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**Do Individualised Life Course Plans
Improve Work-Life Balances?**

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Abstract

In Europe creating diversity and extending workers' freedom of choice is a policy argument of increasing importance. On 1 January 2006 an individuals voluntary Life Course Savings Scheme (Levensloopregeling), unique in Europe, was introduced in the Netherlands. The aim of this individualised voluntary scheme is to improve work-life balances over the life cycle and to increase labour participation. To find out whether the scheme lives up to its expectations, we analyse the actual participation of over 500,000 employees in the Dutch government and educational sector. The results from our logistic regression analysis differ considerably from expectations and from bivariate cross tabulations. Although participation (still) is low, the LCSS has a potential to contribute to balancing the work-life balance over the life cycle. The contribution to continued employment participation is unclear.

Keywords: freedom of choice; savings scheme; unpaid leave; work-life balance; logistic regression analysis

JEL classification: J22, J88; H31

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1. Introduction

In Europe, extending workers' freedom of choice over their working hours is a policy argument of increasing importance. Surveys in EU countries indicate a clear interest of employees in greater flexibility and control over their working hours (see Bettio *et al.*, 1998; Hogarth *et al.*, 2000; Latta and O'Conghaille, 2000; Webster, 2001; Berg *et al.*, 2004). Recent legislation in the EU and at national level, together with initiatives developed by employers, unions and governments, aim to offer employees more choices over their working time (see Bettio *et al.*, 1998; Bielenski *et al.*, 2002; European Foundation, 2003; 2005; Anxo and Boulin, 2006). More "time sovereignty" allows employees to organise their working time more in line with their individual needs and interests. Part-time employment plays an important role in combining working, training and care responsibilities in the various phases of the life cycle. On balance this is expected to increase both the quantity and the quality of labour supply and to safeguard an adaptable labour force generating substantial productivity growth (see Delsen, 1995; 1996; 1998; Bovenberg, 2005).

On January 1st, 2006 the Dutch government introduced a new and for Europe unique individual voluntary life course plan: the Life Course Savings Scheme (*Levensloopregeling*).¹ The scheme offers employees the opportunity to save funds to finance periods of unpaid leave. The system is fiscally facilitated. The Dutch Life Course Savings Scheme (LCSS) is based on the holistic life cycle approach (Heinz and Marshall, 2003) and is an answer to the demand for individualisation and tailor-made employment conditions. The scheme also fits the transitional labour markets approach (Schmid, 2006). According to Bovenberg (2005) the LCSS can be viewed as a self-insurance device against unemployment risk and human capital risk over the life cycle. If individuals bear financial responsibility for their own employability they face a better incentive to work and train than under regular unemployment insurance. The Dutch government expected that the LCSS would make combining tasks easier and the "rush hour of life" less hectic. In addition to this, labour participation was expected to increase, as fewer people would stop working because of care tasks, and people would work more years before retirement (Keuzenkamp, 2004: 15; Tweede Kamer, 2004a; 2004b).

¹ In the EU only the Belgian Career Break System offers a similar right for all employees to full-time or part-time leave (see Román *et al.*, 2006).

In this paper, we establish whether the scheme lives up to its aims and expectations, by analysing the actual participation in the LCSS of over half a million employees in the Dutch government and educational sectors. Participation in the LCSS is explained on the basis of differences in personal characteristics, including gender, age, partner, number of hours worked, annual salary, participation in additional pension products, and sector of activity.

The paper is structured as follows. In Section 2 the background and ingredients of the Dutch life course plan are reviewed. In Section 3 an overview is presented of the results that were expected prior to introduction of the scheme and a number of hypotheses are formulated. Actual participation rates are presented in Section 4. The data set and method are described in Section 5. In Section 6, bivariate relationships are analysed and in Section 7, the results of a multivariate regression analysis are presented. In Section 8 conclusions are drawn.

2. Background and ingredients of the Dutch Life Course Savings Scheme

In the Netherlands, the male breadwinner model is losing ground. There is a clear shift from one-earner households towards two-earners households on the one hand and single-person households on the other hand. Because most Dutch women work part-time and spend the remaining hours on care, it is better to talk about one-and-a-half-earner households (Delsen, 2002: 47-48). Also in other European countries there is a growing incidence of one-and-a-half-earner households (European Foundation, 2007: 73). The increase in women employment not only means more income at the household level, but also changes in preferences in relation to work and working hours, for example a greater need for part-time employment and more control over working hours. The traditional three phased life course has changed into a five phased life course (SZW, 2002; Bovenberg, 2005). The first phase of early youth concerns socialisation, education and receiving care (0-15 years old). The second phase is new: the phase of young adulthood situated roughly between 15 and 30 years of age. Young adults experiment with relationships and jobs and have few care responsibilities. The third phase between 30 and 60-65 years of age is the peak hour of life, in which work, care and to some extent continued learning are combined. This is the family season. Financial and time pressures are high in this phase. The fourth phase, roughly between 60-65 and 75-80, is mainly a phase of leisure (active old age). In the final fifth phase, people suffer from serious health problems and need more intensive care. The new LCSS increases the freedom

of choice of employees concerning the spread of activities over the life course, and is an answer to the challenges caused by these societal developments. The LCSS also represents recognition by the Dutch government of the social costs of its policies aimed at increasing labour participation. Table 1 summarises the main characteristics of the LCSS.

Table 1: Ingredients of the Dutch Life Course Savings Scheme

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| <ul style="list-style-type: none"> - Employees have a legal right to participate in the LCSS - Employees may save a maximum of 12 percent of gross salary per annum income tax free to finance periods of unpaid leave for various purposes; the maximum saving amounts 210 percent of the last earned gross salary. - Under certain conditions employers are allowed to contribute to an employee savings. - Taking leave is only possible during employment. - Taking leave is not a right; leave can only be taken in consultation with the employer. This does not apply to parental leave and long-term care leave, which are provided by law. - Contributions to and returns on the savings fund are tax free. Taxation is deferred until the time when the saving is withdrawn. There is no minimum savings amount requirement for tax relief. - Employees receive a tax credit of € 185 per year of participation in the LCSS when taking up leave, independent of the annual contribution made. - Employees who participate in the LCSS and who take up unpaid parental leave, receive an additional tax credit equal to 50 percent of the gross minimum wage per unpaid day of leave. - Participation in both the Salary Savings Scheme (<i>Spaarloonregeling</i>) and the LCSS in the same calendar year is not permitted. |
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Personal responsibility

State support of the LCSS is limited to fiscal support. The LCSS requires employees to take personal responsibility for the funding of their longer periods of unpaid leave. It offers them the opportunity to save money to finance periods of unpaid leave for various purposes, such as caring for children or ill parents, educational leave, travelling, sabbatical or (partial) early retirement, while continuing the original employment relationship. The LCSS is founded on a number of fundamental (neoclassical) assumptions (Keuzenkamp, 2004). People can reserve a portion of their income to offset losses of income in the future. People feel the need for more freedom of choice concerning taking leave. It is also assumed that employees are able to estimate their future needs for leave and have good insight in the pros and cons of the LCSS. Employers are willing to honour the wishes of the employees concerning leave at different moments of their life course.

Employees are allowed to save up to 12 percent of their gross wage per annum, up to a maximum of 210 percent of their latest annual gross wage. This means, that in 17.5 years the maximum saving account can be reached ($17.5 \times 12 = 210$ percent). This period may be shorter because of returns on the accumulated fund. Holidays and compensation days can also be “cashed in” and added to the savings. If a worker takes a leave, he/she can start building up a full balance again after returning to work.

As employees have a legal right to participate in the LCSS, all employers have to offer such a scheme. Under certain conditions, employers are allowed to contribute to the employee savings. Employers may not stipulate extra conditions for taking up the leave, and the contributions must also be provided to employees who do not participate in the scheme. Taking leave is only possible during employment; it is not a right and can only be taken in consultation with the employer. This does not apply to parental leave (13 weeks for father and mother) and long-term care leave (6 weeks full time), which are provided by law. If employees do not use the accumulated credits during their working career, these credits will be added to their old age pension.

A compromise

Initially, the proposed life course plan focussed on the rush hour of life. The introduction of the LCSS was combined with the abolishment of the fiscal facilitation of early retirement (VUT) and prepension arrangements. This abolishment aimed to increase the labour market participation of older employees. As a result, VUT and prepension plans were expected to disappear. However, the trade unions opposed.² A compromise was worked out. On November 6th, 2004, the government reached an agreement with the employers’ and workers’ organisations, including an increase in the maximum savings amount, the introduction of (partial) early retirement as an option within the LCSS, and relaxation of the transitional arrangements by the government. Moreover, the premia paid into the early retirement funds or prepension funds may be used for the LCSS. As of January 1st, 2006, following the law on fiscal treatment of early retirement and introduction of the Life Course Savings Scheme (*Wet aanpassing fiscale behandeling VUT/prepensioen en introductie levensloopregeling*) (Tweede Kamer, 2004a), tax deductions for early retirement schemes were

² On the history of the decision-making process and the debate on the introduction of the Dutch Life Course Savings Scheme see Frericks *et al.* (2005); European Communities (2005) and Van der Meer and Leijnse (2005).

abolished for people who were younger than 57 years of age on January 1st, 2005. Employees aged 57 and over on January 1st 2005 will remain entitled to current tax benefits and may continue to participate - fiscally facilitated - in the early retirement or prepension schemes offered by their employers. If the employer does not offer these schemes, this group may participate in the LCSS and save up to 12 percent of gross salary per annum. In addition, a transitional regulation is applicable to employees between 50 and 57 years on January 1st, 2005. The maximum savings limit of 12 percent per annum does not apply to this group, thus enabling them to save 210 percent of their last gross salary in a shorter period of time.

The LCSS is fiscally facilitated. The contributions to the savings fund are tax free. Taxation is deferred until the time when the saving is withdrawn. This delayed taxation is called the “reversal rule”. Also the returns on the fund are untaxed. Moreover, the LCSS is supported by a number of tax deductions. When taking up leave, employees receive a tax credit of € 185 (in 2006; for 2007 the amount is € 188) for each year in which money was paid into the LCSS, independent of the annual contribution made. For employees who participate in the LCSS and who take up unpaid parental leave, an additional tax credit applies, equal to 50 percent of the gross minimum wage per unpaid day of leave. In 2006 this was about € 30 per day for a full-timer taking full-time parental leave.

Salary Savings Scheme

The LCSS was originally meant to replace the Salary Savings Scheme (SSS) (2003 Budget Memorandum). The voluntary SSS, which was introduced in 1994, offers the opportunity of saving the maximum of € 613 per annum, tax-free. The savings amount has to remain with the bank for four years. For specified purposes it can be withdrawn within this four year period, for instance to buy a house or to conclude an annuity. After four years, the saved amount can be cashed in tax-free and used to pay for a variety of things. The original aim of the SSS was to stimulate capital formation, *i.e.* building up financial assets by the lower paid employees and to create flexibility in the wage formation and collective labour agreement negotiations. However, all income groups, notably the higher income groups, benefit from the fiscal facilitation (De Mooij and Stevens, 2002).

There was social resistance against the abolition of the SSS. As a compromise it was decided that both schemes would co-exist, with the restriction that participation in both the new

LCSS and the existing SSS in the same calendar year would not be permitted. Employees can choose each year between saving through the SSS or through the LCSS. For the first year of operation (2006) employees had to decide for one of the two schemes before December 31st, 2005. This deadline was later extended to July 1st, 2006.³ The Ministry of Social Affairs and Employment launched an extensive publicity campaign to promote the new LCSS and a special internet site was set up to help people calculate how much they have saved for taking unpaid leave.

Collective labour agreements

The social partners are free to adapt the LCSS to the specific circumstances of an industry or enterprise. For instance, it will be integrated as an option into the collective labour agreement *à la carte* in the Dutch universities. In some of the collective labour agreements, conditions related to the right to take leave (duration) and criteria for refusal of taking leave by the employer are stipulated. Another issue addressed in the collective labour agreements is the choice of the provider of the LCSS. Banks, insurance companies and subsidiaries of pension funds may offer the personal life course saving product. The latter may be a banking product (savings account or investment product) or an insurance product (in most cases a life insurance). The social partners can make collective arrangements with banks or insurance companies in the collective labour agreements. These collective agreements are not mandatory for workers. They are allowed to shop around for a better deal from another financial institution or choose not to participate at all. Trade union confederations FNV and CNV are in favour of a collective scheme with subsidiaries of pension funds. Employers may agree to contribute to the individual employee savings.⁴

3. Expected participation

In 2004 the Dutch government expected that in 2006 the average annual participation in the LCSS would be 1.9 million employees or 20 percent of the workforce and that it would increase to 3.0 million employees or 33 percent of the workforce in 2009 (Tweede Kamer, 2004b: 12). The

³ This deadline applies to ending the participation in the Salary Savings Scheme in 2006 to participate in the Life Course Savings Scheme as of January 1st, 2006. Employees that did not participate in the Salary Savings Scheme could still choose - retroactive to January 1st, 2006 - to participate in the LCSS after July 1st, 2006.

⁴ For example, in 2006 most public sector collective labour agreements included employers' contribution. The agreed employer's contribution varied between 0.45 percent and 1.5 percent of the gross annual salary. Dutch Shell employees received € 600 in 2006.

government was strengthened in these positive expectations by several *ex ante* studies. Survey research by the insurer Avéro Achmea indicated that 33 percent of the respondents would certainly participate (OR-Onlin.nl, 2004). Another survey by the Dutch trade union federation FNV, among employees aged 18-35 years, indicated that 34 percent of the respondents would participate (Van der Erf and Van der Veen, 2003). A study by the insurer Interpolis found that only 3 percent of the respondents would certainly participate, while 23 percent would probably participate in the LCSS (Vos, 2005).

Although these results point towards an expected participation rate of about one third, there are theoretical and empirical grounds to expect that the actual participation would be lower than *ex ante* figures suggested, that only certain groups of employees would participate, and that the scheme would only be used for specific purposes. Surveys suffer from selection bias because potential participants having a higher response rate than non-participants. The SSS is fiscally more advantageous than the LCSS (Goudswaard and Caminada, 2006; Keuzenkamp, 2004). Jongen and Kooiman (2004) have estimated that because of this, the participation rate of the LCSS will be low; they expected only about 17,000 employees (0.1 percent of the workforce) to participate. The required permission of the employer for taking leave makes the scheme less attractive; employees have no guarantee to be able to take leave in the future. Also future returns on the savings are uncertain. Moreover, in the long run, the government may change the conditions.

From a theoretical perspective, it is known that when individuals are confronted with an actual choice situation, “bounded rationality” (Simon 1957) may start playing a role. Individuals are rational, but up to the limit of their capacity to receive and process information. People are not fully aware or do not have a complete picture of the (future) consequences of a choice they make now. A simple solution to this information fuzziness is to consider the predefined standard choice as good. This “power of default” (Clausen and Koch 2002) may easily prevail. Thus, although in mainstream economics offering (more) choices is considered to be better, at the end of the day people may consider that additional options simply increase the risk of making the wrong choice (Iyengar and Lepper, 2000; Schwartz 2004). In this respect the SSS is less risky and hence more attractive than the LCSS.

Maximisers versus satisficers

Following Simon (1957), two classes of people may be distinguished: maximizers and satisficers. Maximizers are people who always try to select the best option from the available options. Maximizers are a small minority. The majority of people are satisficers, who simply look for a choice that is good enough. Being a satisficer may be rational, because of the information costs involved. As a result, most people may choose not to choose. Postponing decisions, choosing not to choose, is also related to the increase in the freedom to choose. According to the theory of framing and the theory of goals (see Lindenberg 2001a; 2001b), if people have to choose from several options, the strive for instant satisfaction and a good feeling may prevail. This is because short-term goals are directly tight to emotions and to the improvement of the conditions of self. As a result many people can be expected not to save money for leave in the future by participating in the LCSS. Another reason to expect low participation, at least in the first year, is the fact the LCSS is a new arrangement. As a result employees might hesitate because they first want to see how things work out. Based on these considerations we expect that only a small minority of the employees will actually participate in the LCSS in 2006.

Adverse selection

Participating employees who wish to take up leave, but do not get permission of their employer may be “forced” to use the LCSS to retire early. Dutch employees are very much in favour of early retirement. Taking into account the steep age-wage profiles with wages above productivity level at older age, employers will only approve when there is economic gain in allowing taking up saved leave, representing an additional incentive to use the scheme for early retirement. This tendency is emphasised by adverse selection resulting from offering workers greater choice and thus greater sovereignty (Delsen 2002; 2003). Due to budgetary constraints, only certain categories of employees can afford to materialise their leave and working time preferences. Especially workers who are well-off and highly productive are expected to be able and willing to opt for early retirement. Lower paid workers will have less opportunity to choose; certainly when conditions are increasingly individualised and made actuarially fair, like in the LCSS. The less well-off and less productive workers will (have to) choose for working more hours and more years.

Although the LCSS is basically an individualised scheme, the decision about working time are generally taken at the household level. That is why related to working time and part-time work,

it seems more informative to take the household as the basic decision-making unit rather than the individual. If both wife and husband are substitutes in the household *production* of commodities (Becker, 1965), one spouse's increased labour supply to the market may tend to decrease the supply of labour of the other. In case both spouses are complementary in the *consumption* of household commodities they may take leave together (see Killingsworth, 1983; Hamermesh, 2000). The mentioned increase in the number of female workers and in the number of households with two incomes increases the financial scope to participate in the LCSS and (one of) the partners may use the savings to retire early, to stop working, or to work part-time for a limited period. The LCSS may stimulate leisure time at younger age and reduce the income drop when taking up leave. The LCSS does not offer an incentive to labour participation at older age. Hence, the LCSS may run counter to the policy of stimulating labour participation (See also De Mooij and Stevens, 2002).

Fiscal treatment may also be an important explanatory factor of the overall participation rate as well as the age, gender and salary distribution of participants in the LCSS. The delayed taxation (reversal rule) only offers limited tax advantage. The difference between the deduction applied when the savings are made and the tax charged at withdrawal is usually minimal and may even turn negative when there is a considerable increase in income (promotion). The exemption from equity tax may be considerable for high income earners; but lower income earners will in most cases not be able to profit from this facility (Goudswaard and Caminada, 2006). The flat tax credit of € 185 is relatively attractive for the lower income groups. After 15 years of participation this tax credit amounts to € 2,770. However, single persons on minimum wage pay little income taxes and cannot profit from this tax credit. Moreover, the absence of a minimum savings amount requirement may induce employees to participate while saving only a very little amount money annually, just to benefit from this flat tax credit, representing a deadweight loss. The additional tax credit of about € 30 per day in case of parental leave is considered a significant financial facilitation for people with low incomes (Frericks *et al.*, 2005: 43). Women and men who earn up to approximately twice the minimum wage will not have to pay any income tax when using the life course plan for parental leave. The scheme will still be unattractive to people with a low income because the tax discount is not paid while the saving is done.

Dutch experience with offering choices in the collective labour agreements *à la carte* (Delsen *et al.*, 2006) and in the individualised Salary Savings Scheme (SSS) (De Mooij and

Stevens, 2002; CBS, 2005a; 2007; Kösters, 2007) shows that the participation rates are higher for male relative to females, older workers relative to young workers, employees with high salary level relative to employees with low salary level and for full-time employees relative to part-time employees. In line with this experience the contribution of the LCSS to facilitating life course choices is expected to be limited; only some employees will be able to participate in the LCSS (see Keuzenkamp, 2004; Plantenga and Remery, 2004; Frericks *et al.*, 2005; MinBZK, 2006). It is expected that the main users will be employees on higher salary, men, older employees, couples without children and full-timers. These groups will be able to set aside money to invest in the LCSS. The LCSS mainly offers financial benefits for employees with a higher salary. For single parent households and young people who are at the start of their career it will be difficult to save money and to build up a substantial account. They may use it for parental leave, but have little time to save. The flat tax credit implies that men with high salaries lose much more than part-time working women and women that have a lower wage when using the LCSS for parental leave. If women use the scheme, they will probably use it mostly to fund parental and/or care leave. As a result, they may lose the opportunity to use the credits for early retirement or other forms of leave. Only few men are expected to use the LCSS for parental leave; men will more frequently use LCSS to fund prepension arrangements. The time to save for early retirement is relatively long. It is a well established fact that the income level changes over the life cycle. Data for 2003 from Statistics Netherlands show that annual salary increases with age, with a peak in the 46-55 years category. For young people the income increase is strong, because they find a (better) paid job or their wages increase related to seniority and more experience. At older age an increasing number of people stop working partially or fully, as a result their average income drops. The highest average income is in households with a breadwinner between 50 and 55 years of age (CBS, 2005b). Combined with pension consciousness these data suggest that the LCSS will mainly be used to finance early retirement.

The contribution of the present LCSS to the objectives of transitional labour markets is also expected to be poor for several reasons. There is no provision that supports the use of leave for continuous training or for upgrading low-skilled. It is to be expected that the present scheme will be used mainly for compensating income loss at early retirement and less for other forms of leave. There are three reasons for this: first, in case of short-term leave (less than three months or less than one year) the SSS is more advantageous; second, older workers have more financial leeway to

save for leave than younger workers; third, in existing schemes more is saved for prepension than for other forms of leave (CPB, 2004; Jongen and Kooiman, 2004). Also because employees have to save first, the contribution to the objectives of transitional labour markets is limited. Pressing needs of women for parental leave and for care leave and early retirement for men will prevail (Frericks *et al.*, 2005: 45-46; Keuzenkamp, 2004).

Also the number of hours worked have their influence on the participation in the LCSS. For the part-time employees the financial scope to save is limited relative to full-time employees. Because most Dutch part-time employees have voluntarily chosen the number of hours they usually work (Delsen, 1995; Bielenski *et al.*, 2002; Buddelmeyer, Mourre and Ward, 2004; Euwals and Hogerbrugge, 2006), their work-life balance may be better than the ones of full-timers, they will have less need to adapt their working hours by participating in the LCSS. Therefore, we expect to find a lower participation rate among part-timers than among full-timers. For the same reasons - because in the Netherlands most part-timers are female and most full-timers are male - we also expect to find a lower participation rate among female employees than among male employees. The choices made most likely also are influenced by care responsibilities. Because this information is not included in our dataset it is not possible to measure directly the impact of childcare or eldercare responsibility on participation. However, as care responsibilities in the Netherlands (as elsewhere) are still primarily a female domain, their influence will most likely be reflected in the (expected) lower participation rates in the LCSS by women. From this we expect the contribution of the LCSS to improved work-life balances to be limited.

4. Actual participation

The actual participation in the LCSS in 2006 confirms the above mentioned expectations. According to Statistics Netherlands (see Table 2) the average participation rate of employees with a paid job of at least twelve hours a week was 5.6 percent in 2006. The participation rate of men is higher than of women. Full-timers participate more than part-timers and employees with a permanent contract considerably more than employees on other contracts. The participation rate increases with age up to 55 years and decreases after that age. Participation rates rise with the education level. Finally, as expected, employees with a partner participate more than singles, and parents less than non-parents. A representative survey in July 2006 among members of the DNB

Household Survey panel found a participation rate of 8 percent; 58 percent of the participants indicated to save for early pensioning. Fiscal benefits are an important motive (65 percent) to participate; also the employer contribution (31 percent) plays an important role. Important reasons for not taking part in the LCSS are: the attractive Salary Savings Scheme (31 percent); save myself and leave options open (16 percent), cannot spare the money (13 percent) (Van Els, Van Rooij and Schuit, 2006).

Table 2: Participation rates of employed employees who work 12 hours or more per week in the Dutch Life Course Savings Scheme by selected characteristics, 2006 (annual averages in percentages)

Total	5.6
Males	6.3
Females	4.6
15-25 years	2.3
25-35 years	5.3
35-40 years	5.8
40-45 years	6.5
45-50 years	6.2
50-55 years	8.3
55-60 years	4.9
60-65 years	1.6
Lower education	3.6
Intermediate education	4.8
Higher education	8.0
Permanent contract and fixed hours	6.0
Other	1.4
12-19 hours per week	2.2
20-27 hours per week	4.0
28-34 hours per week	5.9
35 hours or more per week	6.4
Single	5.2
Single parent	3.6
Partner	6.4
Partner, not parent	6.5

Source: Calculated from Statistics Netherlands (CBS, 2007).

Also Statistics Netherlands' data show that early retirement is the most important reason for participation in the LCSS (see Table 3). The fact that half of the employees (males 54 percent and females 45 percent) want to use it for early retirement runs counter to the aims of the LCSS. For men this was expected. For females this is not in line with the expectations. As expected the early retirement reason to participate increases considerably with age and applies to two thirds of the employees in the age group 45-65 years. Parental leave is more important for females (10.2 percent) than males (3.2 percent); at a lower level this also applies to sabbatical leave. Also this was expected. Unlike our expectations parental leave is not the most important reason for females. Education leave is very limited as a reason for participating in the LCSS, confirming the expected poor contribution of LCSS to the objectives of transitional labour markets. Note, however, that a considerable portion of the participants (29.1 percent) does not yet know the purpose; notably the younger employees (47.1 percent) have not yet decided on the purpose of the savings (CBS, 2007; Kösters, 2007). Survey results of an Internet panel representative for the total employees within the government sector (central government, provinces and local governments, juridical power, defence, police, water boards and education) of the Ministry of Domestic Affairs and Kingdom Relations in the second half of June 2006 show that about 6 percent of the civil servants participate. Older employees participate more than younger employees, the participation increases with the salary level and employees on permanent contract participate more than employees on temporary contracts. Early retirement again is the most important reason (MinBZK, 2006).

Table 3: Reasons for participating in the Dutch Life Course Savings Scheme, 2006 (annual averages in percentages)

	Early retirement	Parental leave	Sabbatical	Leave to care for sick relative	Education leave	Other or unknown	Do not know yet
Total	50.3	5.8	4.7	0.6	0.3	9.0	29.1
Males	53.7	3.2	3.7	0.5	0.5	8.8	29.2
Females	44.5	10.2	5.5	0.8	0	8.6	28.9
15-25 years	29.4	5.9	5.9	0	0	11.8	47.1
25-45 years	39.5	10.5	5.8	1.1	0.5	7.9	35.8
45-65 years	67.9	0	2.9	0	0	10.2	17.5

Source: Calculated from Statistics Netherlands (CBS, 2007).

From these bivariate results it can be concluded that the actual participation rate (5-8 percent) in 2006 is much lower than was expected on the basis of stated preferences and also is clearly below the level expected by the government. Only certain employees are able to

participate. The limited participation implies that the contribution of LCSS to extending free choice of individuals to plan their life course is poor. Also the contribution of the LCSS to a less hectic rush hour of life and to the objectives of transitional labour markets is limited. The fact that the LCSS is mainly used to retire early contradicts the participation aim of the scheme.

5. Dataset

To study participation in the LCSS in more detail, we use data on 542,449 employees in the Dutch government sector and the educational sector provided by Loyalis, one of the suppliers of the LCSS. The government sector includes public administration (central government, provinces and municipalities) and special services like defence, police and justice, water boards, electricity boards, public utilities, academic hospitals and research and science administration. The educational sector concerns subsidised education, including primary, secondary and tertiary education as well as occupational, further and adult education. Of these 542,449 employees we know whether they choose to participate in the LCSS provided by Loyalis at the end of July, 2006. The available background characteristics of the employees are gender, age, whether they have a partner, number of hours worked, annual salary, the participation in additional pension products, and the sector of activity in which they are employed.

Table 4 shows that 3.9 percent of the employees actually participated at the end of July, 2006. This figure underreports the actual participation in 2006, because part of the civil servants had not made a choice yet and for another part of the civil servants the choices were unknown, because they opted for another provider of the LCSS. In our analysis we assume that on average the preferences of those whose choices we do not know are similar to those whose choices are known. Table 4 seems to confirm this. Although the participation rates are lower than the national rates, because of incomplete data, the differences by gender, age, presence of a partner and working time do not differ substantially from the total population presented in the previous section.

Table 4: Percentages of employees in the government sector and education sector participating in the Life Course Savings Scheme by selected characteristics at the end of July 2006 (N=542,449)

	% Participating
Total	3.9
Gender	
<i>Male</i>	4.4
<i>Female</i>	3.5
Age	
<26	2.9
26-35	3.6
36-45	3.4
46-55	4.8
56-65	2.7
Partner	
Yes	4.2
No	3.1
Annual salary	
<€ 15,900	2.0
€ 15,900-€ 22,600	2.7
€ 22,600-€ 30,900	2.9
€ 30,900-€41,500	3.9
>€ 41,500	5.9
Weekly working hours	
<50%	2.3
50%-95%	3.7
95-100%	4.3
Additional pension products	
Yes	11.1
No	3.8
Sector of employment	
<i>Central government</i>	6.1
<i>Municipalities, provinces and water boards</i>	3.9
<i>Preschool, primary, secondary and adult education</i>	3.3
<i>Higher education, scientific research and administration</i>	3.3
<i>Electricity board, public utility and water companies</i>	13.2
<i>Police, defense and judicial power</i>	1.4
<i>Academic hospitals</i>	1.1
<i>Voluntary participants</i>	3.8
<i>Other and unknown</i>	3.4

6. Bivariate analysis

Our data support the expectation that only a minority of the employees would participate in the LCSS. This does not imply that most employees are satisficers; it mainly suggests that only relatively few employees switched from SSS to LCSS. According to Statistics Netherlands (CBS, 2007) two thirds of the participants in the LCSS in 2006 participated in the SSS in 2005. The limited switch is related to the fact that participation in the competing SSS is more interesting and less risky, and the fact that choices are more influenced by short-term rather than long-term considerations. Indeed, in 2006 with a participation rate of 43 percent of employees, the SSS was much more popular than the LCSS (CBS, 2007). In the government sector over 54 percent of the employees participated in the SSS in 2006 (MinBZK, 2006).

As expected the participation rate of men is higher than of women; full-timers participate more than part-timers, and the participation rate increases with the number of weekly working hours. The participation rate of young adults, less than 26 years old is the lowest (2.9 percent) and increases with age (see Table 4). The limited number of young adults that participate may use the LCSS for parental leave in the next phase, the rush hour of life. Although its contribution to reduced hectic also depends on the available amount and time to save, the low participation rate indicates that the contribution of the LCSS to a less hectic rush hour of life will be limited. Our data produce a peak in the participation rate (4.8 percent) in the 46-55 years old category. Also the data from Statistics Netherlands show the lowest participation rate for young employees below 25 years of age and a peak in the participation rate for employees 50-54 years of age (see Table 2). The results are in line with our expectation that older employees have more financial leeway than young employees. They also point towards the LCSS mainly being used for early retirement in the future. Apart from salary level, pension consciousness plays a role in explaining the relatively high participation rate of the older age group, because these employees are closer to retirement age. Moreover, the people in the older age group - borne between 1-1-1950 and 31-12-1954 - are allowed to save 100 percent of their salary per year in the LCSS as part of the transitional regulation. Other employees participating are only allowed to save 12 percent. The relatively low participation rate (2.7 percent) of the 56-65 years old is related to the fact that the employees aged 57 and over may continue to participate in the fiscally facilitated early retirement and prepension schemes, when offered by their employer. It may be concluded that the present design of the LCSS

does not induce employees to work more years after retirement; it actually is an incentive to retire early.

Adverse selection by the LCSS is confirmed by our data. As expected, the participation rate increases continuously with the annual salary level; the participation rate of employees in the highest salary group (5.9 percent) is three times the participation rate of employees in the lowest salary group (2.0 percent). In line with our findings, Statistics Netherlands data show that participation rates rise with the education level: 8 percent of higher educated employees participate in the life course scheme, compared with 4 percent for those with lower education levels (see Table 2). Also the expected positive effect of the availability of a partner is confirmed by our data. Also Statistics Netherlands' data in Table 2 show this positive impact of partner on the participation rate. The positive association of the participation rate with additional pension products supports our expectation that the minority of employees are maximizers.

Table 4 also indicates that the participation rates vary considerably between sectors of activity. These sectoral differences may be related to differences in employee characteristics, gender and age and salary structure. Also differences in the familiarity with the provider of the LCSS, in the participation in the SSS, differences in the collective labour agreements and in the employer contribution to the LCSS partly explain the differences in participation rates in the LCSS between sectors. Moreover, the amounts of prepension premia available that may be used for the LCSS vary between economic sectors as well as between employees. In the sector Electricity boards, public utility and water companies with 13.2 percent the participation of employees is three times as high as in other sectors of economic activity. This is related to the fact that the early retirement funds has been abolished; the money could be transferred to the LCSS. The sectors Police, defence, judiciary (1.4 percent) and Academic hospitals (1.1 percent) show the lowest participation rates. The Police had not yet made a choice at the end of July; it concerns spontaneous participation. The Academic hospitals participate in the LCSS with supplier Careon in the health and care sector.

7. Multivariate analysis

The results of the bivariate analysis show how participation in the LCSS varies among different groups of employees. However, because the characteristics used to distinguish those groups

(gender, age, earnings, sector etc.) are related to each other, the bivariate results do not give insight into the underlying preferences. To get a better picture of the preferences of the different groups of employees we use a multivariate analysis. It discounts for overlapping explanations of participation in LCSS between correlated independent variables and expresses the net effects of each independent variable controlling for any other variable in the equation.

Table 5: Logistic regression coefficients of effects of selected characteristics of employees in the government sector and education sector on participation in the Life Course Savings Scheme at the end of July 2006 (N=542,449)

	B	Exp(B)
Gender is female	0.202**	1.224
Age ^a		
<26	0.360**	1.433
26-35	0.201**	1.222
36-45	-0.153**	0.858
46-55	0.110**	1.116
56-65	-0.517**	0.596
Partner	0.228**	1.256
Annual salary		
<€ 15,900	Reference	Reference
€ 15,900-€ 22,600	0.356**	1.427
€ 22,600-€ 30,900	0.596**	1.815
€ 30,900-€41,500	0.954**	2.596
>€ 41,500	1.486**	4.421
Weekly working hours ^a		
<50%	0.245**	1.278
50%-95%	0.193**	1.213
95-100%	-0.174**	0.840
Additional pension products	0.884**	2.420
Sector of employment ^a		
<i>Central government</i>	0.481**	1.618
<i>Municipalities, provinces, water boards</i>	0.179**	1.196
<i>Preschool, primary, secondary and adult education</i>	0.022	1.023
<i>Higher education, scientific research and administration</i>	-0.095**	0.909
<i>Electricity board, public utility and water companies</i>	1.434**	4.195
<i>Police, defence and judicial power</i>	-0.817**	0.442
<i>Academic hospitals</i>	-1.200**	0.301
<i>Voluntary participants</i>	-0.004	0.996
<i>Other and unknown</i>	0.000	1.000
Constant	-4.556**	0.011

^a Deviation from mean coding

* p < 0.05 ** p < 0.01

The results from the logistic regression analysis presented in Table 5 differ considerably from the bivariate cross tabulations presented in Table 4. When the other individual characteristics are controlled for, gender has a significant influence on participation. Unlike what was concluded from Table 4 and opposite to our expectation, females participate significantly more than males in the LCSS. Table 6 shows that in all salary classes, except the lowest one, the participation rate of females is higher than of males. The higher average for men in the bivariate cross tabulations in Table 4 (reproduced in the bottom row of Table 6 below) can be explained by the high representation in the highest salary class. Women are more frequent in the lower wage classes. So the average participation figures in Table 4 are biased because of differences in the composition of the population. From the logistic regression results presented in Table 5 it can be concluded that when salary is kept constant, women show higher participation rates than men. This is confirmed by Table 6.

Table 6: Percentages of male and female employees in the government sector and education sector participating in the Life Course Savings Scheme at the end of July 2006, according to salary group (N=542,449)

	Males	Females
<€ 15,900	2.0	2.0
€ 15,900-€ 22,600	1.9	2.9
€ 22,600-€ 30,900	2.3	3.3
€ 30,900-€41,500	3.7	4.2
>€ 41,500	5.9	6.0
Total	4.4	3.5

From the cross tabulation in Table 4 it was concluded that the participation-age relationship is inverted-u shaped. The logistic regression shows a non-linear relationship between age and participation rate in which the younger age groups participate above average and the participation rate of the 56-65 years old is below average. This conflicts with our expectation as well as with the expected results from our literature search. Although our data do not include the amount of money saved nor the actual purpose and use of the saving in the future this surprising finding is promising from the LCSS' aim point of view. Table 6 shows that within each age group the participation rate increases with income, and that within age categories there is no systematic relationship of the participation rate and age. In line with data for 2003 from Statistics Netherlands (CBS, 2005b), our

data show that annual salary increases with age, with a peak in the 46-55 years category. This is the major explanation for the differences in results between Table 4 and Table 5 concerning the relationship between age and participation. The below average participation rate of the 36-45 years old seems to confirm the peak hour of life, typified by financial pressure. For the 46-55 years old age category the pension consciousness of the older age groups and the influence of the transitional regulation are confirmed. The below average participation rate of the 56-65 years old relates to the transitional regulation for this age group.

Table 7: Percentages of employees in the government sector and education sector participating in the Life Course Savings Scheme at the end of July 2006, according to age and salary (N=542,449)

	Age group (years)				
	<26	26-35	36-45	46-55	56-65
<€ 15,900	1.8	2.3	1.7	2.2	1.8
€ 15,900-€ 22,600	2.1	2.8	2.4	3.3	2.0
€ 22,600-€ 30,900	3.6	3.1	2.5	3.3	1.7
€ 30,900-€41,500	4.4	4.3	3.6	4.5	2.3
>€ 41,500		7.5	5.7	6.8	3.6
Total	2.9	3.6	3.4	4.8	2.7

Unlike our expectation, the regression results in Table 5 seem to indicate that the LCSS is not mainly used to finance early retirement. The significantly above average rate by young adults below 26 years of age and the 26-35 years old is promising, for it may allow a period of saving long enough to build up a balance for substantial unpaid leave in the next life cycle phase, the peak hour of life. Hence, from the multivariate regression analysis a more positive conclusion can be drawn than from the bivariate analysis. Although participation (still) is low, the LCSS has a potential to contribute to balancing the work-life balance over the life cycle, to the objectives of transitional labour markets as well as to promoting freedom of choice for employees.

The positive relationship between participation rate and annual salary in Table 4 is confirmed by the logistic regression results in Table 5. As expected, the participation rate in the LCSS increases significantly with salary level. Employees in the lower salary groups participate significantly less than employees in the higher salary groups. This points towards adverse

selection. In the individualised and actuarial fair LCSS lower paid and less productive employees have less opportunity to save and hence to choose. The multivariate analysis also confirms our expectation that employees with a partner have a significant higher participation rate than single employees. Relative to couples, in the individualised savings systems the growing number of single person households have less opportunity to participate. This also partly mirrors the importance of the income level for participation. Because of budget constraints the contribution of the present LCSS to facilitate the free choice of individuals to plan their life course is limited and only applies to financially better off and more productive of employees. Purchasing power, *i.e.* salary level is the core factor explaining differences in participation rates. The multivariate regression seems to confirm our expectation that the present design of the LCSS favours the higher salary earners, or at least does not fully correct market failure. Fiscal facilitation is potentially an important policy instrument to increase the LCSS participation rate and extend freedom of choice to all employees, irrespective of salary group, age group or household types.

Table 8: Percentages of employees in the government sector and education sector participating in the Life Course Savings Scheme at the end of July 2006, according to weekly working hours and salary (N=542,449)

	Weekly working hours		
	<50%	50%-95%	95%-100%
<€ 15,900	2.03	1.99	1.90
€ 15,900-€ 22,600	2.74	2.82	1.82
€ 22,600-€ 30,900	3.44	3.54	2.30
€ 30,900-€41,500	4.07	4.67	3.69
>€ 41,500	4.83	6.94	5.97
Total	2.32	3.71	4.30

Contrary to the bivariate results in Table 4 and opposite to our expectation the logistic regression results in Table 5 indicate that part-timers participate significantly more in the LCSS than full-timers; the participation rate and the number of hours worked are inversely related. Table 8 shows that in all salary groups full-time employees participate significantly less in the LCSS than part-time employees. The differences between small and large part-time jobs are not significant. The data, moreover, show that 80-88 percent of the participating part-timers are female; and 75 percent of the participating full-timers are male. These differences in characteristics largely explain the

opposing results in Tables 4 and 5. The link between saving money for unpaid leave and care responsibilities within households is confirmed by the fact that women and part-timers, groups that carry out the major part of the care tasks, also tend to save funds to finance periods of unpaid leave. The logistic regression seems to suggest that part-timers with dependent children prefer to use the LCSS to provide for (full) parental leave or that older part-timers prefer to use it to finance full early retirement. From this it may be concluded that the contribution of LCSS to increase the employment participation is poor. Females and part-timers may use the LCSS to stop working because of care tasks, and the present design of the LCSS induces the most productive employees in particular to retire early in stead of working more years before retirement. The results may also point towards dead weight loss: employees just participate in the LCSS to benefit from the annual tax credit of € 185.

Employees that hold additional pension products have a significant higher LCSS participation rate. This confirms our expectation that the participants in the LCSS are maximizers.

Also controlled for various personal characteristics of the employees the sector of activity has a significant impact on the participation of employees in the LCSS. Employees in the sectors Electricity boards, public utility and water companies have significant above average participations rates. The below average participation rate of employees in the sectors Police, defence, judicial power and in Academic hospitals in Table 4 is also confirmed by the regression results.

8. Conclusions

The Dutch LCSS aims at increasing labour market participation of women and older workers. It supports combining employment and family responsibilities by enabling employees to cope better with stressful periods. It can be concluded that in 2006, the first year of operation, the LCSS was not very popular among the Dutch male and female employees. Actual participation is lower than expected by the government for various theoretical and practical reasons, including the design and fiscal facilitation, the fact that LCSS is a recent innovation and the more favourable competing scheme, the SSS. The LCSS lends shape to the individualisation; it enables an employee to vary his/her working time over the life cycle according his/her personal situation. Starting from heterogeneous employees preferences, offering options will result in high levels of participation

and may imply that differentiation will occur. Lack of differentiation of actual choices and low participation rates point towards a gap between preferences and choices offered or that the options only match the preferences of a sub set of employees. Our analysis shows purchasing power to be the core explaining factor. The LCSS, the fiscal facilitation in particular, mainly offers financial benefits for employees with a higher salary and explains why certain groups of employees (still) have limited opportunity to participate in the LCSS, while according to our findings they potentially are interested. For within salary categories the participation rates of these groups are above average.

An important finding from our multivariate analysis is that controlled for other characteristics young people participate more than older employees, females participate more than males, part-timers more than full-timers and employees with a partner participate more than singles. The contribution of the present LCSS to facilitating the free choice of individuals to plan their life course is limited, due to the low take up rate, as well as because certain groups of employees are not able to participate. Although participation (still) is low, the LCSS has a potential to contribute to promote freedom of choice for employees, to balancing the work-life balance over the life cycle, and to some extent also contribute to the objectives of transitional labour markets. Investment in human capital over the life cycle is not addressed in the present LCSS. The contribution to continued employment participation is limited, or may even be negative. The potential is emphasised by the Coalition Agreement (2007) between the three political parties of the present government to address a number of the above mentioned shortcomings of the present LCSS.

Taking into account of our research results three changes seem of special importance. Firstly, access of the LCSS has to be extended for lower paid workers, younger workers and parttimes (females). This may for instance be realised by adapting the fiscal facilitation that especially is favourable for older male full-time workers. When working parttime becomes fiscally more attractive, it not only promotes combining work and care, it also cushions part of the tie pressure in the rush hour of life, and promotes gradual retirement. Adding the option to borrow money to finance leave is an additional option to promote access of the LCSS for younger workers. Secondly it would be to abolish the approval by the employer. If the governments considers it desirable that employees participate in the LCSS, than it should also offer them the certainty that the saved amounts can be spend on the purpose they were saved for. Thirdly it is of

importance that the SSS is integrated into the LCSS. When the option is added that (part of) the money saved can be withdrawn freely, it extends the freedom of choice of the workers, and at the same time promotes employment participation, because less leave will be taken. Moreover, it lessens the financial pressure in the peak hour of life. Study entitlements for education and training facilities and saving towards longer parental leave will be linked to the life-course savings scheme will contribute to transition labour markets. Not only the participation rates, also the effectiveness of the LCSS are expected to benefit from these announced changes in the design of the scheme.

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