The Turkish Pension System: Further Reforms to Help Solve the Informality Problem

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29-Nov-2006
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English text only

ECONOMICS DEPARTMENT

THE TURKISH PENSION SYSTEM: FURTHER REFORMS TO HELP SOLVE THE INFORMALITY PROBLEM

ECONOMICS DEPARTMENT WORKING PAPER No. 529

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All Economics Department Working Papers are available through OECD's Internet Website at www.oecd.org/eco/working_papers

JT03218800

ABSTRACT

The Turkish pension system: further reforms to help solve the informality problem

Recent social security reform has significantly improved the long-run sustainability of the pension system. However, the pension system continues to serve as an important barrier to a more rapid expansion of the formal-sector economy in two ways. First, early-retirement incentives (including severance payments) continue to push many incumbent formal sector workers into the informal sector, often at ages as young as 40-45. While new labour force entrants face a much higher retirement age, policies for incumbents are fiscally expensive, inequitable, and serve to swell the ranks of the informal sector. Second, even when the transition to the new pension rules is complete, net replacement rates will remain very high by OECD standards, requiring high social security contribution rates that make it too expensive for firms to employ low-skilled labour in the formal sector. Thus, further pension reform is one of the keys to overcoming Turkey's economic duality. Finally, since the pension system does not cover the informal sector, it does little to alleviate poverty among the wider population of older people. This paper discusses a number of reforms that would increase the retirement age, reduce inter-generational inequities, and permit a significant cut in the tax wedge on labour, while better addressing old-age poverty concerns at all levels of income.

This Working Paper relates to the 2006 Economic Survey of Turkey (www.oecd.org/eco/surveys/turkey).

JEL Classification: D10, H55, J14, J18.
Keywords: Turkey; pensions; early retirement; informal economy.

RÉSUMÉ

Le système des retraites en Turquie: Les réformes supplémentaires pour aider à résoudre le problème de l'informalité

La récente réforme de la sécurité sociale a amélioré largement la viabilité à long terme du système de retraite. Cependant, la structure de ce dernier reste un important obstacle à une expansion plus rapide de l'économie formelle, pour deux raisons. Premièrement, du fait des incitations à une retraite anticipée (telles que les indemnités de départ), de nombreux travailleurs du secteur formel continuent à rejoindre le secteur informel, souvent à un jeune âge comme 40-45 ans. Alors que les nouveaux entrants dans le marché du travail prendront leur retraite à un âge bien plus élevé, les politiques concernant les travailleurs déjà actifs sont coûteuses pour les finances publiques, ne sont pas équitables et nourrissent le secteur informel. Deuxièmement, même lorsque le passage aux nouvelles règles régissant les retraites sera achevé, les taux de remplacement nets seront encore très généreux par rapport aux niveaux observés dans la zone OCDE, avec des taux de cotisation élevés qui dissuadent les entreprises du secteur formel d'employer une main-d'œuvre peu qualifiée. En conséquence, la poursuite de la réforme des retraites est fondamentale pour surmonter ce dualisme économique. Enfin, parce qu'il ne couvre pas le secteur informel, le système de retraite ne contribue guère à atténuer la pauvreté au sein de la population âgée. Ce chapitre examine plusieurs réformes qui repousseraient l'âge de la retraite, réduiraient les inégalités intergénérationnelles et feraient diminuer significativement le coin fiscal sur le travail, tout en répondant mieux aux préoccupations suscitées par la pauvreté des personnes âgées à tous les niveaux de revenu.

Ce Document de travail se rapporte à l'Étude économique de la Turquie 2006 (www.oecd.org/eco/etudes/turquie).

Classification JEL : D10, H55, J14, J18.
Mots clés : Turquie, système des retraites, retraite anticipée, secteur informel.

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THE TURKISH PENSION SYSTEM: FURTHER REFORMS TO HELP SOLVE THE INFORMALITY PROBLEM

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1.   Before May 2006, the Turkish social security system was made up of three separate social security institutions: SSK, for private and public sector workers; Emekli Sandiği (ES), for civil servants; and Bağ-Kur, for self-employed workers and farmers. Together, the system has been running deficits for more than a decade, despite very favourable demographics. Over time these deficits have required increasingly large transfers from the general budget (Figure 1, panel A), prompting several attempts at reform. The first reform, in 1999, led to a temporary fall in the size of the deficits in the SSK and Bağ-Kur systems, although they subsequently started to rise again due to a combination of discretionary increases in the pension level and shrinkage of the premium base. In the Emekli Sandiği (ES) system, only one of the main parameters was changed and deficits have risen continuously.

2.   The cumulative value of these deficits between 1994 and 2004, plus their debt servicing cost (calculated using the Treasury bill rate), was 475 billion YTL in 2004 prices, equal to approximately 110% of GDP and 1.5 times the total consolidated debt stock as at the end of 2004.[2] Thus, the unsustainable social security system deserves a large part of the blame for Turkey's fiscal challenges over the past decade. In this context, the 2006 social security reform was essential (see Box 1 for a summary). Rather than continuing to increase, actuarial scenarios for these deficits now show them gradually declining over the next four decades and reaching balance by around 2045 (Figure 1, panel B).[3]

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2.   Ministry of Labour and Social Security (2005).

3.   Even with reform the additional pension system deficits between 2006 and 2040 cumulate to more than 50% of GDP (without taking into account the implicit debt servicing cost).

Figure 1. Deficits in the pension system
Per cent of GNP

Per cent

A. Budget transfers to Social Security Institutions

ES
Bag-Kur
SSK
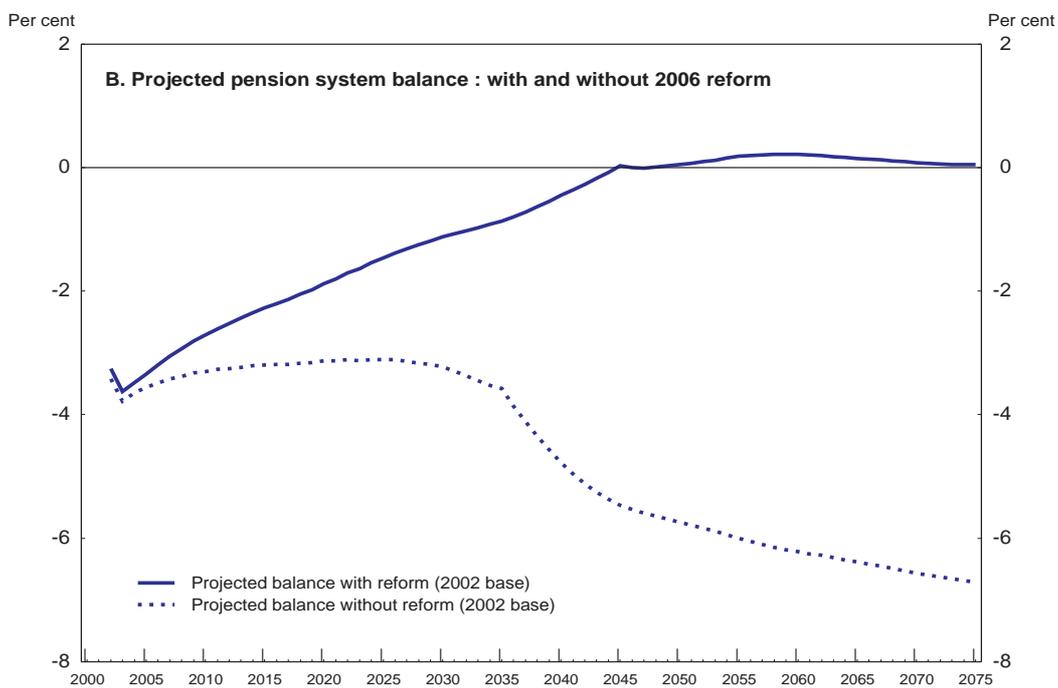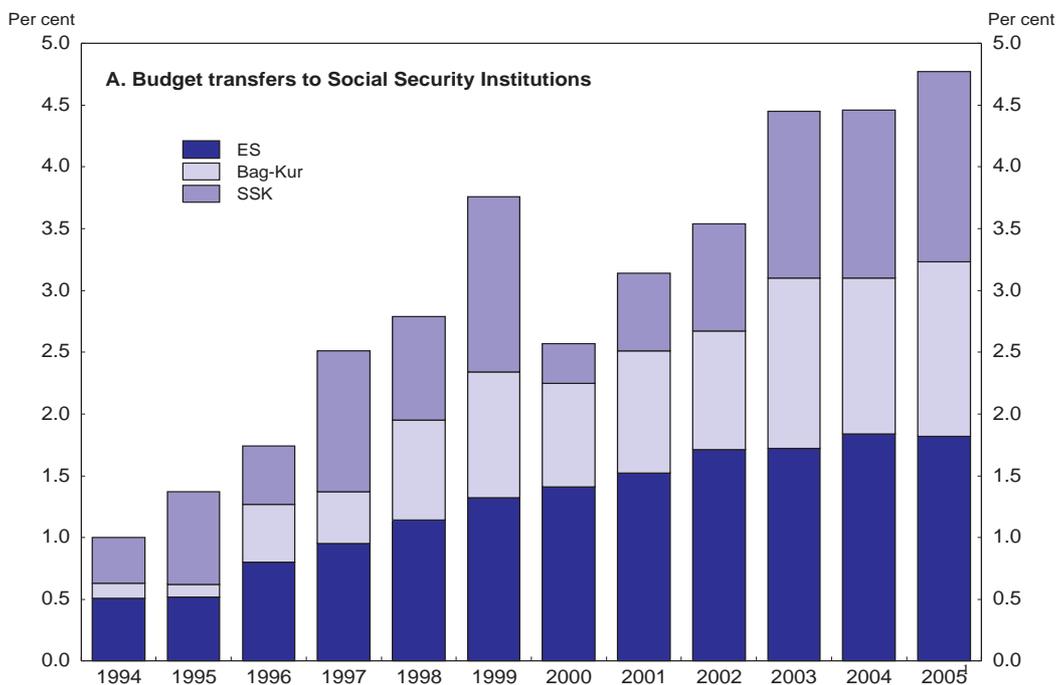
Source: Social Security Institutions.

Box 1. The 2006 social security reform

Following considerable delays, two new social security laws, both of which constituted structural performance criteria in Turkey's IMF program, were passed into law in May 2006. The social security administrative reform law became effective as of May 2006 and the social insurance and health reform law will take effect in January 2007.[1]

The first of these laws (the social security administrative reform law) will unify the three social security institutions into one. This change will considerably improve the ability of the administration to accurately monitor the number of insured persons, revenues and expenses, as well as to provide better customer service. The benefits of a unified system are perhaps greatest in the area of health financing.[2] However, an important benefit in the area of pensions will be the facility with which social security registration can be enforced. Finally, the establishment of an integrated social security system will also permit greater mobility of the workforce between the public, private, and self-employed sectors, thus also potentially contributing to higher labour productivity.

The second law (the social insurance and health reform law) unifies the three pension systems by introducing a single pension formula which is based on more sustainable parameters than those currently in force. Figure 2 illustrates the impact of this change by comparing *full-career* net replacement rates in other OECD countries with those

Figure 2. Net replacement rates: international comparison
Net pension as a percentage of individuals pre-retirement earnings
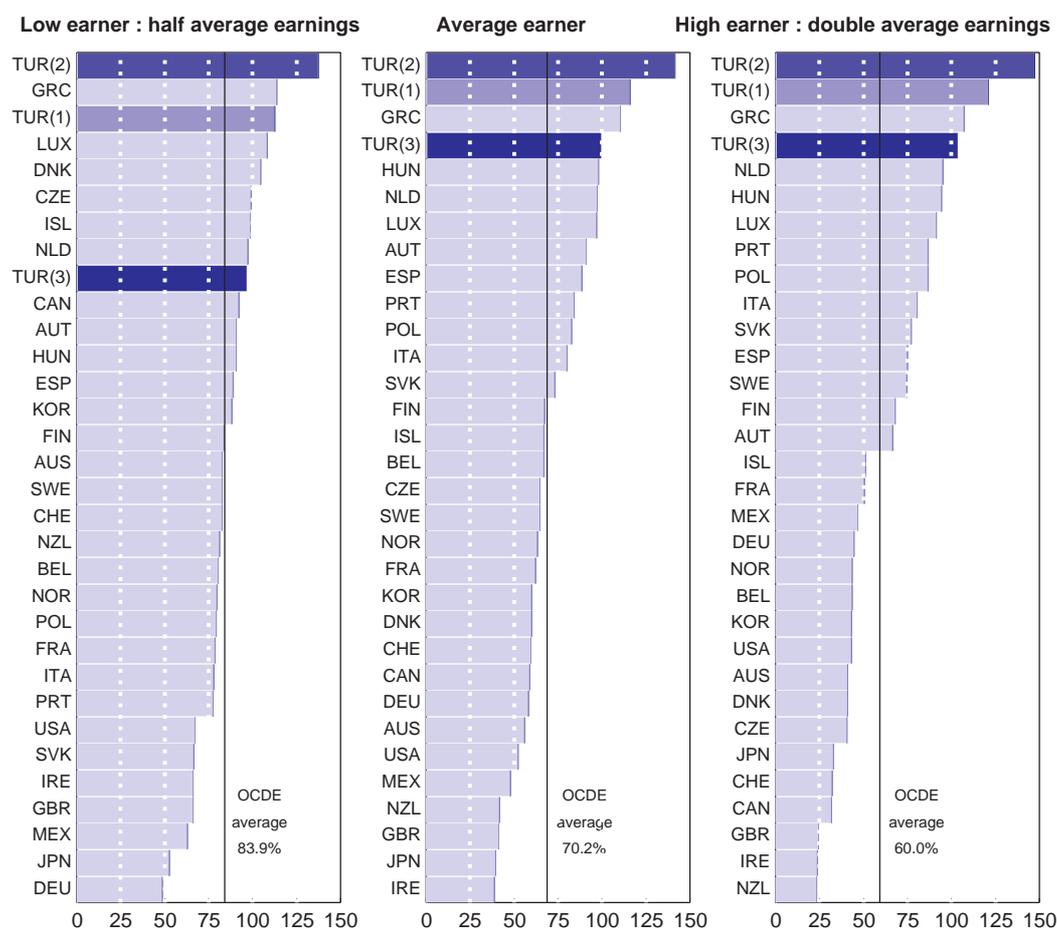
1.   Turkey: pre-99 SSK system.
2.   Turkey: 2000-2006 rules for SSK.
3.   Turkey: 2007 long-run parameters.
Source: OECD, Pensions at a Glance, 2006, and Secretariat calculations.

in Turkey under three sets of pension rules: the pre-1999 rules (system 1); the 2000-2006 rules (system 2); and the post- 2016 rules (system 4).[3] See the Annex for further details of each set of rules. Although replacement rates were already high under system 1, it is clear that system 2, which was introduced in 1999, implied even higher replacement rates. It is therefore fortunate for Turkish public finances that the 2006 reform has cut replacement rates back. In practice, no worker would receive a full-career replacement rate under system 2, since this system has been in place for only 7 years. As discussed later, however, workers who participated in the formal labour market over this 7 year period will end up with higher replacement rates than those who did not.

Despite the 2006 reform, net replacement rates have only moved down from the highest in the OECD to the second highest (for double at double average income earners). An important reason why net replacement rates remain so high by OECD standards is the fact that pensioners in Turkey do not pay income tax or health insurance premiums. With the exception of Mexico and the Slovak Republic, all other OECD countries tax pensions, and a significant number also require pensioners to pay health insurance premiums.[4] In addition, some of the new parameters are still quite "generous", although the impact of this is partially offset elsewhere. In particular, the new long-term accrual rate of 2.0% per annum, while lower than previously (meaning that workers now have to work more years for the same pension) still remains relatively high by OECD standards. The only country with a higher rate is Spain. Moreover, the accrual rate in Turkey is even higher – 2.5% per annum – in the short term; only from 2016 will the lower rate of 2.0% kick in. On the other hand, the new valorisation rate is slightly less generous than the OECD average. While in Turkey past earnings will, in future, be valorised by an average of consumer price inflation and economy-wide earnings growth, many other OECD countries put 100% weight on average earnings (which usually grow faster than prices), although some countries (such as Belgium, France and Spain) use only prices, and some use a combination.[5] Pension indexation post-retirement is linked to inflation, as was the case pre-reform.

Overall, the improved pension formula explains only part of the projected improvement in the fiscal sustainability of the system. Other important factors include: *i)* an increase in the premium base for ES and Bağ-Kur; *ii)* a change in the indexation of ES pensions from wages to inflation; and *iii)* the gradual phasing in – after 2036 – of a higher minimum retirement age of 65. Although the 1999 reform already legislated for the gradual phasing out of the very young minimum retirement ages that are seen currently, the 2006 reform has also legislated for a further increase to 65 – including for women – between 2035 and 2048 (Figure 3, panel A). In the meantime, however, workers are still entitled to full pension benefits at very young ages, providing little incentive for them to continue to work – at least in the formal sector – after qualifying for a pension.

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1. The President has appealed several articles of the pension reform law in the Constitutional Court. Following a similar appeal (by an opposition party) of the 1999 reform law, the introduction of several parts of that law were delayed until 2002.
2. For further discussion see Box 5 in Brook (2006).
3. The results of system 3, for which some interim rules will apply between 2007 and 2015, are not illustrated. See the Annex for further details.
4. OECD countries in which pensioners pay some level of social security contributions include Austria, Belgium, Finland, France, Germany, Japan, Luxembourg, the Netherlands, Norway and Poland.
5. See OECD (2005, 2006b) for further details.

3.   Despite the essential reforms that have now been passed, the pension system is still a significant barrier to an expansion of the formal sector in two respects. First, the grandfathering of previous early retirement entitlements serves to push the (generally more educated) middle-aged formal sector workforce into the informal sector at a relatively young age. Second, social security contributions remain high, making up a significant portion of the tax wedge which discourages firms from employing low-skilled workers in the formal sector.[4] Moreover, Turkey's pension system does little to address poverty and equity issues in the wider population. This paper documents these remaining problems with the pension system and proposes some "next steps" for reform to address these issues.

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4.   Only around ¼ (23.5%) of the working age population (defined as those aged 15 – 64) are contributing to a social security institution, while approximately ½ are not participating in the labour market, and the remainder are working in the informal sector.

The slow transition to the new rules is expensive and creates poor incentives for formal sector participation

4.   The new pension rules are being phased in too slowly in two respects. First, although the pension eligibility age in Turkey is the lowest in the OECD, it is expected to increase only very gradually (see Figure 3, top panel). This problem originated between 1986 and 1992 when populist measures eliminated the minimum retirement age, permitting retirement in some cases after less than 15 years of contributions, apparently in the hope that it would cut unemployment. It did not – although it did send the social security deficit soaring and permit early retirees to continue working informally while drawing their pension (see Box 2). Despite the stricter conditions for early retirement that were introduced with the 1999 reform, more than half of the current pensioners in the system for private sector workers (SSK) are still below the *official* retirement age (58 for women and 60 for men). Moreover, more than three quarters of the pensioners are younger than the higher benchmark of 65 years, and this percentage is expected to remain high for several decades to come (Figure 3, panel B).

5.   At present women are allowed to retire earlier than men and, because they live longer on average, they typically extract higher implicit rates of return on their contributions. This suggests that some savings could be made, and some increases in female participation rates achieved, by accelerating the equalisation of the retirement ages for women and men.[5] At present, with a pension eligibility age of 44, and a life expectancy (at age 44) of 76, women enjoy an average retirement period of 32 years, whereas men, with a pension eligibility age of 47, enjoy an average retirement period of 28 years (given life expectancy of 75 at age 47).[6] No other OECD member country has such long average periods of pension eligibility.

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5.   Under the 2006 social security law the *official* retirement ages (of 58 for women and 60 for men) do not begin to increase until 2036. According to that law they will be equalized at 65 in 2048. It is often argued that the younger retirement age for women can be justified on the grounds that women do more unpaid work at home. However, this argument can become circular, implicitly serving as a justification for the status quo, rather than promoting gender equality.

6.   UN Demographic projections.

Figure 3. Minimum pension eligibilty age is only gradually being increased

A. Pension eligibility age by sex and cohort(1)

Further increase to 65 legislated by 2006 law (previously copped at 60 for men and 58 for women)

Men retiring 2043

Men retiring 2006

Increases already legislated by 1999 law

Men
Women

Cohort (year of birth)

B. Percentage of SSK pensioners who are 'young'

Women(<age 58)
Men(<age 60)
Women(<age 65)
Men(<age 65)
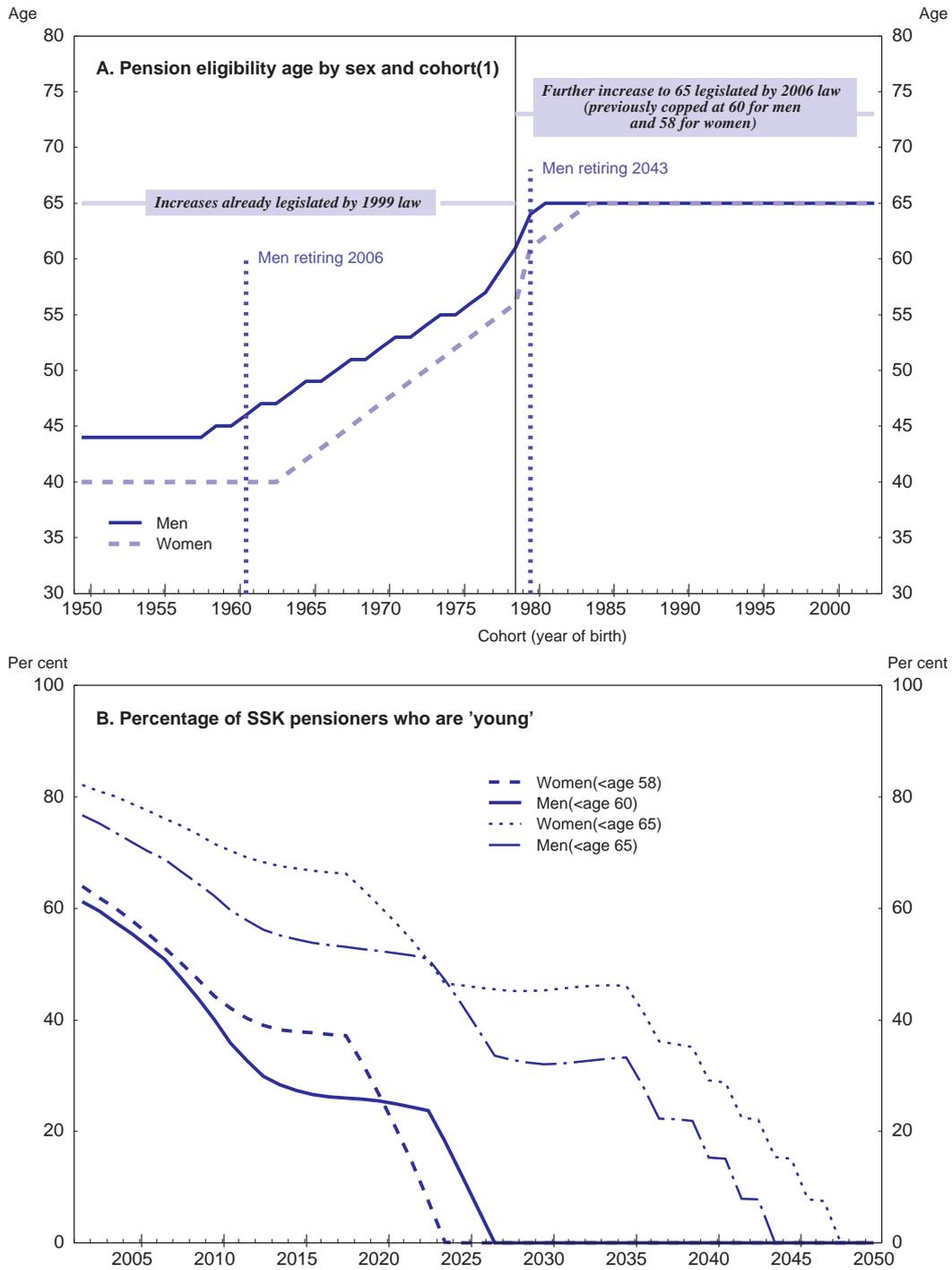
1. This chart presents pension eligibility ages for those workers who had not already retired at the time the 1999 law was introduced. Prior to the 1999 law, some workers could retire younger than the age presented here (as discussed in Box 2). The minimum eligibility ages presented here assume that each worker joins the labour force at 20.

Source: Social Security Institutions and OECD.

Box 2. Early retirement incentives and continued work incentives

Under the rules introduced between 1986 and 1992, a Turkish man was permitted to retire after being registered with a social security institution for 25 years and having contributed for 5000 days.[1] Since it was possible for young people to register during their studies, many years before actually starting work, the 5 000 days (or 15 years) of contributions often became the binding criteria, permitting some workers to retire in their late-30s. Neither the 1999 nor the 2006 pension reform have restored the minimum retirement age to the *official* retirement age (which is currently 58 for women and 60 for men)[2]. Instead, the 1999 reform introduced a gradually increasing minimum age scale which largely preserves the early-retirement rights of the existing labour force, while the 2006 reform increases the minimum pension eligibility age only after 2036. As a result, the minimum pension eligibility age is gradually increasing but only slowly (see Figure 3, panel A). Even by 2010 there will be many retirees in their 40s, and by 2020 many people will still be qualifying for retirement in their early 50s.

Unlike most other OECD countries, Turkey does not reduce the pension benefit for workers who retire younger than the official retirement age, leaving little incentive for qualifying early-retirees to continue working in the formal sector.[3] Turkish retirees do not pay any taxes on their pension and are entitled to full health insurance, without having to pay any social security contributions. In addition, retirees are eligible to receive a severance payment on retirement, equal to one month's salary for each year of service. Although severance payments are not part of the pension system, this can add up to a substantial sum of money and serves as a significant incentive for retirement.

These rules serve to boost the numbers of middle-aged pensioners working in the informal sector. Indeed, estimates suggest that there are more than 1 million male pensioners working informally. Most of these (approximately 700 000) are aged 50-59, comprising a quarter of the male population in that age group and almost double the number of registered male workers in this age group.[4]

Anecdotal evidence suggests that in the private sector (where unregistered work is widespread), it is relatively common for workers to officially retire, and then to continue to work in the informal market (often for the same employer). This arrangement benefits both the worker (who on top of receiving his or her pension now pays no social security contributions and no income tax) and the employer (who pays no social security contributions on behalf of that worker). By contrast, if a pensioner remains registered with a social security institution, he or she must pay the full social security contribution rate on his wage and salary income (between 33.5% and 39%, depending on the industry). The big loser from informality is the government, which suffers from lower tax revenues while still having the obligation to provide all retirees with free health insurance on top of their pensions. To some extent the 2006 reform has even increased incentives for pension-eligible workers to shift to the informal sector, since registered pensioners previously paid social security contributions of only 30% in SSK and 10% in Bağ-Kur. While it does make sense to tax pensioners the full social security contribution rate on their wage and salary income, other policies need to change to provide incentives for continued formal-sector work.

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1. For women the rules were even more lenient, requiring just 20 years of registration.
2. Based on the 1950 Pension law No. 5417 the minimum retirement age was originally 60 for both men and women. Subsequently, it was lowered to 55 for women with the 1965 Social Insurance Law no. 506. The minimum retirement age for both men and women was then eliminated altogether in 1969 with law no. 1186.
3. An ES worker is not permitted to continue work as a civil servant after retirement. In the other pension systems, a worker who qualifies for a pension but who wishes to continue to work could choose to delay pension receipt. In this case the final pension would take into account the additional years worked. However, it would be more favorable to the worker to begin pension receipt immediately - which is also possible - in which case there is no increment to the subsequent pension, also implying an implicit tax on continued work. However, the more urgent distortion to correct in Turkey is the lack of a pension reduction for those who retire young, rather than the lack of a pension increment for those who continue working.
4. Of 2.9 million men aged 50-59 only 0.6 million were contributing to a social security institution in 2005, while 1.6 million were receiving a pension. From the Household Labour Force Survey, however, only an estimated 0.9 million men in that age group stated that they were not participating in the labour force due to retirement, suggesting that the remainder (1.6 million – 0.9 million = around 700 000, or ¼ of the male population in that age bracket) were participating informally. Due to very low female labour force participation, the comparable figures for women - both the number of pensioners and the number of informal workers - are much lower.

6.   Second, and also extremely costly, is the grandfathering of previous pension entitlements and the slow speed with which the new pension parameters are being phased in. One of the problems under the pre-1999 system was the lack of a link between social security contributions paid and subsequent retirement salaries. As a result, it was common for many employees to pay the minimum legal social security premium, subsequently being promoted to a higher grade just in time to qualify for an actuarially generous pension.[7] Although a very high percentage of workers are still registered as earning the minimum wage, workers who pay the minimum premium will now have that reflected in their retirement pensions, at least for the post-1999 portion of their working life.

7.   Rather than applying the new pension formula to current workers, however, it will be fully applied only to new entrants to the labour force from 2007. Workers who straddle the different sets of pension rules will have their pension calculated as the weighted average of the full-career pensions that they would be entitled to under each of the four sets of rules.[8] This means that the more generous pension rules of the existing system, and the pre-1999 system, will continue to impact on pension entitlements for many decades to come. In addition, the long-run parameters of the new pension formula will only take effect from 2016, creating an interim formula from 2007-2015. Figure 4 shows the weighted average gross replacement rates that will result for different sexes and birth cohorts.[9] This chart makes it clear that replacement rates in Turkey will continue to be very high relative to the OECD average.

Figure 4. Effective gross replacement rates by sex and birth cohort after the 2006 reform
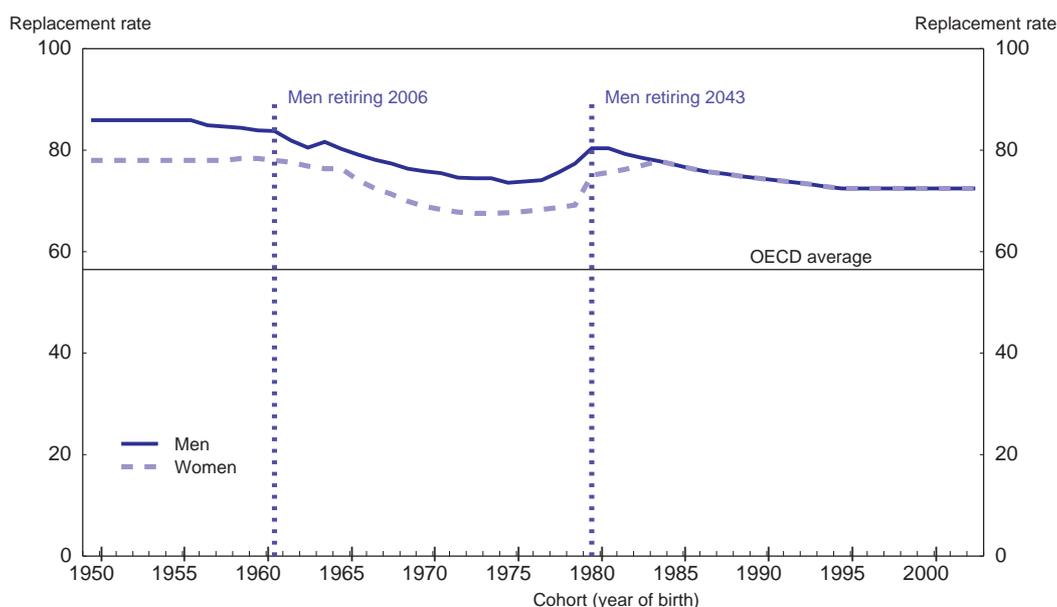
Note: Effective gross replacement rates for an SSK worker earning the average wage and retiring at the
       minimum age of pension eligibility (see the Annex for more details).
Source: Social Security Institutions and OECD pension models.

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7.   In this context the term *actuarially generous* is used when the present value of the pension entitlements is much higher than the present value of social security premiums paid.

8.   These four sets of rules are: the pre-1999 rules; the current rules; the 2006 formula with the interim accrual rate; and the 2006 formula with the long-run parameters. See the Annex for further details.

9.   The lower female replacement rate stems from women's shorter contribution period. The variations across cohorts stem partly from the varying weight on each of the full-career pensions that are calculated under each set of rules and partly from the fact that the number of years of contributions varies across cohorts as the minimum pension eligibility age is adjusted.

8.   Because of the different pension eligibility ages across birth cohorts, a comparison of replacement rates does not capture differences in the generosity of the system across cohorts. This can better be illustrated by comparing pension wealth (PW) and Benefit/Cost Ratios (BCRs) across birth cohorts (Figure 5). These are calculated by assuming that each person begins work at age 20 and retires as soon as he or she qualifies. The results illustrate the significant reduction in the generosity of the pension system across cohorts. While part of this is due to the different full-career replacement rates under the different systems, it is predominantly due to the higher retirement ages of the younger cohorts; by working longer the younger cohorts both increase their contribution period and reduce their duration of pension receipt. Generally speaking, the only cohorts to face the full impact of the reformed pension system will be those born in the 1980s or later, while the 1970s-born cohorts are still permitted to retire young and so are in a mid-way position between the old and the new regimes.[10] This raises intergenerational equity concerns as the younger generations have to bear the burden of current pension obligations through higher taxes and social security contributions, while seeing their own pension wealth reduced below that of their parents. Full details of the rules in each pension system and other assumptions made are provided in the Annex.

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10.   Women's PW and BCR remain higher than those of men, even after full equalization of the retirement age, due to women's longer life expectancy.

Figure 5. Older cohorts are benefiting enormously
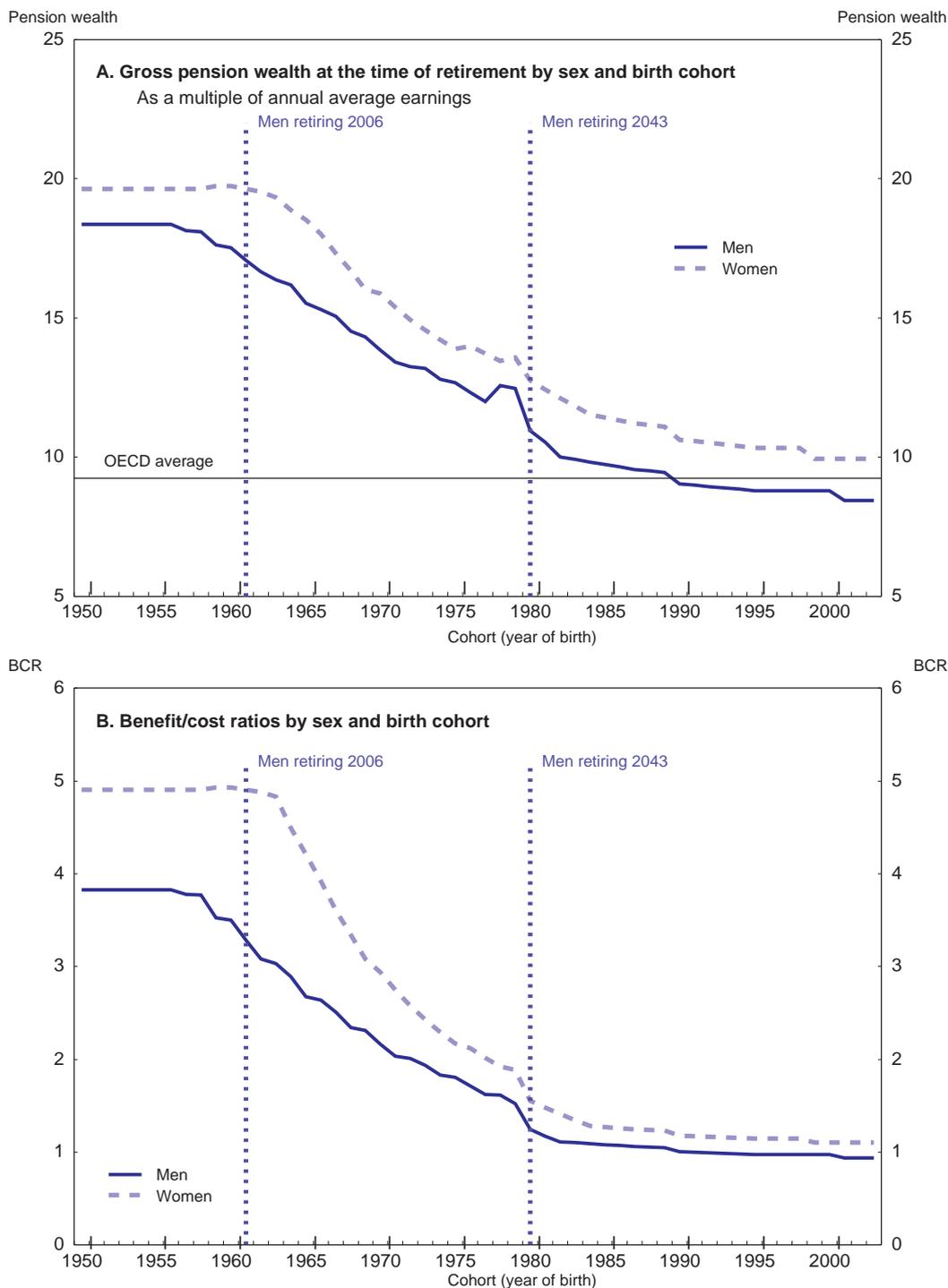
Note: Gross pension wealth and BCRs are calculated for an SSK worker earning the average wage and retiring at the minimum age of pension eligibility. The Benefit/Cost ratio BCR is the ratio between the pension wealth at retirement and the sum of contributions paid into the system (both expressed in present value terms). (See the Annex for more details).
Source: Social Security Institutions and OECD calculations.

9.   In addition to illustrating the generational impacts of the reforms, the BCR measures also provide some indication of the long-run sustainability of the different pension rules. Generally speaking, BCRs of greater than 1.0 are only fiscal sustainable if the size of the registered population is increasing. Although Turkey has a growing population, the *contributing* population has been falling as a percentage of the working age population, thus helping to explain the growing social security system deficits. Under the new long-run parameters, the BCR is close to 1.0, suggesting that the system could (in the long-run) be close to sustainable. In Turkey, however, a BCR of less than 1.0 would probably be required for long-run sustainability as long as the rate of dependent beneficiaries remains high and as long as pensioners continue to receive free health insurance.[11] Some OECD countries with BCRs of less than 1.0 include Germany (0.8), Italy (0.7) and Japan (0.8).[12]

10.   There are three reasons why steps should be taken to reduce the system generosity for the *older* cohorts. First, because the current pension rules effectively serve to push middle-aged formal-sector workers into the informal sector. Since these workers are often well educated, and can command above-average salaries, this is very costly in terms of the diminished tax base. Second, it seems inequitable for the older cohorts to get so much more out of the pension system than the younger generations. In addition to receiving pension benefits that are several times greater than their contributions, these cohorts, and their beneficiaries, also benefit from free health insurance after retirement and the possibility of (tax-free) work in the informal sector. Third, net replacement rates remain very high by OECD standards, and this generosity keeps the tax wedge high, restricting the potential for more formal sector job creation, thus impeding productivity growth[13] and the pace of improvement in the standard of living for the poor. One important reason for Turkey's high net replacement rates is that pension income is not taxed. All other OECD countries, except Mexico and the Slovak Republic, tax pension income. At present Turkey has an EEE tax scheme, whereby a tax exempt status applies to originally earned income, investment returns on that income, and pension income received. The introduction of taxes on pension benefits would imply a shift to an EET tax system. Without further changes, Figure 1 (panel B) shows that Turkey will continue to run large social security deficits for several decades to come, despite the window of opportunity that current demographics present.

11.   For the 1950s and 1960s cohorts – most of whom have already qualified for early retirement – new policies should ensure sharper incentives to continue work, combined with stricter enforcement of current registration requirements, as follows:

- Reduce net replacement rates by taxing pension income, as in most other OECD countries, and by requiring pensioners to pay health insurance premiums, to be deducted from pensions at source.

- Target tax fraud and social security registration enforcement measures on middle-aged retirees, to improve incentives for them to continue work within the *formal* sector, and to improve tax and social security revenues.

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11.   Low female participation in Turkey means that the proportion of *dependent* pension beneficiaries is much higher than in other OECD countries. Since the BCR takes into account only the pension wealth of the registered worker, the liabilities of beneficiaries are not captured. In addition to spouse benefits, Turkey's social security institutions also pay benefits to a rather large number of female orphans (as long as they remain unmarried, orphaned daughters are eligible for these pensions throughout their lives, rather than only until adulthood, as is the case for sons).

12.   Calculations from OECD pension models.

13.   See Gönenç (2006) for further discussion.

12.   For the 1970s cohorts, who have not yet qualified for retirement, there are several additional options for further reform, as illustrated in Table 1. These include: A) an immediate increase in the retirement age to 60; B) an immediate switch to calculating the full pension according to the 2007 pension rules; or C) a combination of the two.[14] These scenarios suggest that significant fiscal savings could be achieved by immediately applying the *official* retirement ages of 60 for men and 58 for women, while additional savings could be achieved by accelerating the transition to the new pension parameters. Even under option C, however, the pension system would continue to treat the 1970-born cohort more generously than the 2000-born cohort (final column in Table 1). This is because the 2000 cohort faces a retirement age of 65, which is 5 years higher than that of the 1970 cohort under reform option C, despite the fact that the life expectancy is only around 3 years higher. Finally, early retirement incentives should also be reduced by eliminating the obligation for employers to pay severance payments to retiring workers.

Table 1. Options for further pension reform
Expected Pension Wealth and Benefit/Cost ratio for a male born in 1970 under different reform assumptions

	Base case	A) Accelerated increase in the retirement age	B) Same pension age: new pension rules	C) Higher pension age *and* final pension rules	2000 cohort male (for comparison)
Gross Pension Wealth (PW)	13.4	12.1	10.6	10.0	9.2
Benefit/Cost Ratio (BCR)	2.1	1.5	1.7	1.2	1.0

13.   If political constraints prevent an immediate increase in the minimum retirement age, an alternative would be to introduce a decrement to the pension benefit for each year that the pension is claimed early (where "early" could be defined as younger than the *official* retirement age of 58 for women and 60 for men). In order to be actuarially neutral, OECD pension models show that, for someone retiring at age 45, the pension benefit should be reduced by 4% for each year before the *official* retirement age. The reduction increases with the retirement age, peaking at around 6% per annum for someone retiring only a few years before the official retirement age.[15] This policy could be expected to proxy reform option (A) in Table 1, by significantly improving the incentives for middle-aged workers to retire later.

Social security contribution rate cuts should be made an priority

14.   As discussed in Gönenç (2006), the high cost of employing someone formally is an important part of the explanation for Turkey's very large informal sector. Of that cost, social security contributions make up the bulk of the tax wedge on labour in Turkey (Figure 6) suggesting that further pension reform must be an important part of the formalisation agenda. Compared with other OECD countries, the very low rate of social security compliance, the sheer scale of the informal sector, and low levels of human capital and productivity, suggest that high contribution rates are more harmful in Turkey than in wealthier countries with high tax wedges. By pushing the cost of low-skilled labour above its marginal productivity rate, firms are forced to hire such workers informally, creating the economic duality that characterises

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14.   Note that while each of these options successively reduces gross pension wealth, option B results in a higher BCR than options A or C, due to the extra years of pension entitlement (since early retirement is still permitted in this case).

15.   See Queisser and Whitehouse (2006) for technical details about calculating actuarially neutral decrements.

almost all aspects of the Turkish economy. Indeed, it is difficult to imagine any significant contraction in the size of the informal sector as long as the cost of labour in the formal sector remains so high.[16]

Figure 6: Average tax wedges on labour, international comparison[1]
As per cent of gross labour costs, 2005
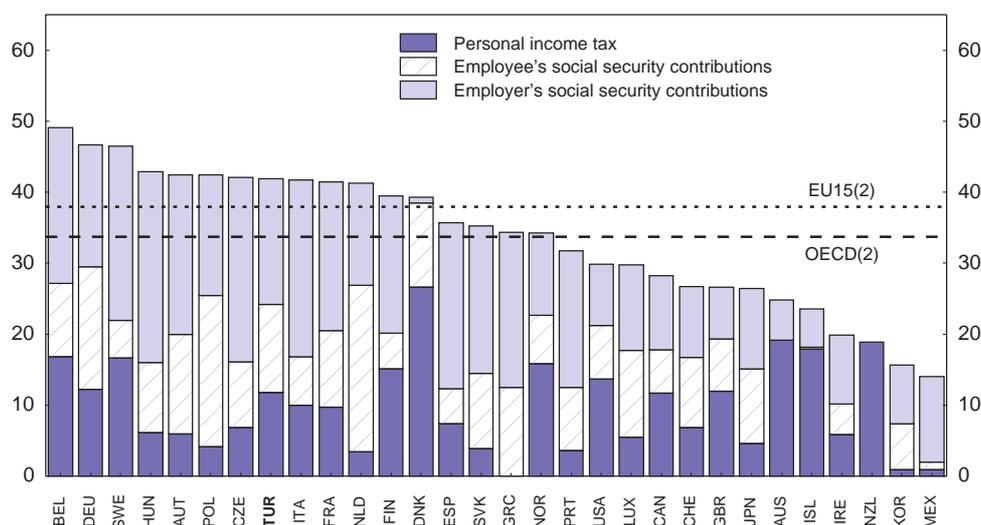
1. For a single individual without children at the income level of 67% of the average production worker, or estimated wage levels of the average production worker.
2. Weighted average using 2000 GDP and PPP.
Source: OECD, Taxing Wages, 2005.

15.   Unfortunately, cuts in the compulsory social security contribution rate would have important transition costs, due to the pay-as-you-go (PAYG) nature of the pension system; the social security institution would receive less income, while still having to meet pension obligations acquired in the past when contribution rates were higher. Given the already high deficits in the social security system, successive governments have argued that cuts to social security contribution rates are unaffordable. However, OECD (2006a) argues that funding the cost of significant cuts to the social security contribution rate should be prioritised. Since social security tax revenues from the private sector are a relatively small source of revenue in Turkey (due to the large informal economy and low compliance), the first-round impact of halving the contribution rate would reduce net government revenues by around 2.5% of GDP[17]. Even without accounting for dynamic scoring effects (via higher compliance) much of this could be funded by the fiscal savings that would result from the pension system reforms that are required to reduce incentives for early retirement and improve intergenerational equity. As discussed above, these changes are: to introduce a decrement to the pension benefit for those workers who wish to retire earlier than the

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16.   The cost of labour could be cut either by reducing social security contributions or by abolishing the minimum wage, permitting low skilled labour to be hired formally at a much cheaper rate (see Gönenç (2006) for a discussion of the minimum wage). With a lower contribution rate, the resulting pensions would, of course, have to be much lower than the minimum pensions paid today (but probably still much higher than the means-tested pension).

17.   Net social security revenues received by the government equate to around 5% of GDP in Turkey (versus nearly 15% of GDP in other countries with high social security contribution rates). Thus, if the social security contribution rate was halved, the direct cost to net government revenues would be around 2.5% of GDP. Any dynamic scoring effects (in terms of greater formal sector job creation) could significantly further reduce this cost.

official retirement age; to reduce net replacement rates by taxing pension income and by introducing a health insurance premium payable by pensioners; and to remove the obligation of employers to pay severance payments to retiring workers.

16.   Workers contributing at lower social security contribution rates would inevitably end up with much smaller pensions (as discussed in Box 3). However, with an expanded role for private savings, to plug the gap for those who would prefer to save more, this would not necessarily imply lower retirement incomes. For those at the lower end of the income distribution, who can not afford to save voluntarily, the resulting pension may be small but it would undoubtedly be larger than the means-tested pension that poor older people currently qualify for (see discussion below). In order to ensure incentives for the poor to participate in the formal sector labour market, it may also be necessary to consider introducing a social safety net that is available for very low-income workers in the formal-sector, rather than only for those in the informal sector with no pension income.[18]

Box 3. Lowering social security contribution rates without blowing out the system deficits

The three main pension parameters in a defined benefit system are: the retirement age, the contribution rate, and the value of the accrual rate. The latter two of these determine the replacement rate. The relationship between the three of them is constrained by financial sustainability. Policymakers can choose to set only two parameters, with the third being determined by the future fiscal costs.

The 1999 and 2006 reforms in Turkey have focused on making the system more sustainable by reducing the accrual rate and raising the pension eligibility age (at least for new entrants), while leaving the contribution rate more or less unchanged. This has been an important and commendable effort. But if one of Turkey's key challenges is the reduction of informality, then the pension eligibility age will need to be increased and/or the replacement rate cut, to allow a reduction in the social security contribution rate.

Many analysts (*e.g.* Robalino *et al*, 2005) have argued that the contribution rate should not be used as the parameter that "closes" the finances of the scheme given choices of pension age and accrual rate. One reason is that high payroll taxes can reduce the level of employment and expand the informal sector: first, because it may lead firms to adopt production processes that use lower levels of labour, relative to other production inputs, and second, because some firms and individuals experience liquidity constraints and cannot afford to pay the high rates. In Turkey, these costs of the high payroll tax are generally recognised, but it is sometimes argued that they are offset by the acquired social security benefits to workers who participate. Yet it has been shown that high contribution rates can reduce individual welfare, even when the expected rates of return on these contributions are high. This is because the contribution rate is a form of forced savings for workers. If workers are forced to save well beyond their individual preferences, they are worse off even if they enjoy high pensions when old. On the basis of this argument, Robalino *et al.* recommend that payroll taxes should not exceed 15%, and that the contribution rate should be constant over time.

The bottom line, therefore, is that if Turkey is seriously committed to reducing the informality problem, then some further explicit choices will need to be made about the level of income replacement that the public pension system will target for workers with different levels of earnings, including those who are earning below the minimum wage, and who are therefore kept out of the formal system. Key outcome variables to consider include the level of the basic (or means-tested) pension and the replacement rate for the average full-career worker.

With respect to the basic pension, some of the factors that should be taken into account include: the general standard of living of the population, estimates of the poverty line and the minimum wage (it can be argued that the basic pension should be lower than the minimum wage but higher than the poverty line), the existence of other formal and informal social assistance, and the costs. In Turkey, where there is a strong culture of families supporting their older relatives, the current system of paying the means-tested pension only to older people without this support can probably be maintained for quite some time in the future, but possibly not forever.

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18.   As discussed later, only older people who do not have any other pension income, or family support, are currently eligible for the means-tested pension.

In the Turkish system, retirement ages remain low and replacement rates high by OECD standards, pushing up social security contribution rates and limiting the possibility for low-skilled workers to be incorporated into the formal sector. In general, except for individuals at the bottom of the income distribution, there is no good reason to consider public pensions as the only source of savings for retirement. In Turkey this suggests a strong case for lower social security contributions, lower replacement rates, and a stronger role for voluntary savings while maintaining the current defined benefit, public scheme.

Ways to address concerns about poverty among the older population

17.	If the deficits of the social security institutions – which are tax-financed through transfers from the central government budget – were being used to achieve important social goals, such as a reduction in poverty, then the status quo may be more easily justified. However, those benefiting from the actuarially generous pensions (those with BCRs significantly above 1.0) are formal-sector wage and salary earners, the group of workers that already has the lowest incidence of poverty. This conclusion is reinforced by the fact that a large number of "retirees" are actually relatively young workers, who supplement their pension with "informal-sector earnings", on which they pay no tax and no social security premiums.
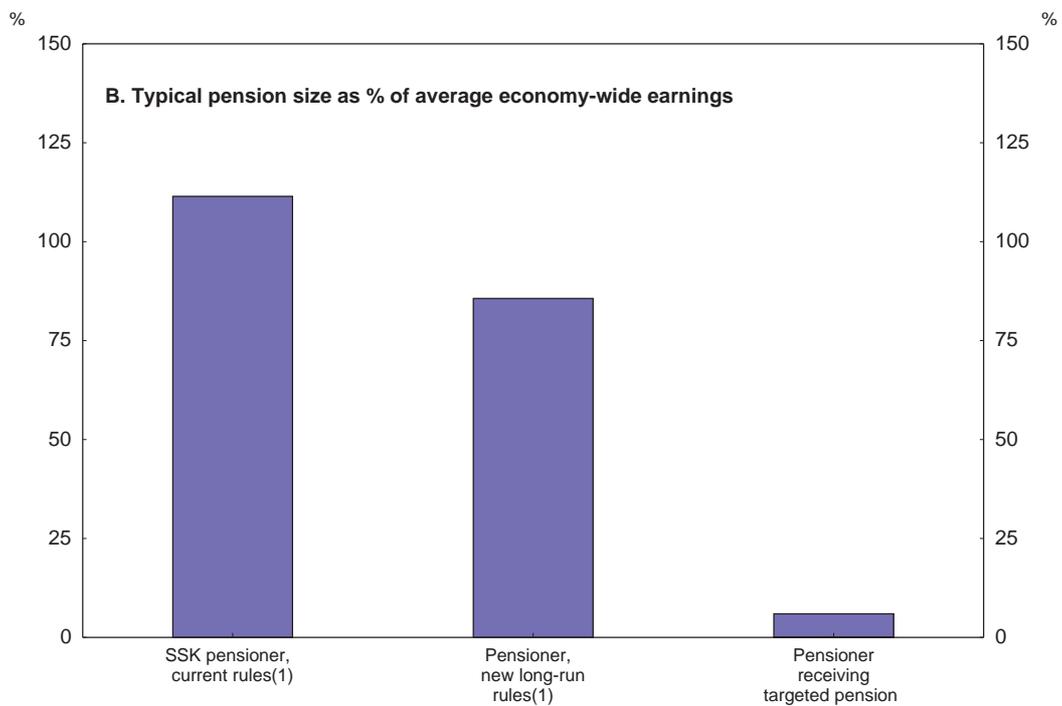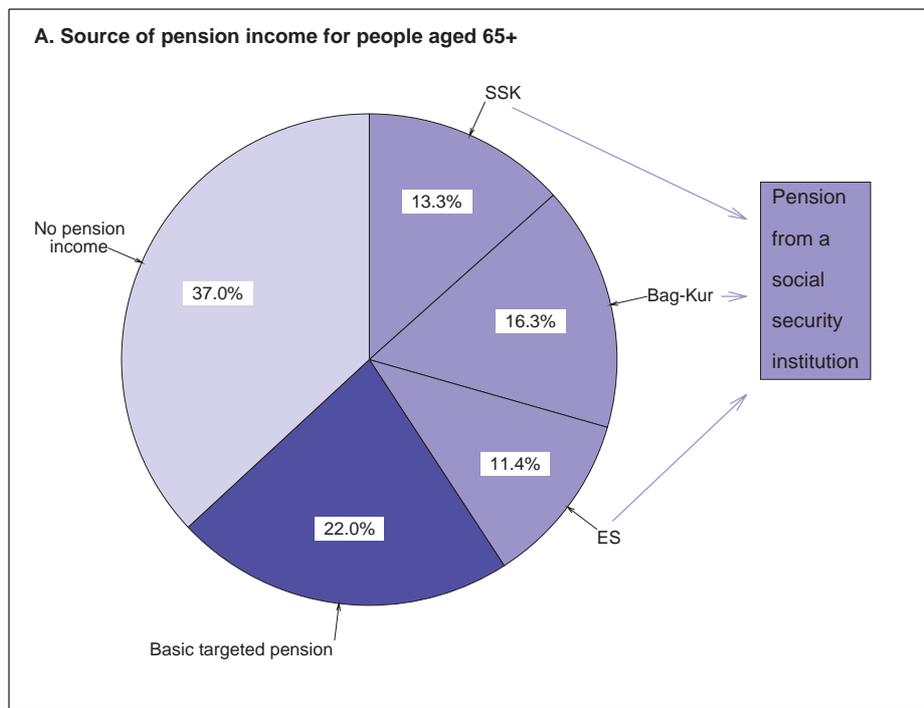
18.	Social security registration figures indicate that only around ¼ of the working age population, or around ½ of the labour force (as measured by the HLFS) pay social security contributions to a social security institution. As they get older, the remainder of the population is either supported by relatives or receives a "means-tested pension" which is available for those people over the age of 65 who have a low living standard, do not receive any other income, and have no one else (*i.e.* no family members) responsible for their care.[19] In Turkey, approximately 22% of the 65+ population receive the means-tested pension, 41% receive a pension from one of the three social security agencies, and the remaining 37% receive no pension income (Figure 7, panel A).[20] However, many of those receiving no income are probably spouses of pension-earners, who will qualify for a survivor allowance (and therefore move into the 40% statistic) in the event that the primary pension recipient dies first. Indeed, almost half of the civil servant pension recipients (Emekli Sandiği) aged 65 or older are survivors or other dependents.[21]

19.	The means-tested pension is funded from the Emekli Sandiği (ES) social security fund. However, at a cost of less than 1 billion YTL in 2005 (0.2% of GDP) the cost of these pensions is negligible in the bigger scheme of things.

20.	Source: Emekli Sandiği for number of means tested pensioners, the Social Security Institutions for the number of pensioners (including dependents) and UN demographic projections for 65+ population size.

21.	The share is slightly lower (around 1/3) among those in the scheme for the self-employed (Bağ-Kur) and private sector wage and salary earners (SSK).

Figure 7. Old age income disparities within the population are large

A. Source of pension income for people aged 65+

SSK

13.3%

No pension
income

37.0%

16.3%

Bag-Kur

Pension
from a
social
security
institution

11.4%

ES

22.0%

Basic targeted pension

B. Typical pension size as % of average economy-wide earnings

%

%

150

150

125

125

100

100

75

75

50

50

25

25

0

0

SSK pensioner,
current rules(1)

Pensioner,
new long-run
rules(1)

Pensioner
receiving
targeted pension

1.   Pensions are calculated for an individual earning the average wage.
Source: Social Security Institutions; Emekli Sandigi; UN demographic projections; OECD calculations.

19.   The level of Turkey's means-tested pension is extremely low by any benchmark (*e.g.* see Figure 7, panel B). In 2005 the means-tested pension was equivalent to approximately 65 YTL (around USD 50 or € 40) per month. According to OECD (2005) this basic pension is equal to 6 per cent of average earnings, making it the lowest means-tested pension in the OECD (the next lowest are: Greece: 12%; Canada: 16%; Denmark: 17%; Mexico: 19%; Portugal and the United States: 20%). It is also significantly lower than the absolute (food only) poverty threshold (Table 2).[22] Given the very low level of this pension and its low fiscal cost, it could be increased to the absolute poverty line.[23]

Table 2. Means-tested pension versus the poverty line for a single individual
In YTL per month

	Means-tested pension	Absolute poverty line	% of population	General poverty line	% of population
		Food only		Food and non-food	
2002	24.5	59	*1.4*	137	*26.9*
2003	51.5	75	*1.3*	186	*28.1*
2004	57.9	81	*1.3*	190	*25.6*
2005	64.5	85		206	

Source: TURKSTAT Poverty Studies (2002 – 2005), Emekli Sandiği.

20.   Finally, it is inequitable that the eligibility age of 65 for receipt of the means-tested pension is significantly higher than minimum pension eligibility ages for formal-sector workers. This not only argues in favour of an immediate increase in the minimum pension age but also a more rapid convergence of the *official* retirement ages of 60 for men and 58 for women to the "informal-sector retirement age" of 65.[24] The retirement age in the formal sector should represent only the age at which the worker would become eligible for the *full* pension. By introducing decrements to the pension benefit, workers could still be permitted to retire earlier, at the cost of an actuarially fair reduction in their pension.

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22.   The 1.3 million 65+ year-olds who received the means-tested pension in 2005 make up about 1.8% of the total population. If the means-tested pension is the only income received by these people (a requirement for entitlement) then all 1.3 million (1.8% of the population) should be living below the absolute poverty threshold. However, Table 2.1 suggests that only 1.3% of the population live below this threshold. A likely explanation is that some of the recipients of the means-tested pension also receive assistance from their families, even though – strictly speaking – family support would make them ineligible for the means-tested pension. Some may also be disabled and thus qualify for additional assistance up to a total of 208 YTL (2005 disabled benefit level).

23.   1.3 million recipients in 2005, times 64 YTL per month, equals approximately 1 billion YTL per annum, or 0.2% of GDP. If the pension were increased to the absolute poverty line of 85 YTL per month, the additional cost would be less than 0.1% of GDP per annum.

24.   At present, a Turkish man aged 65 can, on average, expect to live for another 13 years, and a Turkish woman for another 15 years. However, life expectancy is highest for those who work within the formal sector, who are in the upper half of the income distribution, and lowest for those at the bottom of the income distribution (for whom the age for eligibility of the means-tested pension is already 65). Moreover, average life expectancy is increasing. By the year 2035, UN demographic projections suggest that these numbers will have increased to 15 years, and 18 years respectively.

The agenda for further reform

21.   As discussed in OECD (2006a), the extent of informality in Turkey is a serious impediment to improved economic growth and higher living standards. Addressing the problem will require a comprehensive approach, of which further pension reform is only one part, albeit an important part. At present, several cohorts of formal-sector workers are currently benefiting enormously at the expense of the taxpayer and the younger generations. No OECD country has ever had normal retirement ages anywhere near as low as those in Turkey, although such low retirement ages can be found in certain Middle East and North African countries.[25] In Turkey, it is often argued that the pension rights that incumbent workers anticipated on the day that they joined the labour force should be protected, regardless of the fiscal cost. However, most countries only protect the pension wealth that has already been accrued, rather than guaranteeing expected pensions in a forward looking sense. Some OECD countries have even cut accrued pension rights in a backward-looking sense.[26] The very slow pace of transition in Turkey to higher minimum pension ages and to more affordable pension parameters shows that an attempt is being made to also safe-guard the *future* pension expectations of workers who entered the labour force under more generous rules.

22.   Accelerating the transition to the new rules would have several positive effects. First, it would reduce the incentives of the middle-aged population to move into the informal sector. Second, significant fiscal savings would be made, and these could be used to partly fund significant cuts in the social security contribution rate. By reducing the tax wedge, this would assist the creation of more formal sector jobs. Finally, an accelerated transition to the new rules would be more equitable.

23.   The recommendations proposed in this paper (and summarised in Box 4) try to strike a balance between protecting the pension rights of incumbents (for example, cuts to the gross replacement rate of current pensioners are not proposed) and permitting the pension system to be further reformed in a way that will encourage greater formalisation and mitigate the inequities of past populist policies. OECD (2006a) has argued that reducing the social security contribution rate should be a top priority of the Turkish government, in order to permit a significant expansion of the formal sector. The further reform priorities discussed in this paper would generate fiscal savings and can help to fund the transition costs associated with reducing the social security contribution rate.

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25.   *E.g.* For men, the earliest full-career pension eligibility age in private sector pension schemes is 40 in Bahrain and Egypt, 45 in Jordan, and 50 in Algeria, Djibouti, Iran, Tunisia and Yemen. Even among this group, Turkey's minimum retirement ages are unusually low (Robalino *et al*, 2005).

26.   For example, by switching from earnings valorisation to prices valorisation the French pension reform of 1993 significant reduced pension wealth on workers' accrued rights as well as on their future acquired rights.

Box 4. Recommendations for further pension reform

Improve incentives for middle-aged pensioners to remain in or return to the formal sector:

1. Introduce an actuarially equivalent reduction (of 4 - 6% per year) to the pension benefit of anyone who chooses to retire younger than the *normal* retirement age of 60 for men and 58 for women.

2. Reduce net replacement rates by taxing pension income and deducting a health insurance premium from all pensions.

3. Remove the entitlement of retiring workers to severance payments.

4. Accelerate the convergence of the formal-sector retirement age to the informal-sector retirement age (65) and equalise the retirement ages for women and men sooner.

5. Focus a social security registration and income tax enforcement team on pensioners who continue to work.

Reduce the tax wedge on labour, in order to permit the expansion of the formal sector:

6. *Significantly* reduce (for instance, cut by half) both employers' and employees' social security contribution rates. The transition costs of this policy should be partially funded by the reforms listed above as well as the following:

7. Accelerate the phasing in of the new pension parameters by introducing the long-term accrual parameter of 2.0 earlier than 2016 or by calculating the pensions of retirees on the basis of the new (long-run) pension formula alone, rather than only for the portion of their careers that took place after 2007.

Envisage a pension system that will address old-age poverty concerns for all

8. Eliminate barriers that prevent the formal sector from expanding to encompass low-skilled workers, even if that means that such workers will pay only low social security contributions and thus accumulate only low levels of pension wealth.

9. Increase the means-tested pension to the absolute poverty level, and consider further increases in the future as finances permit. Consider introducing a pension safety net (means-tested pension) that is independent of participation in the formal sector.

10. Introduce a voluntary savings scheme into which workers would be automatically enrolled, with the option of active opt-out, and into which the difference would be paid between the employees' current (high) and future (low) social security taxes.

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ANNEX

ASSUMPTIONS UNDERLYING THE PENSION ANALYSIS

This annex describes the methodology and assumptions used to model the future pension entitlements of Turkish workers. The analysis is based on the microeconomic approach used in *Pensions at a Glance* (OECD, 2005, 2006b) permitting the comparison of key pension entitlement statistics for Turkey, with those for other countries. The calculations show the pension entitlements of private sector workers who enter the system at age 20 and work continuously until the age of full pension eligibility. The generic pension model uses individual lifetime average earnings in the benefit formula, and this is assumed to track the economy-wide average (2% real earnings growth per year). Mortality rates are based on country-specific data from the UN/World Bank population database. The discount rate used for actuarial calculations is 2% per year.

Compared with the analysis in *Pensions at a Glance*, this paper models not only the long-run pension parameters but all four sets of pension rules that are relevant for calculating Turkish pensions: system 1 for the period prior to 1999; system 2 from 2000–2006; system 3 from 2007–2015: and system 4 for the post-2015 period. For workers who straddle the different sets of pension rules (summarised in Table A1), the pension is calculated as the weighted average of the full-career pension that they would be entitled to under each of the four sets of rules, where the weights are the proportion of working years spent in each system.

Once the weighted average replacement rate has been calculated for each birth cohort of workers, this is multiplied by a cohort-specific annuity factor to produce a measure of gross pension wealth (PW). The PW represents the present value of the future stream of pension payments, expressed as a multiple of average earnings. Its calculation takes into account the replacement rate at which pensions are paid, the age at which each birth cohort becomes eligible to receive a pension, each cohort's life expectancy and how pensions are indexed after retirement. Finally, Benefit-Cost Ratios (BCRs) for each birth cohort are calculated. These indicate each cohort's pension wealth at retirement as a multiple of what he or she has paid in over the years. A BCR of 1.0 would therefore be required to ensure a sustainable pension system in a country with a stable insured population and no additional liabilities (such as survivors' pensions). Although Turkey has a growing population, the *insured* population has been falling as a percentage of total workers, and the number of non-contributing dependents is also high.

All calculations are based on the pension retirement rules for an SSK worker earning the average (formal-sector) wage; in future, following the amalgamation of the three pension systems, the pension analysis for future cohorts will be the same for all workers. In all cases the pension contribution rate for pensions is assumed to be 20%. Other rules and assumptions underpinning the pension analysis for each of the four sets of pension rules are summarised in Table A1.

Pension rights accrued before 1999 are calculated on the basis of so-called *indicator tables* (which are based on job grade and qualifications), rather than by use of an earnings-related formula, as is the case under the subsequent rules. In order to model the pre-1999 pension rights, a generic formula-based model has thus been used to proxy for the tables. This model is based on the fact that the pre-1999 SSK pension rules specify the pension relative to that of a full-career worker – defined as a man (woman) aged 55 (50) with 5 000 contribution days. The base pension for such a worker roughly equates to a gross replacement rate of 60%. The replacement rate is increased by 1% for each year older than 55 (50) and for each

additional 240 contribution days. So a man who retired at age 45 with 25 years of contributions (9000 days) would receive a pension with a replacement rate of 76% [= 60% + 16% (9000 – 5000)/240], and a woman who retired at age 40 with 20 years of contributions (7 200 days) would receive a replacement rate of 69% [= 60% + 9% (7200 - 5000)/240].

Table A1. Summary of key features of the different pension rules

	System 1: pre-1999 pension rules (up to 1999)[1]	System 2: current pension rules (2000-2006)	System 3: temporary new pension rules (2007-2015)[2]	System 4: final new pension rules (2016-)
Key rules for calculating the replacement rate under the different pension laws:				
Minimum retirement conditions: for men	*i)* Insured 25 years + 5 000 contribution days, or *ii)* Age 55 + 5 000 contribution days.	*iii)* Age 60 + min. 7 000 contribution days, or *iv)* Age 60 + insured 25 yrs + 4 500 contribution days. (NB: These rules are being phased in only gradually).[3]	*v)* Age 60 + 25 working years (but only for those who join the labour force after the new law is introduced). *vi)* From 2036 the age will begin to rise towards 65.[4]	Same as system 3.
for women	*i)* insured 20 years + 5 000 contribution days, or *ii)* Age 50 + 20 years of insurance.	Age 58 + 20 years of insurance. (Being phased in only gradually).[3]	As for men but age 58 instead of 60.	Same as system 3.
Accrual rate	n/a	3.5% per annum (p.a.) for first 3 600 days then 2% p.a. until 9 000 days, then 1.5% p.a. after that.	2.5% for every year until end 2015 and then 2% for every year after that.	2% per annum.
Valorisation	n/a	Real GDP growth rate	50% real earnings growth: 50% CPI inflation.	Same as system 3.
Indexation	Discretionary	CPI inflation	CPI inflation	Same as system 3.
OECD assumptions:				
Real GDP growth rate	n/a	2% real earnings + 1.0% labour force over the next 50 years = 3.0% real GDP growth	n/a	n/a
Real earnings growth	n/a	n/a	2% (standard OECD assumption).	Same as case 3.

1. Following the pension reform of 1999, implementation of the higher retirement age did not begin to be enforced until May 2002. For the purposes of this exercise it is therefore assumed that the pre-1999 retirement age is relevant up and until the end of 2001.
2. It is assumed that the new pension rules will begin to be implemented in January 2007. However, implementation could be further delayed by constitutional appeals (as was the case following the 1999 law change).
3. The minimum pension eligibility age for workers who joined the labour force before 2000 is defined according to Article 3-B SSK of Law 4759 (adopted 23 May 2002) as a function of the duration of insurance prior to 23 May 2002.
4. From 1936 onwards, the pension eligibility age is determined by a table included in the 2006 law.

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