004 p.77.

est empêché d'exercer la profession qu'il a exercé en dernier lieu ou une autre occupation correspondant à ses forces et aptitudes''¹¹⁷.

The invalidity must be certified by a specialised doctor. It can be temporary or definitive. Being a measure of exit from the labour market in a financially advantageous way, the measure was extensively used (see Table 5) before 2002. Then, due to the commitments taken by Luxembourg in the framework of the EES, the conditions for eligibility became more restrictive.

Table 5: Table 5: Number of applications for invalidity and negative responses (%)

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Applications	3.562	3.154	2.480	2.442	2.204	2.080	2.304	3.326	3.634
Refusals	368	579	617	659	746	651	731	1.579	1.811
	10.3%	18.4%	24.9%	27.0%	33.8%	31.3%	31.7%	47.5%	49.8%

Source: IGSS, Rapport Général sur la sécurité sociale, 2004, at:

http://www.gouvernement.lu/publications/rapportsactivite/rapports_activite_2004/securite_soc/rap2004secsoc.pdf

If the number of applications is still high (it increased slightly from 1996), the refusal rate increased dramatically, from 10.3% in 1996 at almost 50% in 2004 and this due to EES implementation in national policies, which made early retirement schemes more restrictive .

Even if the legislation did not change in order to restrict the access to invalidity only to those in need, in the jurisprudence of the Superior Council of the Social Insurance, Luxembourg, through the case HEPP versus EVI from 12/03/1997¹¹⁸ concerning an application for invalidity pension, the court interpreted the law in a restrictive sense, in the way that the applicant must prove that he is incapable of exercising his activity not only in his work place but **as well** as in other occupations which correspond with his qualifications. In this way, the jurisprudence delimitates the professional invalidity from the general invalidity, as it was regulated by the law. The effects of this judgement were significant in increasing the refusals of invalidity applications, because there were still other types of jobs possible for the applicant.

¹¹⁷ *Code des Assurances Sociales*, Art. 186-194, at :

<http://www.secu.lu/legis/legis/Legpen2.htm#peninv>

¹¹⁸ C.S.A.S. 12.3.97 HEPP c/EVI No 38/97 No.: I 142/96, available at:

<http://www.secu.lu/jus/juspensions/frameisevi/index.htm>

4.5. Positive Measures: Re-Insertion Policies in Luxembourg

The main measures in the framework of active ageing policies and reinsertion policies in Luxembourg are work incapacity schemes and incentives for reinsertion into the labour market. They were introduced in the last years in the framework of EES in order to coop with employment target allowing old workers to continue working in more suitable conditions to their health status and to employers to be reimbursed for a part of their extra costs of maintaining low productive workers by the ADEM.

Before the new Law of 25 of July 2002, the workers with reduce work capacity were in a very delicate situation. If their application for an invalidity pension was refuse because they were not fulfilling the criteria, they were often fired (after a period of 26 weeks of sickness the employer can fire them)¹¹⁹. If they were contesting in court the decision of refusal of the invalidity pension, motivating with the incapacity of work, they could not apply for unemployment benefits, because they declared themselves as being unable to work, therefore there were eligible only for minimum income allowance (RMI). This vicious circle was trapping many workers, and the new law gave them an alternative.

4.5.1. Work incapacity (*L'incapacité de travail*)

The condition for eligibility for the work incapacity schemes are defined by the Law of 25 of July 2002 regarding work incapacity and professional reinsertion: *"Le salarié qui n'a pas été reconnu invalide (cf. art. 186 du CAS) mais qui par suite de maladie prolongée, d'infirmité ou d'usure présente une incapacité pour exercer son dernier poste de travail bénéficie soit d'un reclassement interne (au sein de la même entreprise), soit d'un reclassement externe (sur le marché du travail)"*¹²⁰.

¹¹⁹ Source: Luxembourg: *Rapport sur le système de pension*; Inspection Generale de Securite Sociale, 2002, available at: http://europa.eu.int/comm/employment_social/soc-prot/pensions/lux_pensionreport_fr.pdf

¹²⁰ *Loi du 25 juillet 2002 concernant l'incapacité de travail et la réinsertion professionnelle*, Art. 1, at : <http://www.legilux.public.lu/leg/a/archives/2002/0763007/0763007.pdf#page=2>

This means that in the case of professional invalidity the employer, if it has over 25 employees (Art.2), it has the obligation to redistribute to the invalid worker another position within the firm, more suitable for his/her health condition. If the employer refuses to comply with its obligation it has to pay a compensation for 2 years (Art. 4). On contrary, if there is a pay gap between the new job as a result of the redistribution and the previous one, the ADEM is supporting the additional costs (Art. 3); therefore the worker is not financially disadvantaged by this measure.

If an internal redistribution is not possible, according to the law (Art. 5) they will proceed to an external redistribution through the National Employment Administration (ADEM). In a first phase, the old worker will be put on the placement lists of the ADEM and considered unemployed and he/she will receive the corresponding allowance ("*indemnité d'attente*"¹²¹) for a maximal period of 2 years. After the end of the term, if it was not possible to reinsert the person on the labour market, then he/she will be considered still active, searching for a job and will receive an allowance corresponding to an invalidity one.

The internal redistribution is a positive measure aiming to facilitate the maintaining of workers with reduced work capacity in firms, by providing them a more adapted job to their working capacities. The external re-distribution is a way to create a transitional path on the labour market, hopefully back to employment; but there are many cases when it is only an alternative way through invalidity for early exit from the labour market, and in these circumstances it can not be considered an active ageing policy.

As we can see from **Table 6**, the number of external redistributions' beneficiaries is almost double than of those who benefited of internal redistributions (mostly because there was not possible to give them different tasks in the same firm, or that many firms have less than 25 employees). The mobilisation of all social actors is necessary in order to implement active ageing policies in long term perspective; therefore efforts must be made even by the small firms, if an internal redistribution is possible.

¹²¹ Idem 120, Art.5.

Table 6: Internal and External Redistribution in cases/year in 2003 by gender

	Total	Women	Men	%
Applications	923	342	581	100%
Internal Redistribution	265	91	174	29%
External Redistribution	510	199	311	55%
Pending Applications	87	28	59	9%
Inadmissible Applications	53	22	31	6%
Application without object	8	2	6	1%

Source: NAP 2004, p.40

4.5.2. Incentive for re-insertion on the labour market - for employer

(*'aide à l'embauche*)

The incentives for the re-insertion on the labour market (*'aide à l'embauche*) measure is regulated by Law of 23 July 1993. It consists in a special allowance /incentives given to the employer. The employer who hires an old unemployed aged 50 or more, who was on the ADEM lists for at least 1 month, is partially reimbursed for the social security contributions for a period of max. 7 years by the ADEM. The employer who hires an old unemployed aged 40 or more, who was on the ADEM lists for at least 12 months, is partially reimbursed for the social security contributions for a period of max. 3 years.

Table 7: Use of the Incentive for re-insertion on the labour market - for employer (*aide au à l'embauche*) in number of cases per year:

Year	2001	2002	2003
Nr. of cases	296	364	428

Source: Activity Report of Ministry of Work and Employment (MTE) 2004

As we can see from **Table 7**, the re-insertion allowance registered an important increase, its beneficiaries almost doubled since 2001 - which represents a positive trend.

4.5.3. Incentive for re-insertion on the labour market - for employees (*Aide au réemploi*)

The measure is regulated by Law of 31 July 1995¹²² which stipulates the general condition of applications. It consists of an allowance given to the employee who was fired or who is in danger to be fired for economical reasons, or who is transfer for the same reasons, or who is redistributed in a position worse paid in order to compensate for the monetary lost.

Table 8: Use of the incentives for re-insertion '*aide au réemploi*' (in number of cases/year)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Nr. of cases	206	323	747	669	852	1.012	1.100	1.288	1.575	2.010

Source: Activity Report of Ministry of Work and Employment (MTE) 2004

As we can see in the **Table 8**, the measure was successful, there are almost 10 times more beneficiaries in 2004 than in 1995 and it is encouraging that active ageing policies have take up in Luxembourg as well.

In conclusion, in Luxembourg there are 2 contradictory trends in the employment policies: a system of early retirement schemes (although with more restrictive entry barriers since 2001)- but still in contradiction with EES objectives, and several measures of active ageing policies which are more and more used in the last years, a positive trend, although still not very popular.

The next chapter of this paper will present the empirical analysis of the impact of perceived age discrimination on the decision to exit earlier from labour market undertaking early retirement schemes.

¹²² *Loi du 31 juillet 1995 relative à l'emploi et à la formation professionnelle* at : <http://www.legilux.public.lu/leg/a/archives/1995/0651108/0651108.pdf?SID=056091c367ace5aa35cb9d5d2c4961d3#page=2>

5. Empirical analysis

5.1. Literature review

Are old workers “*encouraged*” by their employers to retire early from the labour market? Is perceived discrimination at the work place playing a role in decision to retire early? Which are the other factors that influence this decision and in which sense? The empirical analysis will try to answer at all these questions.

Several empirical studies were done on the influences of different job related characteristics and individual socio-demographic characteristics on the decision to retire earlier from the labour market. Blekesaune and Solem (2005) consider that sometimes early retirement can be imposed to the old workers by their employers who do not give them the opportunity to continue their work¹²³. In a longitudinal case study on the Norwegian labour market they found evidence that the timing of retirement is influenced by: physical strains of the job (hard physical work is associated with early retirement), marital status (married or cohabiting people are more likely to retire earlier than the others), gender (women retire later also because the couple tends to coordinate their retirement timing; in a couple men are, in average older than their wives); education (higher education is a predictor of later retirement) and income (people with higher income are more likely to retire earlier).

In an OECD case study on The Netherlands, Lindenboom (1998) found evidence of strong incentives (high replacement rate) in the early retirement schemes on the probability to retire. He defines **retirement** as “*a decision regarding the optimal age to stop working given the individuals environment and his/her relative preference for income and leisure*”¹²⁴. This definition applies only to voluntary retirement, since the author is stressing that there are evidences of an involuntary retirement as well, at the pressures of the employers. Lindemboom (1998) considers

¹²³ Blekesaune, M, Solem, P. E., *Working conditions and early retirement: a prospective study of the retirement behaviour*, in «Research on Aging», vol. 27, no. 1, 3-30, 2005, p.6.

¹²⁴ Lindeboom, M, *Microeconomic Analysis of the Retirement Decision: The Netherlands*, OECD Working Papers No. 207, ECO/WKP(98)20, 1998, at: <http://www.oecd.org/dataoecd/55/35/1867079.pdf>, p.4.

that the individual environment is determined by the institutional settings (including the employer's human resources policy).

Studying effects of job characteristics on the decision to retire early using data from the US census, Filer and Petri (1988)¹²⁵ concluded that age at retirement is determined by specific characteristics of the jobs; therefore, workers who have jobs that are differentially difficult for old workers to perform are more likely to retire earlier. Another interesting finding of their study was the perverse effect of generous schemes of early pension benefits: they will create incentives to retire earlier.

Comparing several OECD countries, Blöndal and Scarpeta (1998)¹²⁶ consider that retirement age is significantly influenced by financial incentives, especially by the replacement rate of early retirement schemes: in country with a low replacement rate people will tend to prolong their working life until they can retire in more advantageous financial conditions. In Luxembourg, according to OECD estimations,¹²⁷ replacement rate for early retirement for a 55 year old worker is, in average, 93% of his wage, one of the highest replacement rate among all OECD countries (in the Nordic countries for example it is around 50% and in Australia it replace only 41% of the work revenue, a policy aiming at discouraging early retirement). These findings illustrate the fact that the effect of the pension revenues varies from country to country and depends largely on the replacement rate of the pension system.

Using an discrete time independent competing risk model in a cross country comparison in Germany, Britain and The Netherlands, Schils (2004)¹²⁸ found evidence that Dutch women have lower hazard¹²⁹ to retire than men (this can be explained by the fact that often they do not meet the criteria for early retirement

¹²⁵ Filer, R., Petri, P., *A Job Characteristics Theory of Retirement*, in «The Review of Economics and Statistics», vol. 70, no.1, Feb. 1988, p. 123-128.

¹²⁶ Blöndal, S., Scarpeta S., *The retirement decision in OECD countries*, Economic Department Working Papers no. 202, ECO/WKP (98)15, June 1998.

¹²⁷ Idem, 126, p.96.

¹²⁸ Schils, T., *Early Retirement Behaviour of senior workers: A comparative analysis of Germany, Britain and the Netherlands using panel data*, Paper Presented at the 1st International Conference for Panel Data Users, Zurich, February 23-24, 2004, February 19, 2004, at: http://www.unizh.ch/sts/research/conferences/panel_conference/papers/pschils.pdf

¹²⁹ A negative effect of the hazard to retire means that women are more likely to retire later than men (the risk of leaving employment status is lower for women).

schemes due to interrupted carrier); good health has a negative effect on the hazard to retire; a negative effect of the high education in Britain (rather an exception, as the author highlighted¹³⁰); and a positive effect of the hourly wages in Britain but negative in Germany; a negative hazard to retire for single people and for those having dependants in Germany and a positive hazard for those working in public sector in both UK and Germany. This study shows that effects of the independent variables can vary and can even have opposite signs across countries. This is explicable by the different cultural and institutional settings, as well as by the different public policies (like early retirement schemes). Actually the influence of the income on retirement age is strongly linked on the replacement rate of the pension system and the financial incentives of the early retirement, which differ from country to country in line with the above studies.

We will base our hypothesis mainly on Reinstadler's (2004) study¹³¹ on the determinants of retirement age on Luxembourg using PSELLII data base, the 2001 wave. The author found evidence that the retirement behaviour of Luxembourgish can be explain by: type of activity after retirement; education (high educated people are more likely to retire later), type of profession (workers in the handcrafting sector are more likely to retire earlier than the others, those working in administration or constructions are more likely to retire later than all the others, those working in the steal sector are the ones who leave first the labour market); matrimonial status (singles are retiring earlier, an unexpected effect); children (positive effect), nationality (Luxembourgish nationals retire in average earlier than foreigner residents); age at first job (those who started to work later will tend to retire later) and estimation of the years worked (positive relation). Among the limitations of her study, Reinstadler is mentioning the fact that she could not control, due to data limitations, for important variable like health status, financial incentives and an essential factor: firm's policy towards its old workers: "*l'intérêt qu'elles [les entreprises n.a.] peuvent trouver a des départs précoces ou a contraire tardifs.*"¹³² She leaves a path open for a further analysis.

¹³⁰ Idem 128, p. 22.

¹³¹ Reinstadler, A., *Les non-activités ages de 55 a 64 ans: pourquoi certains ont-ils cesse leur activité professionnelle plus tôt que d'autres ?*, Document du recherche PSELL, no. 2004-18, Luxembourg, Avril 2004.

¹³² Idem 131, p. 9.

5.2. Research Questions and Hypotheses

The theoretical framework presented in the previous chapters and the empirical studies reviewed provide the basis for our hypotheses. Our main research questions are:

Are old workers discriminated by their employers at the exit from the labour market? Does the perceived discrimination influences old workers' retirement behaviour, being more likely to leave as soon as possible undertaking early retirement schemes?

Consequently, the main hypothesis for which we want to test with our model is that the **firm's policy** has an impact on the decision to retire from the labour market: a discriminatory policy will determine them to retire earlier or, conversely, an active ageing policy will encourage them to prolong their working lives.

Based on the findings of the reviewed empirical studies in the previous section, we will construct operational hypothesis for the effects of all the others independent variables on the dependent one.

Regarding the influence of the first **socio-demographical characteristic**, gender, we expect women to retire later than men due to interrupted career. We expect that single people (never married, divorced, separated or widows) are more likely to retire later than married ones, because of different value that they assign to work time and leisure: having a family, married people will tend to value more their leisure time. The number of children will influence positively the retirement age and can be explain through two mechanisms: in the case of active women, they will be more likely to retire later due to the career interruption for maternity; for men, a larger number of dependent children creates a necessity to work longer in order to provide more revenue for the household. Therefore people with more children are more likely to retire later. There is a big gap between participation rates of foreigners and

nationals¹³³, difference confirmed by Reinstadler's study (2004)¹³⁴, therefore foreigner residents will be more likely to retire later from the labour market. As the empirical studies underlined, education seems to be directly correlated with retirement age: people with higher education are more likely to retire later than the others.

Regarding **job related characteristics**, more specific the type of profession, empirical studies reviewed show that those working in physically demanding jobs retire in average earlier than the others; therefore we expect that low qualified workers will retire earlier than all other employees, with the exception of those working in the handcrafting sector. Reinstadler (2004)¹³⁵ discovered that most of those working in handcrafting sector in Luxembourg were actually ARBED's employees and the big steel factory used extensively early retirement schemes¹³⁶.

To have high pension revenues represents an incentive to retire earlier and we expect that it will have a negative effect on the retirement age. In the category of financial incentives could be also the private pension which can have ambiguous effects: if the worker contributed long enough to have full benefits, it can be an incentive to retire earlier, consequently, if the worker joined recently the third pillar of the private pension schemes it can be an incentive to prolong his working life in order to contribute enough years to receive full benefits.

People who worked more years are more likely to undertake early retirement because they fulfil easier the eligibility criteria (in terms of minimum years worked) than those who worked less years. Consequently, people who started later their working carrier are more likely to retire later.

The expected effects of the independent variables, as mentioned in this section, on the timing of the early retirement are summarised in **Table 9**.

¹³³ See Table 3: Activity rate- old of people (55-64) in Luxembourg 1997-2003 (%) by nationality and gender in Chapter 4.

¹³⁴ Idem 131, p.10.

¹³⁵ Ibidem 131, p. 7.

¹³⁶ See Chapter 4.

Table 9: The expected effects of the independent variables on the dependent one (retirement age in years)

Dimensions	Categorical variables	Independent variables in the model	Expected effect on dependent variable
Firm's policy (as perceived by the respondent)	Firm's policy	- <i>Neutral</i> - <i>age discrimination</i> - <i>active ageing policies</i> Women	Ref. - + +
Socio-Demographic Characteristics	Marital status	- <i>married</i> - <i>never married</i> - <i>divorced, separated</i> - <i>widow</i> number of children Foreigner	Ref. + + + + +
	Education level	- <i>none, primary, low secondary</i> - <i>higher secondary level</i> - <i>high level</i>	Ref. + +
Job Related Characteristics	Type of profession (BIT classification)	- <i>low qualified workers</i> - <i>qualified workers</i> - <i>handcrafting sector</i> - <i>administrative professions</i> - <i>intermediate professions</i> - <i>intellectual professions</i> - <i>senior officials</i> - <i>sales and services sector</i> pension revenue (100E/year) private pension working experience (years) Age at first job	Ref. + - + + + + + + + ? - +

Legend:

+ : positive effect

- : negative effect

? : ambiguous effect

Ref.: reference category

5.3. Methodology and Data Base

We want to test if there is a causal relationship between firm's policies in terms of discrimination towards old workers and the timing of the early retirement in Luxembourg. As we could see in the reviewed empirical studies, there are other variables which could influence retirement decision. Therefore we will consider timing of early retirement as a function of the firm's policy, socio-demographic characteristics of the individual and job related characteristics (ch.). Consequently, our model can be written as:

Retirement Age = f (Firm's Policy, Socio-Demographic Ch., Job Related Ch.)

We will use employee's perception of the discouragements or, on the contrary, of the encouragements from the part of the employer to prolong their working lives as a proxy for age discrimination, respectively active ageing policies (recoded as firm's policy towards its old workers).

The empirical model will test if there is a statistically significant difference between the retirement behaviour of those old workers who felt discriminated at the work place and those who did not and will estimate the value of this difference (the size of the effect). The statistical method used to estimate our model will be a linear regression¹³⁷ with the dependent variable - *early retirement age* and independent variables: *perceived firm's policies* (active ageing, discrimination, neutral), *socio-demographic variables* (gender, marital status, number of children, nationality, education level) and *job related characteristics* (activity sector, revenues, private pension, working experiences and age at first work).

The data are drawn from the first wave (2003) of the third *Panel Socio-Économique "Liewen zu Lëtzebuerg"*¹³⁸ (PSELL III), which is part of the EU-SILC (*Statistics on Income and Living Conditions*). EU-SILC was launched in 2003 in order to provide micro-data on household incomes and social exclusion in EU and

¹³⁷ For detailed methodology see Annex 2.

¹³⁸ *Living in Luxembourg* (translation of the author from Luxembourgish).

Luxembourg was one of the first six Member States which run the first wave¹³⁹. Using PSELL III we can obtain results representative for the resident population in Luxembourg, therefore they can be generalised at the national level. The sample size of PSELL III (N) is 7675 adult individuals.

We controlled for selectivity bias with a *two-steps Heckman procedure*¹⁴⁰ introducing the *inverse of Mill's ratio* (calculated with the help of a logistic regression¹⁴¹ in a first step) in our linear regression (in the second step). We estimated the probability of being selected in our subsample by applying the logistic regression procedure on the adult population of the entire sample, in total 7675 individuals.

We discarded self-employed from our sample because, as an OECD study (1998) highlighted, "*retirement behaviour of self-employed is expected to differ substantially from that of other workers*"¹⁴². We choose the OECD definition of old workers: "*over 50 years old*"¹⁴³ and we fixed the upper age limit at retirement in our sample at 64 years (before the statutory retirement age, 65 in Luxembourg). Therefore our basic sub-sample used for the estimation of the regression model includes only workers who retired early and who were working as employees in previous job, in total **424 individuals**.

The data are weighted in order to control for sampling errors (some categories of individuals may be underrepresented in our sample). The new weights are calculated based on the original weight of PSELL III data base, 2003 wave¹⁴⁴.

One of the limitations of our study is that the selected sample is rather heterogeneous, and retirement behaviour of workers at the age of 50 years can be substantially different from that of the workers aged over 60. Initially we intended to

¹³⁹ In 2005 EU-SILC will be compulsory for all Member States, source: <http://epp.eurostat.cec.eu.int>

¹⁴⁰ For more details see: Smits, J., *Estimating the Heckman two-step procedure to control for selection bias with SPSS*, Sept. 2003, at: <http://home.planet.nl/~smits.jeroen/selbias/Heckman-SPSS.doc>. The procedure is described in Annex 2.

¹⁴¹ Please find the model of the logistic regression in Annex 4. The results of the model will not be discussed here since they are not relevant for our analysis.

¹⁴² Lindeboom, M, *Microeconomic Analysis of the Retirement Decision: The Netherlands*, OECD Working Papers No. 207, ECO/WKP(98)20, 1998, available at <http://www.oecd.org/dataoecd/55/35/1867079.pdf>, p. 7.

¹⁴³ OECD 2004, p. 3.

¹⁴⁴ See Annex 2 for computing procedure of the new weights.

compare the two subgroups, but we faced the problem of the insufficient number of cases in the “over 60s” subsample. Another limitation was the fact that we could not control for some important predictors of the retirement age like health status at the moment of retirement, since we have the information only for the reference year of the survey, and there is a gap of several years between the moment of the interview and the exit from the labour market. This problem could be solved with a longitudinal analysis, and this could be the path for a further research.

5. 5. Descriptive analysis

This section will use descriptive statistics such as frequencies, cross-tabs and graphs to illustrate the relationships between the independent variables and the dependent one or between two independent variables (we will focus on age discrimination).

5.5.1. Dependent variable: early retirement age

Early retirement age is a continuous variable ranging from 50 to 64 (the limits which we selected, explained in the sampling procedure above) with a mean of 57.37. As we can see from **Figure 2** there are two peaks in the retirement age, at 57 and at 60 years, corresponding with the ages at which the workers fulfil the eligibility criteria (discussed in the previous chapter) for early retirement schemes.

Figure 2: Early retirement age (% of cases)



5.5.2. Independent variables

a. Firm's Policy

Firm's policy represents the employee's subjective perception of the employer's attitude towards old workers and it has three categories¹⁴⁵: perceived discrimination, active ageing policies and neutral policies (were recoded in this category the responses of those workers who did not felt either encouraged nor discouraged to prolong their working life). The variable was created by recoding the answers at two questions addressed for the first time during 2003 survey on the pensioners and early retired younger than 68 years at that moment¹⁴⁶.

The question used as a proxy for discrimination was: *"Avez-vous eu l'impression que votre employeur incitait les travailleurs en fin de carrière à partir le plus tôt possible ?"*¹⁴⁷.

The limitation of the construction of this variable is the fact that it is a subjective one; it measures the perceived discrimination by the old employee at his work place. We notice that the question was asked in a general manner to measure firm's policies towards its old workers and not towards an employee in particular.

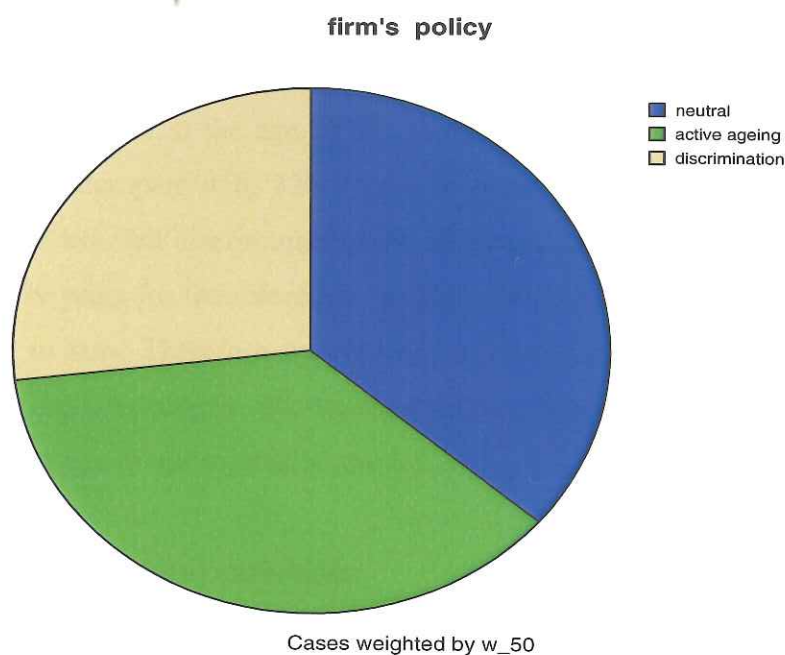
As we can see from **Figure 3**, a large share of the old employees, 26.9% of them, felt discriminated at the work place. Only 37% of old workers felt encourage by their employer to continue their working life. For 26.9% of them firm's policy towards its old workers was neutral: they did not feel neither encouraged nor discouragement to stay.

¹⁴⁵ Recoded for the regression analysis in dummies, for details see Annex 2.

¹⁴⁶ The aim of the questionnaire was to assess the potential participation on the labour market among the young pensioners.

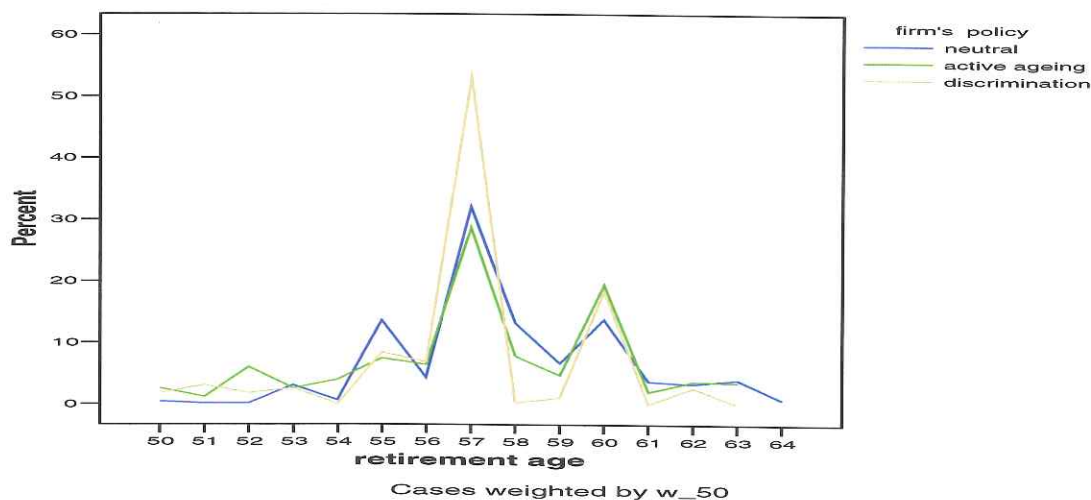
¹⁴⁷ PSELL III Questionnaire, Module R, p. 31.

Figure 3: Age discrimination in Firm's Policies



Perceived age discrimination has a strong impact on the retirement age, as we can see in **Figure 4**: retirement behaviour of those who felt discriminated differs substantially from the one of those who did not felt discriminated. This difference is more visible at the age of 57 (the minimum eligibility age for early retirement in Luxembourg).

Figure 4: Early Retirement by Firm's Policy



As soon as they are eligible for early retirement schemes, 52% of those who felt discriminated exit the labour market, compared with only 32% of those who felt neither discriminated neither encouraged to stay. Between the last category and those who felt encouraged to prolong their working life it is just a small difference in the retirement behaviour at the age of 57: 28.8% of those who felt encouraged exit the labour market compare with 32% in the reference category. The average retirement age for those who felt discriminated is 56.97 years, compare with a average retirement rate of 57.79 years for the reference category and only 57.25 years for those who felt encourage to stay. Therefore we will expect a rather weak effect of active ageing policies on early retirement. We expect a strong effect of the perceived discrimination on retirement age in our regression model.

b. Socio-demographical variables:

In our sample women are underrepresented: only 25% compared with 75% men, an indicator of the low participation rate of women in general, and of old women in particular, on the Luxembourgish labour market¹⁴⁸. The retirement behaviour of men and women differ substantially¹⁴⁹. Men are more likely to undertake early retirement schemes and there is a gap in the 57 years' peak of early exits from the labour market between them: 87% of men retire at 57, compare with only 12.3% of women. Women are more likely to retire in their 60s. There is a difference of 4 months in the average retirement rates: 57.28 years for men compare with 57.64 years for women.

Divorced and separated workers are more likely to retire earlier¹⁵⁰, with an average retirement rate of 56.38 years followed by the married ones, with an average retirement rate of 57.34 years. Those who were never married postpone their exit from the labour market with an average retirement age of 59 years; therefore we expect a strong effect of this category. People with more children¹⁵¹ are more likely to retire earlier with an average retirement rate of 57.37 years for those with 5 children,

¹⁴⁸ See Figure 1, Chapter 4.

¹⁴⁹ See Figure 3.1.: Early Retirement by Gender in Annex 3.

¹⁵⁰ See Figure 3.2.: Early retirement by marital status in Annex 3.

¹⁵¹ the maximum number of children/individual in our sample is five and the mean is 1.78 children/person, a low fertility rate, under the replacement rate, which on long terms has important effects on demographic ageing.

compare with 57.96 years for those without children. The effect of the first child is significant: they retire 1 year later than those who are childless. Beside this effect, there is no substantial difference between the retirement behaviour of old workers with different number of children; therefore we will expect a weak effect on the dependent variable¹⁵².

In our sample we have 23% foreigner residents and 76.9% Luxembourgish. The 57 *peak* of the early retirement schemes coincides for both Luxembourgish and foreigners workers; a difference can be noticed at the age of 60, when Luxembourgish are more likely to retire than foreigners¹⁵³. The average retirement rate is higher for Luxembourgish (57.48 years) than for foreigners (57 years), which is rather unexpected.

Regarding the education level, 55.2% of our respondents have no education at all, primary or lower secondary level, 22% have a high secondary level diploma and 22.8% a high level of education. The retirement behaviour of the last category differs substantially from the one of the others¹⁵⁴, with an average retirement age of 58.91 years, compare with 56.74 for those with the lowest education level; therefore we will expect a strong effect of the high education on the timing of retirement.

c. Job Related Characteristics

Regarding the retirement behaviour of people working in different sectors we can notice¹⁵⁵ a later retirement in the case of those working in intellectual professions with a average retirement rate of 58.47 years and of the senior officials with a average retirement rate of 58.39 years, compare with low qualified and qualified workers with an a average retirement rate of 57 years. Qualified workers have the lowest average retirement rate (56.52 years) followed by those working in handcrafting sector (56.79 years).

¹⁵² See Figure 3.3: Early retirement by number of children in Annex 3.

¹⁵³ See Figure 3.4.: Early retirement by nationality in Annex 3.

¹⁵⁴ See Figure 3.5.: Early retirement by education level in Annex 3.

¹⁵⁵ See Figure 3.6: Early retirement by profession in Annex 3.

Descriptive statistics do not offer us a clearer picture on the effect of the pension revenue on retirement age¹⁵⁶; therefore we have to check the effect in the explanatory analysis.^{*} People who joined a private pension scheme (50.3% of our sample) are more likely to retire earlier than the others¹⁵⁷, in average at 57.56 years compare with 57.18 years for the rest of the workers.

Self reported working experience is a continuous variable ranging from 3 to 53 years. Luxembourgish people are working, in average, 38.38 years. They start early, in average, at 17.53 years, with a minimum age at the first job of 7 years¹⁵⁸ and a maximum of 36. The descriptive statistics do not offer us a clear picture of the effects of these variables on the retirement behaviour¹⁵⁹; therefore we have to check their effect in the explanatory analysis.

5.5.3. Are there evidences of double discrimination?

Some categories of workers may be more vulnerable than others, especially when the grounds of discrimination accumulate. *Is it more discriminated an old woman than an old man? Are foreigners the first ones to be pressured to undertake early retirement schemes?* We tried to answer at these questions with the help of a crosstabulation¹⁶⁰ of gender and foreigners variables on firm's policy. The results are unexpected, as we can see in **Figure16**.

Men are more likely to feel discriminated on age ground than women, 29.2% of them felt discriminated compare with 19.5% of women. Consequently, women are feeling more encourage to prolong their working life, with 46.2%, compare with 34% for men. It is an interesting result, but we have to keep in mind that the descriptive statistics may be biased by the errors or by the effects of other independent variables, therefore only an exploratory analysis can tell us the real effect¹⁶¹.

¹⁵⁶ See Figure 3.7.: Early retirement by pension revenue (mean) in Annex 3.

¹⁵⁷ See Figure 3.8: Early retirement by private pension in Annex 3.

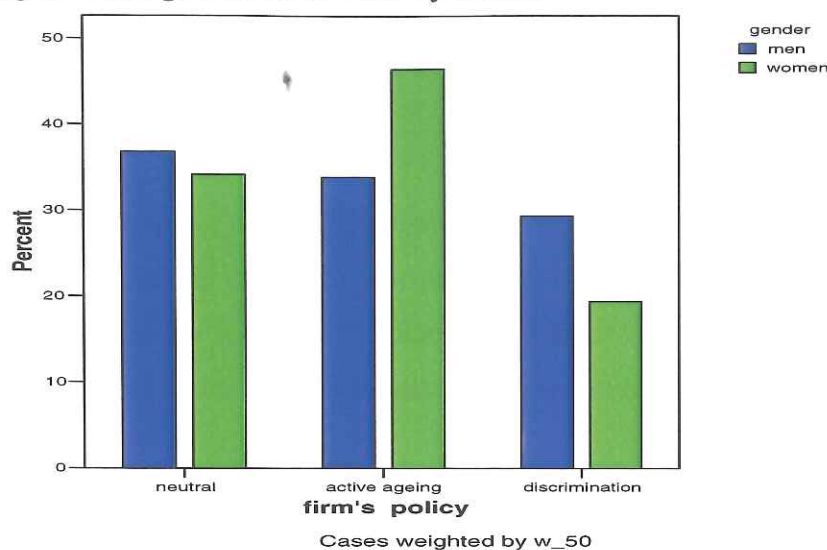
¹⁵⁸ We did not consider this an outlier since 38% of our sample started to work before the age of 16.

¹⁵⁹ See Figure 3.9.: Retirement Age (mean) by Working experience and Figure3.10: Retirement Age (mean) by age at first job, in Annex 3.

¹⁶⁰ See Table 3.11: Crosstabulation Gender by Firm's Policy and Table 3.12: Crosstabulation Foreigners by Firm's Policy in Annex 3.

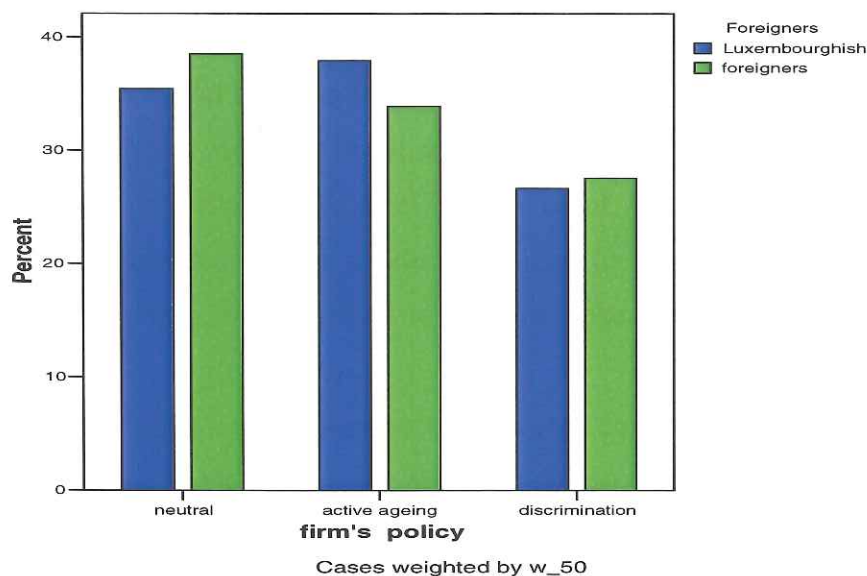
¹⁶¹ We wanted to check this hypothesis and we run a binary logistic regression with the dependent variable: perceived discrimination and independent variables socio-demographic and job related characteristics and the effects of neither of them were statistically significant, therefore we could

Figure 16: Age discrimination by Gender



As far as it concerns the cumulus of age and ethnic discrimination we can see from **Figure 17** that foreigners are slightly more likely to feel discriminated: 27.6% compare with 26.7%¹⁶² of the nationals. The difference is less than 1 percent; therefore it is not statistically significant. Luxembourgish feel more encouraged to stay on the labour market with 38%, compare with 33.7% for foreigners.

Figure 17: Age Discrimination by Nationality



conclude that perceived age discrimination at the work place can not be explained by the socio-demographic characteristics of the individual.

¹⁶² See Table 3.12.: Crosstabulation Foreigners by Firm's Policy in Annex 3.

We can conclude that age discrimination is not linked with other grounds of discrimination, it is generalised among old workers regardless of their ethnic origins or gender.

Descriptive statistics supported our hypotheses, giving us some hints about the magnitude of the effects on the dependent variable, but only an explanatory analysis can estimate the real effect of each variable and its magnitude, therefore in the next section we will analyse the results of the regression model.

5.6. Explanatory Analysis

In order to test our hypotheses, we applied a linear regression model with dependent variable - early retirement age and independent variables: perceived firm's policy (*discrimination, active ageing, neutral*), socio-demographic variables (*gender, marital status, number of children, nationality, education level*) and job related characteristics (*activity sector, revenues, private pension, working experiences and age at first work*). The results of the regression model are presented in **Table 10**.

The model explains 28.4% of the timing of retirement which represents a good estimation for a model in social sciences, where there are behavioural characteristics for which is difficult to control¹⁶³. Inverse of Mill's ratio¹⁶⁴ is highly significant, which means that it was a selectivity bias for which we controlled, thereby our predicted values are more likely to be close to the true ones.

As far as our independent variables are concerned, we observe from the model presented in **Table 10**, that the effect on the dependent variable is highly significant for: *never married, number of children, nationality, working experience and age at first job* (at 0.01 level); very significant for: *age discrimination and private pension*

¹⁶³ R Square=.284. Adjusted R Square (preferred by some researchers because it is not biased by the number of the independent variables) is .245. For detailed model statistics see Annex 4. See also Allison, P. *Multiple regression- a primer*, Pine Forge Press, US, 1999, p.13.

¹⁶⁴ For details on the computation procedure see Annex 2.

(at 0.05 level) and significant for: *gender, divorced & separated, higher secondary level, high level of education, administrative professions and sales and service sector* (at 0.1 level). For all the other variables we can not reject the null hypothesis therefore we consider that their effects on the retirement behaviour are not statistically significant.

Table 10: Model's coefficients and significance with dependent variable-retirement age (years)

Dimensions	Categorical variables	Independent variables in the model	Estimated Coefficients and significance level
Firm's policy	Firm's policy	(Constant)	70.714***
		Inverse of Mill's ratio	-6.460***
		<i>-neutral</i>	Ref.
		<i>-age discrimination</i>	-.741**
Socio-Demographic Characteristics	Marital status	<i>-active ageing policies</i>	-.325
		Women	.629*
		<i>-married</i>	Ref.
		<i>-never married</i>	4.021***
		<i>-divorced & separated</i>	1.120*
		<i>-widow</i>	-.474
	Education level	number of children	.511***
		foreigner	1.017***
		<i>-none, primary, low secondary</i>	Ref.
		<i>-higher secondary level</i>	.577*
Job related Characteristics	Type of profession (BIT classification)	<i>-high level</i>	.708*
		<i>-low qualified workers</i>	Ref.
		<i>-qualified workers</i>	.069
		<i>-handcrafting sector</i>	-.158
		<i>-administrative professions</i>	1.024*
		<i>-intermediate professions</i>	.505
		<i>-intellectual professions</i>	.411
		<i>-senior officials</i>	.860
		<i>-sales and services sector</i>	1.129*
		pension revenue (100E/year)	.000
		private pension	.599**
		working experience (years)	-.213***
		age at first job	.155***

Legend:

Ref.: reference category

in italic: dummies of the same variable

in bold: significant variables

Level of significance:

*** significant at 0.01 level

** significant at 0.05 level

* significant at 0.1 level

Perceived age discrimination has a very significant negative effect on the retirement age, as expected. Workers who felt discriminated are more likely to retire, in average, almost 9 months¹⁶⁵ earlier than those who were not discriminated, nor encouraged to stay (reference category). This confirms our central hypothesis: there are statistical evidences that workers are discriminated at the exit from the labour market and which prove that the employer's attitude has a significant negative effect on their decision to retire: the old workers are persuaded to undertake early retirement schemes as soon as they fulfil the eligibility criteria. We have to remark that active ageing policies do not have a statistically significant impact on the retirement decision. This fact has important consequences for social policy makers, which will be discussed in the policy recommendations.

We will briefly discuss the effects of the other independent variables, starting with the socio-demographical ones. Women are more likely to retire, in average, 7.5 months later than men and this confirms our hypothesis. The fact can be explained by the interrupted career of women (and the need to work more in order to fulfil the eligibility criteria for early retirement schemes). This finding is supported by the effect of the number of children: for each additional child, workers will retire, in average, 6.13 months later. The strongest effect from all the independent variables is of those never married who retire, in average, 4 years later than married ones. This effect can be explained also by the fact that they do not have family obligations (with one exception, they do not have children¹⁶⁶). The same positive effect we can see it in the case of divorced and separated persons who retire, in average, 1 year later than the married ones. This different retirement behaviour can be explained also by the value assigned to work or leisure by each category: those married would prefer to have more time for their family. As we expected, the effect of nationality is highly significant: foreign residents retire, in average, 1 year later than Luxembourgish nationals. The level of education has a direct proportional effect on early retirement age: those with high secondary level retire, in average, 7 months later than those with lower education level; high educated workers retire, in average 8.5 months later than those with the no education, primary or low secondary level.

¹⁶⁵ We transformed years in months $0.741 \text{ years} = 8.89 \text{ months}$.

¹⁶⁶ See Table 3.13: Crosstabulation never married by number of children in Annex 3.

Regarding the effects of the job related characteristics, from *type of profession* variable we can see in **Table 10** that only some categories have a significant effect on the dependent variable: those working in administrative professions retire, on average, 1 year later than low qualified workers. People who work in sales and service sector retire, on average, 1.29 years later than low qualified workers, an expected effect. When we controlled for educational level, we noticed that those who work as senior officials and in intellectual professions (who had the highest average retirement rate¹⁶⁷) do not have statistically different retirement behaviour from low qualified workers, therefore the effect identified in the descriptive statistics was rather due to the educational level and not entirely to the type of profession. These results prove the fact that in the descriptive statistics some effects are biased by the influence of other variables for which we can not control.

The effect of the private pension is interesting: those who joined a third pillar pension are more likely to retire, in average, 7 months later than those who will not receive a private pension. This supports the hypothesis that joining a third pillar creates incentives to prolong working life.

Working experience has a negative effect, as expected: for each additional year worked, people are more likely to retire, in average, 2.5 months earlier. This can be explained by the fact that they are more likely to fulfil the eligibility criteria for early retirement schemes. Conversely, age at first job has a positive effect: for each additional year of delay in starting their working carrier, individuals will retire, in average, 1.86 months later. This expected effect confirms the previous finding: they have to work until a later age in order to fulfil the eligibility criteria for the retirement schemes.

The explanatory analysis confirmed our hypotheses (for the variables with significant effects discussed above) and, in particular, our central hypothesis: there are evidences of age discrimination at the exit from the labour market in Luxembourg.

¹⁶⁷ See Chapter 5.

Most of our findings came to confirm the results of the previous empirical studies. A different result from Reinstadler (2004)¹⁶⁸ we got in the case of the strong positive effect of singles category, but our findings are supported by the previous empirical studies (Blekesaune and Solemn, 2005; Lindenboom, 1998; Schils, 2004).¹⁶⁹

Those workers who felt discriminated had a statistically significant different behaviour from those who were not as far as it concerns the timing of retirement, being more likely to undertake early retirement schemes. To answer to our research question, we can say that there are statistical evidences of age discrimination at the exit from labour market. The fact that old workers are "*encouraged*" to undertake early retirement schemes has a significantly effect on their retirement behaviour: they are "*pushed out*" from the labour market.

6. Conclusions and Policy Recommendations

With the help of legislative, social policy and empirical analysis approaches, the present paper tried to investigate the existence of age discrimination at the exit from labour market in Luxembourg.

Though it signed and ratified all main international treaties which prohibit discrimination, Luxembourg is the laggard of the European Union as far as implementation of directives regarding equal employment opportunities is concerned. Although there is a draft bill pending in the Parliament since 2003, this does not accurately transpose the EU directives, leaving the doors open for discriminatory practices. Moreover, present national legislation promotes age discrimination regarding access to public employment. There are no specific provisions in the Luxembourgish legislation prohibiting age discrimination.

¹⁶⁸ Reinstadler, A.op. cit, p. 6. She found evidence that singles are more likely to retire 1 year earlier than married ones.

¹⁶⁹ See Chapter 5.1

We identified two contradictory trends in the Luxembourgish social policy: on the one hand, active ageing policies were recently promoted on the labour market – both through internal and external redistribution on more adequate positions in case of work incapacity and through financial incentives to employees and to employers who hire old workers; on the other hand Luxembourg still promotes very generous early retirement schemes, which facilitate the task for those employers who want to “get rid of” their old workers. These early retirement schemes are very popular among old workers: average retirement age is 59.3 years, more than five years before the statutory retirement age.

Luxembourg has one of the lowest participation rates of old workers in EU and failed to implement the *Lisabon Strategy*, in the framework of the European Employment Strategy. The revised Lisabon Strategy (June 2005) may give better results, but there is a need to involve all social actors in the implementation process and a first step could be removing age barriers in employment.

The empirical analysis confirmed our central hypothesis: there is a statistically significant relationship between perceived discrimination at work place and the decision to retire earlier. Old workers who feel discriminated by their employer are more likely to retire, in average, seven months earlier. Descriptive statistics give us a picture about the probability to be *pushed out* from the labour market: at the age of 57 (the minimum eligibility age for early retirement in Luxembourg), 52% of those who felt discriminated exit the labour market undertaking early retirement schemes, compared with only 32% of those who did not felt discriminated, nor encouraged to stay. There is a clear evidence of the fact that some employers are pressuring old workers to undertake early retirement schemes. They use early retirement as a “*market clearing mechanism*”¹⁷⁰.

¹⁷⁰ Quardagno, J, Hardy, M, *Work and Retirement* in Binstock, R, George, L., (Eds.) *Handbook of ageing and the social sciences*, Academic Press, 1996, US, p. 326.

We did not find evidence of a double discrimination¹⁷¹. Age discrimination is not linked with gender or ethnic discrimination, but it is generalised among old workers regardless of their ethnic origins or gender. These findings have important consequences for policy makers – the policy mix should be designed to combat generalised age discrimination and be orientated towards an integrated age management at micro level.

What are the policy implications of these findings? First they illustrate the need to implement anti-discriminatory policies in Luxembourgish labour market. Only legislative measures (although necessary) are not enough, therefore there is a need for a policy mix, including policy incentives and education campaigns.

These campaigns should be tailored for different target groups. One policy campaign should be oriented towards employers to pursue them to implement good practices in dealing with old workers. Walker (1999) defines good practice in the fields of active ageing policies as: *“actions to combat age barriers, whether directly or indirectly and providing an environment in which each individual is able to achieve his or her potential without being disadvantaged by age”*¹⁷². This should be the goal of the *equal opportunities at all ages* campaign.

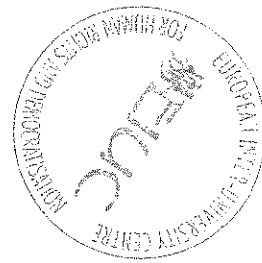
However, many workers take voluntary early retirement, there is a *“deep rooted culture”*¹⁷³ of early retirement in Luxembourg. Therefore, there is also a need for a public policy campaign aimed at encouraging old workers to prolong their working life, a campaign which should involve all social actors (including old workers). However, profound cultural changes may take longer time to be achieved.

To sum up, we found statistically significant evidence of age discrimination at the exit from labour market in Luxembourg, discrimination favoured also by the gaps in national legislation and by the employment policy promoted in Luxembourg.

¹⁷¹ We checked only for age cumulated with gender ethnic discrimination.

¹⁷² Walker, A., *Combating Age Discrimination at the Work Place*, in *Experimental Ageing Research*, N.25, 1999, p. 367-377

¹⁷³ See OECD Report (2004).



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<http://www.stop-discrimination.info>

Annex 1

Pensions System in Luxembourg¹⁷⁴.

1. Old age pension in Luxembourg comprises 2 parts:

- a flat rate part (*majoration forfaitaire*) the same for all, equal with 329.75E/month for 40 years of insurance;

- an income related pension part (*majoration proportionnelle*): 1.85% of total earnings taken into account.

There are also 2 supplements:

- a proportional supplement (*majoration échelonnée*)

- allowance at the end of the year (allocation de fin d'anne) of 539.52 E in case of complete 40 years career, otherwise, proportional reduction

2. Amount of pension:

- a. minimum:- no less than 90% of reference amount, if the insured has at least 40 years of insurance; therefore the minimum is 1 262.88 E/month.

- if he contributed less than 40 years, the minimum pension (*pension minimale*) is reduced by 1/4th for each missing year.

- b. maximum: 5 846. 66E /month (no pension should exceed 5/6 of 5 times the reference amount).

Pensions are automatically increased when the index of prices development (inflation) is higher than 2.5%.

3. Accumulation pension-earnings:

There is no limit for old age pension. In the case of early retirement pension the accumulation is limited to earnings from occasionally activity, with earnings less than 1/3 of the social minimum wage.

¹⁷⁴ Source: MISSOC 2004

Annex 2

Methodology

We want to test if there is a statistically significant difference between the retirement behaviour of those old workers who felt discriminated at the work place and those who did not and to estimate the value of this difference. We will do so by using a linear regression procedure. The data will be weighted (correcting for the heteroscedasticity) and we will control for the selectivity bias with a *two-steps Heckman procedure* introducing the *inverse of Mill's ratio* (calculated with the help of a logistic regression in a first step) in our linear regression (in the second step).

Ordinary least square multiple linear regression (also called OLS regression or linear regression) is the most popular statistical method for studying the relationship between a dependent continuous variable (in our case retirement age) and one or more interval, dichotomous, or dummy variables independent variables. Ordinary least square is the method used to determine the regression equation; it is multiple because implies the use of more than 1 independent variable; it is the simplest method of estimation of least square (ordinary) and it is used to describe a linear equation¹⁷⁵.

A **dichotomous variable** is a discrete categorical variable with two possible values (binary coded with 0-1). In our model *women*, *foreigners* and *private pension* are dichotomous variables.

Dummy variables are a way of adding the values of categorical variables to a regression equation. Each value of the categorical independent except one is entered as a dichotomy (ex. if discrimination= 1 if there is perceived discrimination, otherwise 0; etc.). One class must be left out (**reference category**) to prevent perfect multicollinearity in the model (in this case we left out neutral policies). We checked for **multicollinearity** (we face extreme multicollinearity when an independent

¹⁷⁵ Source: Allison, P.: *Multiple regression- a primer*, Pine Forge Press, US, 1999, p.2.

variable is a perfect linear function of other variable in the equation)¹⁷⁶. We recoded in dummies *firm's policy*, *marital status*, *education level* and *type of profession*.

We will use **logistic regression** procedure in a causal analysis in order to determine if a particular independent variable (in our case perceived discrimination) has a statistically significant effect on the dependent variable and to determine the magnitude of that effect, controlling¹⁷⁷ for all the other independent variables. One of the advantages of using linear regression is the fact that it separates between the effects of each independent variable on the dependent one.

A simple linear regression equation is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

Where:

- α is the constant (intercept), representing the value of the dependent when all the independent variables are 0 (not always it makes sense to interpret it in a model)
- β is the coefficient (slope), representing amount of change in the dependent variable when the independent one increases with 1 unit;
- Y is the dependent variable;
- $X_1 \dots X_n$ are the independent variables (or explanatory variable);
- ε is the error term.

To evaluate the estimated coefficients (β) for each independent variable we rely on **confidence intervals** and **hypothesis testing**. Confidence interval represents the intervals in which will be ranged the possible values of our coefficients¹⁷⁸. For example if the probability value (the significance of the coefficient) falls in the 0.5 confidence interval we can be 95% sure that the true value (not the one that we predicted) will be close from the one predicted. In our case the null hypothesis is that *perceived discrimination has no effect on early retirement decision*¹⁷⁹. If perceived discrimination has no effect on retirement age the probability of finding a coefficient as large as or larger than the estimated coefficient (β) is less than 5%. The most used

¹⁷⁶ Alisson, op. cit., p.149.

¹⁷⁷ Logistic regression controls for variables "*keeping them constant*" in other words, it compares individuals with similar characteristics on all the other independent variables in order to determine the effect of one particular independent variable on the dependent one. Source: See. Allison, op. cit., p. 5.

¹⁷⁸ Idem 175, p.14.

¹⁷⁹ Consequently, the linear regression procedure will test for the null hypothesis for each independent variable.



confidence intervals are: 0.01, 0.05 and 0.1¹⁸⁰. If the significance of the coefficient is higher than 0.1, then we can not reject the null hypothesis, therefore we can not consider that the predicted effect of the independent variable on the dependent one is statistically significant.

How do we know how good our model is? There are several statistical tests, from which the most popular is **R-Square** (the coefficient of determination)¹⁸¹ which tell us how much of the variance in the dependent variable is explained by the specific combination of independent variables that we introduced in our model.

We **weighted** the cases in our sample in order to control for biases in the standard errors (the case of heteroscedasticity¹⁸²). We calculate the new weights, adapted at the size of our sample after the formula:

$$W_{50} = \text{pwgt} * N / N^*$$

where N represents the real size of our sample and N^* the false one that we get using the original weight of PSELL 3, pwgt , which was created for the size of the original sample.

In order to control for **selectivity bias** (the fact that it is not at random that those individuals were selected in our sample) we will apply a *two-steps Heckman procedure*¹⁸³. In a first step we will apply a logistic regression to the entire sample of adult individuals in PSELL III, 2003 wave in order to determine the probability of being selected in our sample¹⁸⁴ (people who retire early and worked as employees¹⁸⁵ in the previous job). The aim of this first step procedure is to save the residuals¹⁸⁶

¹⁸⁰ Alisson, op. cit., p.16.

¹⁸¹ Idem 180, p. 13.

¹⁸² Heteroscedasticity occurs when the degree of random noise in the relationship between dependent and independent variable is not always the same (violation of the homoscedasticity assumption) source: Alison, P., op. cit, p. 54.

¹⁸³ For more details see: Smits, J., *Estimating the Heckman two-step procedure to control for selection bias with SPSS*, Sept. 2003, at: <http://home.planet.nl/~smits.jeroen/selbias/Heckman-SPSS.doc>

¹⁸⁴ See the logistic regression model in Annex 5. The results will not be discussed since they are not relevant for our analysis.

¹⁸⁵ Self-employed and unpaid workers in the households are discarded from the sample since they could not face discrimination from the employer.

¹⁸⁶ Residuals in a logit model can be defined as the difference between the true value of the coefficient (0 or 1) and the predicted probability for it. source: <http://www.soc.washington.edu/users/brines/residuals.doc>

which are useful for finding observations with large discrepancy between the observed and the predicted values¹⁸⁷. With the help of the residuals we will compute our control variable, lambda (Λ). The computation procedure implies one transformation of a new variable, the residuals (IKL) which contains the individual probabilities predicted by the model into the form it would have had when they would have been computed on the basis of a probit model¹⁸⁸:

compute IPS = probit(IKL).

The new variable IKL contains the quasi probit scores¹⁸⁹ and it will be used to compute LAMBDA after the formula¹⁹⁰:

compute LAMBDA = ((1/sqrt(2*3.141592654))*(exp(-IPS*IPS*0.5)))/cdfnorm(IPS).¹⁹¹

In the second step of Heckman's procedure we will introduce LAMBDA (which corresponds to the inverse of Mill's ratio) in our linear regression model. If LAMBDA is significant in our model it means that it was a selectivity bias for which we controlled, therefore our estimated coefficients are more likely to be close to the real ones.

¹⁸⁷ Idem 175, p. 94.

¹⁸⁸ Smits, J., op. cit, p. 5 .

¹⁸⁹ A PROBIT regression computes maximum-likelihood estimates of regression parameters and optional threshold parameters for binary or ordinal response data. Source:
<http://www.id.unizh.ch/software/unix/statmath/sas/sasdoc/stat/chap5/sect1.htm>

¹⁹⁰ Idem 188 , p.5.

¹⁹¹ The control variable will be computed with SPSS statistical package, for which it was specially designed by Smits (2003) op. cit .p.5.

Annex 3 Descriptive Statistics

Figure 3.1.: Early retirement by Gender

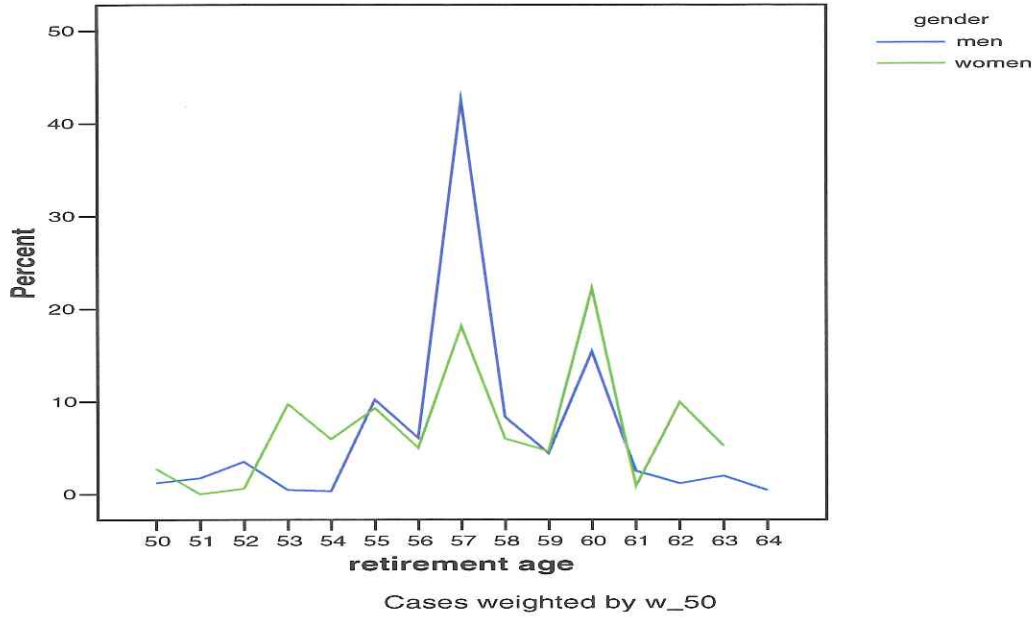


Figure 3.2.: Early retirement by Marital Status

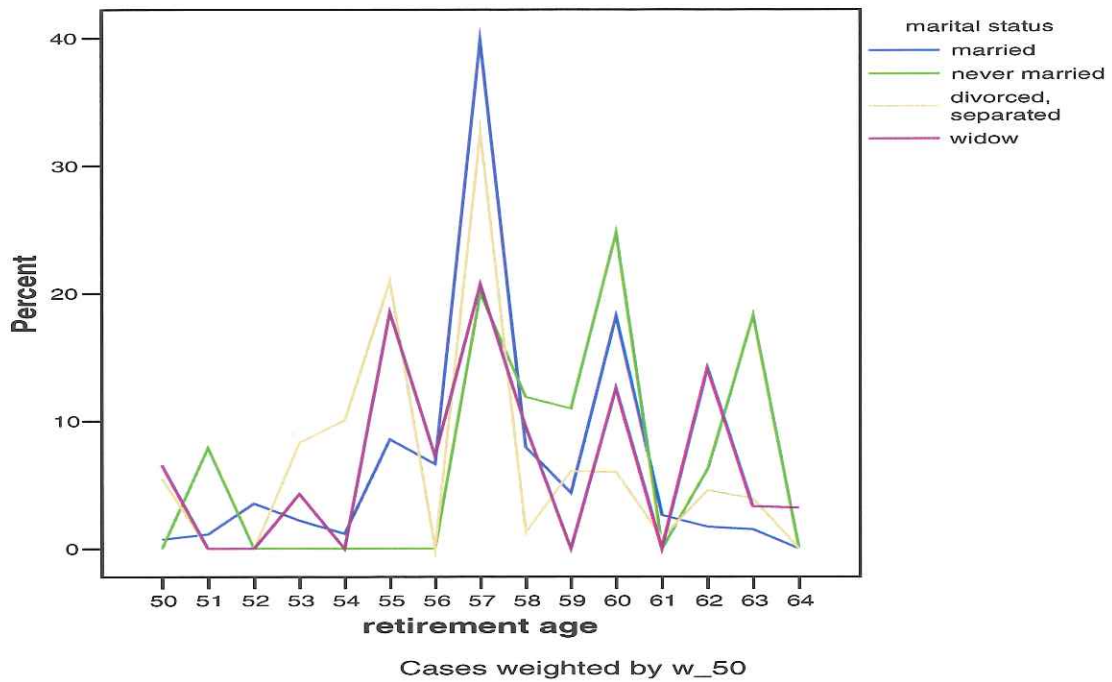


Figure 3.3.: Early Retirement by Number of Children

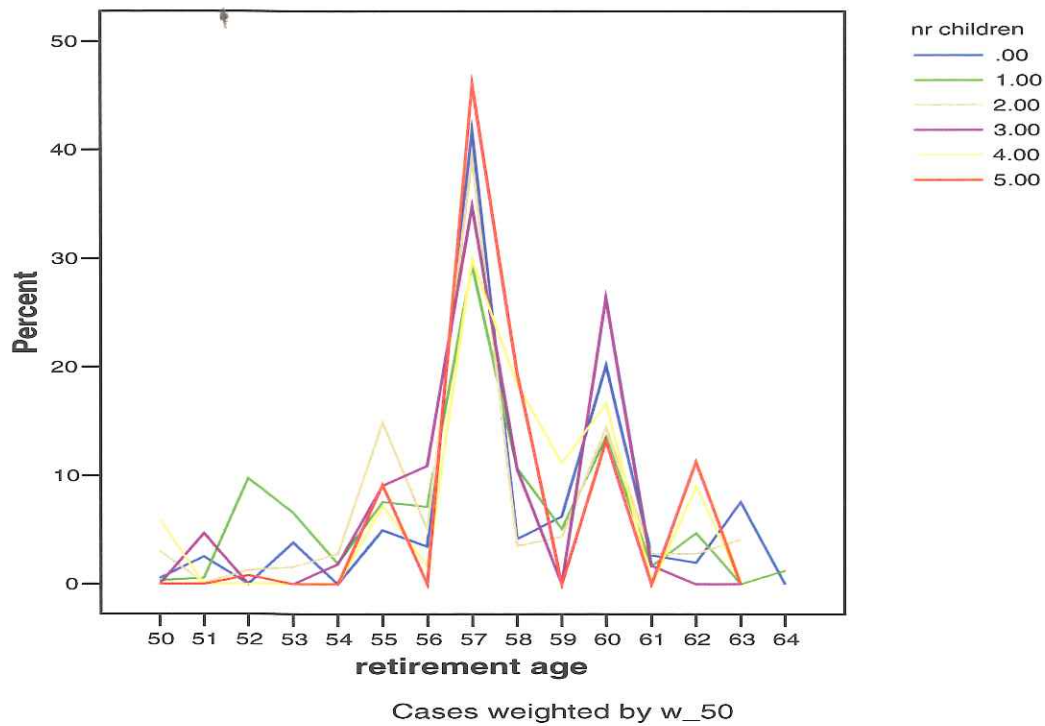


Figure 3.4.: Early Retirement by Nationality

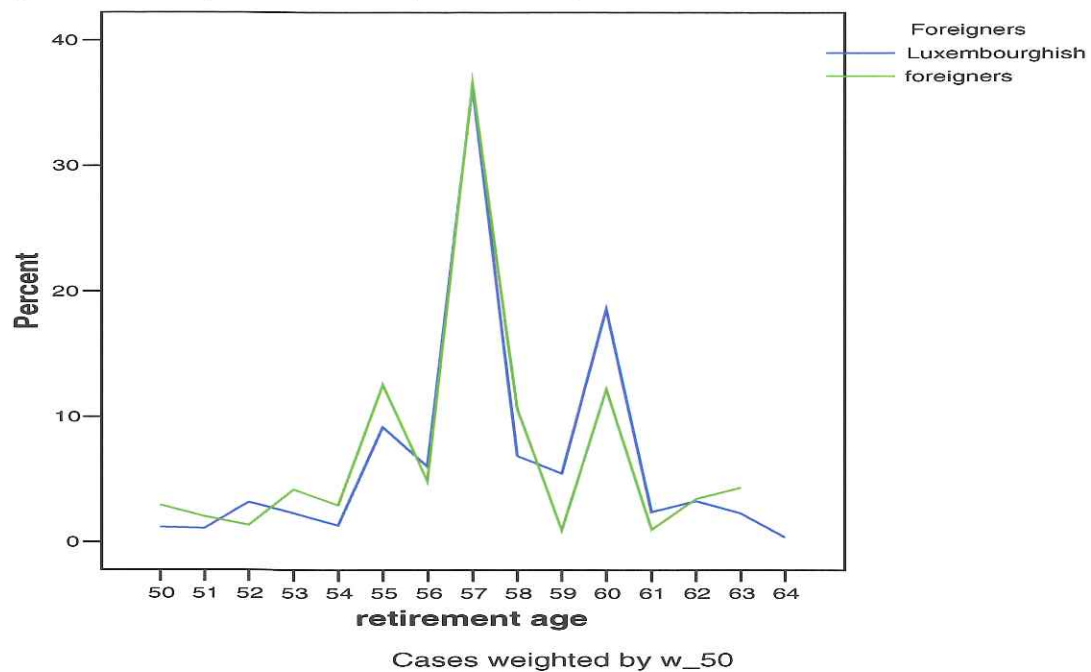


Figure 3.5.: Early retirement by Education Level

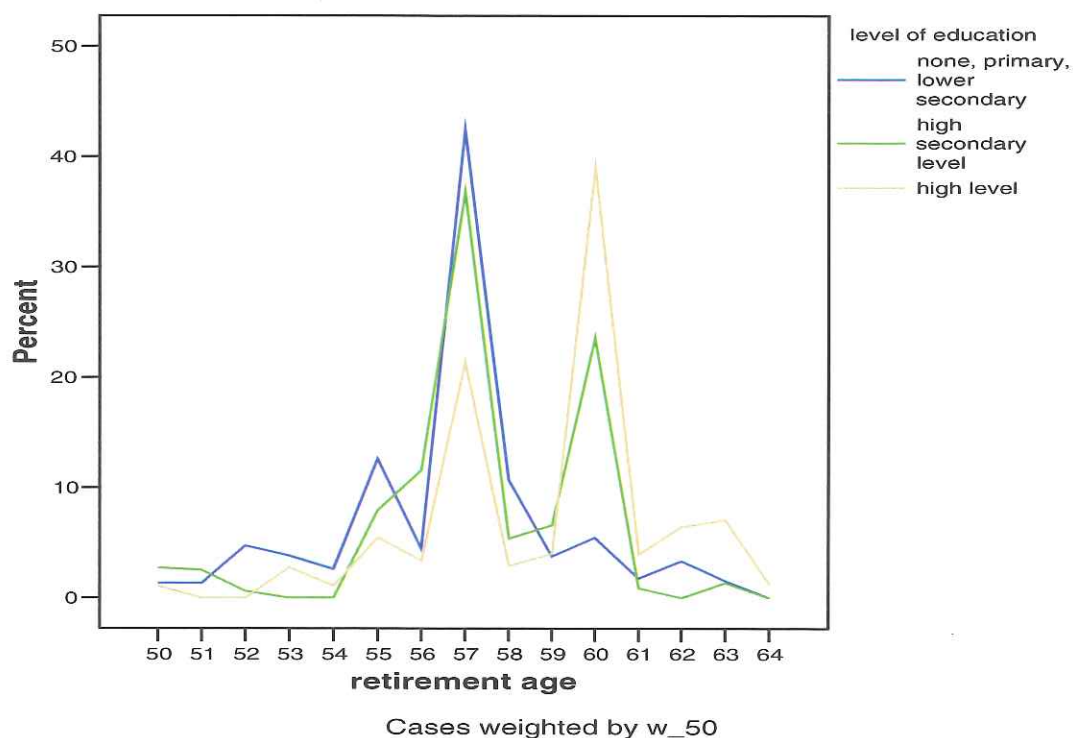


Figure 3.6.: Early retirement by Type of Profession

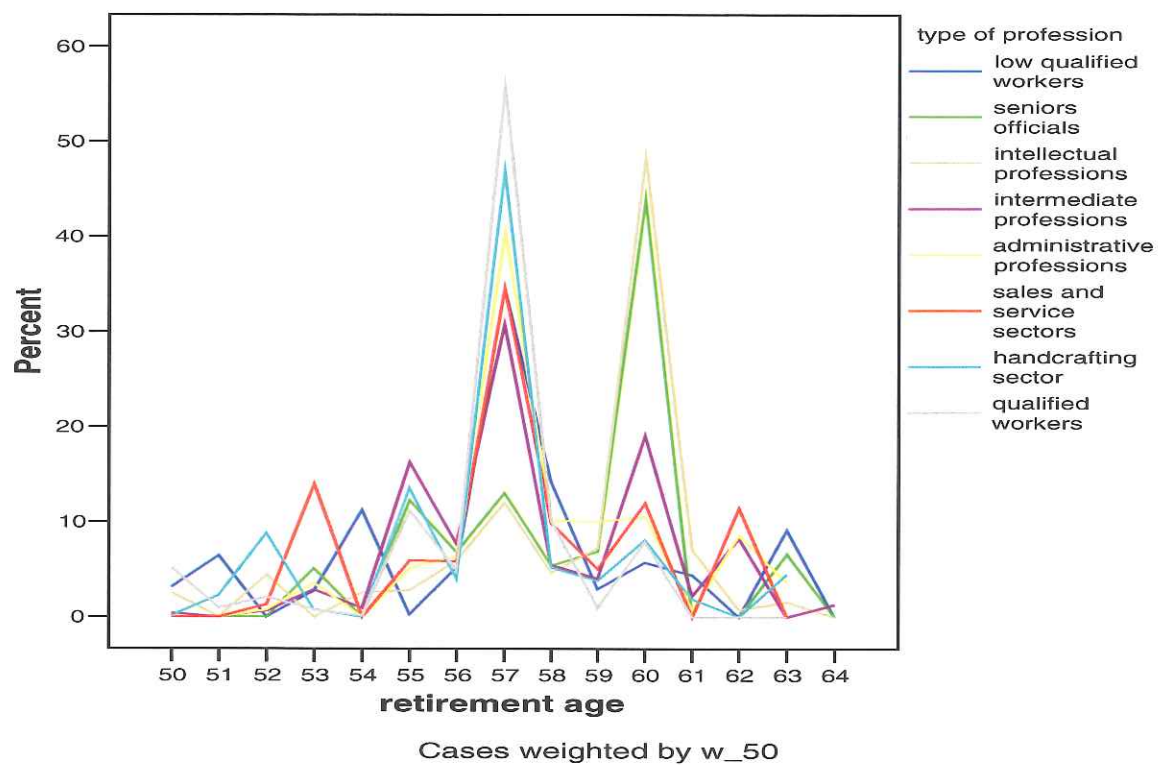


Figure 3.7.: Pension Revenues by Early retirement



Figure 3.8.: Early retirement by Private Pension

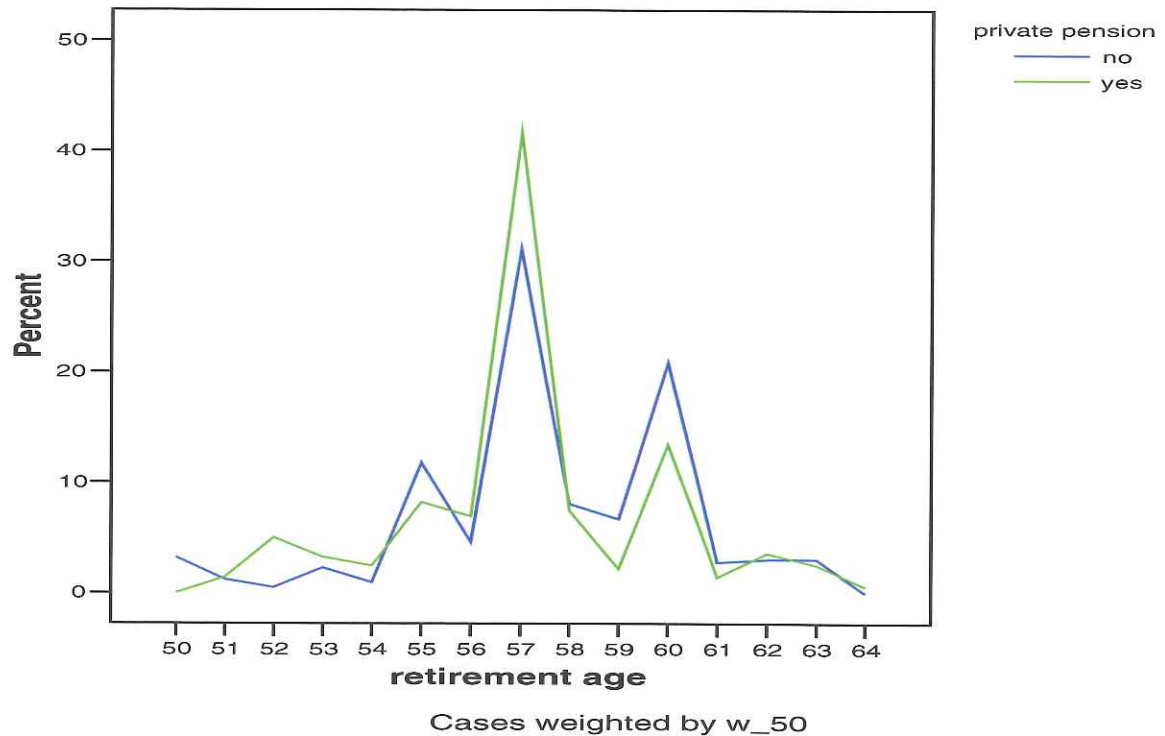


Figure 3.9.: Mean Retirement Age by Working Experience (years)



Figure 3.10.: Mean Retirement Age by Age at First Job (years)



Table 3.11.: Crosstabulation gender by firm's policy

			firm's policy			Total
			neutral	active ageing	discrimination	
gender	men	Count	117	108	93	318
		% within gender	36.8%	34.0%	29.2%	100.0%
		% within firm's policy	76.5%	68.8%	81.6%	75.0%
	women	Count	36	49	21	106
		% within gender	34.0%	46.2%	19.8%	100.0%
		% within firm's policy	23.5%	31.2%	18.4%	25.0%
Total		Count	153	157	114	424
		% within gender	36.1%	37.0%	26.9%	100.0%
		% within firm's policy	100.0%	100.0%	100.0%	100.0%

Table 3.12.: Crosstabulation Foreigners by firm's policy

			firm's policy			Total
			neutral	active ageing	discrimination	
Luxembourgish		Count	115	124	87	326
		% within Foreigners	35.3%	38.0%	26.7%	100.0%
		% within firm's policy	75.2%	79.0%	76.3%	76.9%
foreigners		Count	38	33	27	98
		% within Foreigners	38.8%	33.7%	27.6%	100.0%
		% within firm's policy	24.8%	21.0%	23.7%	23.1%
Total		Count	153	157	114	424
		% within Foreigners	36.1%	37.0%	26.9%	100.0%
		% within firm's policy	100.0%	100.0%	100.0%	100.0%

Table 3.13.: Crosstabulation never married by children

Count

		never married		Total
		.00	1.00	
nr children	.00	50	23	73
	1.00	99	1	100
	2.00	150	0	150
	3.00	64	0	64
	4.00	24	0	24
	5.00	14	0	14
Total		401	24	425

Annex 4

Exploratory analysis

1. Linear Regression Model

1.1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.533(a)	.284	.245	2.293

a Predictors: (Constant), Age first job, perceived age discrimination, never married, sales and services sector, divorced, separated, administrative professions, pension revenue (100E/year), higher secondary level, widow, qualified workers, Foreigners, senior officials, nr children, private pension, active ageing policies, Women, intermediate professions, working experience (years), intellectual professions, high level, handcrafting sector, lambda

1.2. ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	836.454	22	38.021	7.234	.000(a)
	Residual	2107.662	401	5.256		
	Total	2944.116	423			

a Predictors: (Constant), Age first job, perceived age discrimination, never married, sales and services sector, divorced, separated, administrative professions, pension revenue (100E/year), higher secondary level, widow, qualified workers, Foreigners, senior officials, nr children, private pension, active ageing policies, Women, intermediate professions, working experience (years), intellectual professions, high level, handcrafting sector, lambda

b Dependent Variable: retirement age



3. Model's Coefficients

Model Dependent Variable: retirement age		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Independent variables		B	Std. Error	Beta		
(Constant)		70.714	4.999		14.145	.000***
Inverse of Mill's ratio		-6.460	1.401	-.965	-4.610	.000***
Firm's policy (as perceived by the respondent)	<i>-Neutral</i>	Ref.				
	-age discrimination	-.741	.299	-.125	-2.476	.014**
	<i>-active ageing policies</i>	-.325	.278	-.059	-1.166	.244
	Women	.629	.351	.103	1.794	.074*
Marital status	<i>-married</i>	Ref.				
	-never married	4.021	.769	.346	5.227	.000***
	-divorced, separated	1.120	.585	.115	1.913	.056*
	<i>-widow</i>	-.474	.437	-.052	-1.085	.279
number of children		.511	.114	.241	4.476	.000***
Foreigners		1.017	.371	.163	2.739	.006***
Education level	<i>-none, primary, low secondary</i>	Ref.				
	-higher secondary level	.577	.333	.091	1.731	.084*
	-high level	.708	.393	.113	1.799	.073*
Type of profession (BIT classification)	<i>-low qualified workers</i>	Ref.				
	<i>-qualified workers</i>	.069	.482	.010	.143	.886
	<i>-handcrafting sector</i>	-.158	.486	-.023	-.325	.745
	-administrative professions	1.024	.558	.108	1.836	.067*
	<i>-intermediate professions</i>	.505	.457	.079	1.105	.270
	<i>-intellectual professions</i>	.411	.597	.046	.688	.492
	<i>-senior officials</i>	.860	.630	.083	1.366	.173
	-sales and services sector	1.129	.589	.104	1.916	.056*
	pension revenue (100E/year)	.000	.001	.015	.292	.771
	private pension	.599	.260	.114	2.301	.022**
working experience (years)		-.213	.075	-.555	-2.836	.005***
Age at first job		.155	.039	.249	4.034	.000***

Legend:

Ref.: reference category

in italic: dummies of the same variable

in bold: significant variables

Level of significance:

*** significant at 0.01 level

** significant at 0.05 level

* significant at 0.1 level

4.2. Logistic Regression

2.1. Case Processing Summary

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	7675	100.0
	Missing Cases	0	.0
	Total	7675	100.0
Unselected Cases		0	.0
Total		7675	100.0

a. If weight is in effect, see classification table for the total number of cases.

2.2. Variables Created or Modified: IKL -Predicted probability

Reslogit -Difference between observed and predicted probabilities

2.3. Dependent Variable Encoding

Original Value	Internal Value
.00	0
1.00	1

2.5. Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1917.328(a)	.097	.328

a. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

2.6. Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)						
gender	.026	.150	.030	1	.864	1.026
marital_status1	-.909	.283	10.306	1	.001	.403
marital_status2	-.648	.236	7.518	1	.006	.523
marital_status3	.156	.221	.503	1	.478	1.169
children	-.104	.053	3.782	1	.052	.901
Foreigners	-.323	.148	4.788	1	.029	.724
ED1	-.183	.158	1.336	1	.248	.833
ED2	.229	.159	2.073	1	.150	1.257
work_experience	.131	.007	356.352	1	.000	1.140
health_status	-.627	.210	8.871	1	.003	.534
Constant	-6.422	.302	453.192	1	.000	.002

a. Variable(s) entered on step 1: gender, marital_status1, marital_status2, marital_status3, children, Foreigners, ED1, ED2, work_experience, health_status.