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Denmark

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

TABLE OF CONTENTS

Boxes

Tables

Figures

This Survey is published on the responsibility of the Economic and Development Review Committee (EDRC) of the OECD, which is charged with the examination of the economic situation of member countries.

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The Secretariat's draft report was prepared for the Committee by Jens Lundsgaard, Felix Hüfner and Espen Erlandsen under the supervision of Andreas Wörgötter.

The previous Survey of Denmark was issued in March 2005.

BASIC STATISTICS OF DENMARK

THE LAND

Area (sq.km.)	43 560	Population of major urban areas, 2004, thousands	
Agricultural area (sq. km.)	28 900	Copenhagen	1 087
		Århus	229
		Odense	146
		Åalborg	122

THE PEOPLE

Population, January 2006, thousands	5 427	Total employment, 2005, thousands	2 710
Number of inhabitants per sq. km	126	By sector:	
Population, annual net natural increase		Agriculture	92
(average 2000-2004, thousands)	7.5	Manufacturing	401
Natural increase rate per 1000 inhabitants, 2004	1.8	Construction	170
		Market services	1 069
		Community, social and personal services	980

THE PRODUCTION

Gross domestic product, 2005		Gross fixed capital formation, 2005	
Kr billion	1 551.5	Kr billion	322.4
Per capita (US$)	47 842	Per cent of GDP	20.8
		Per capita (US$)	9 942

THE GOVERNMENT

Public consumption, 2005		Composition of Parliament	Number of seats
Per cent of GDP	25.9	(Preliminary results as of 10 February 2005)	
General government current revenue		Liberals	52
Per cent of GDP	56.4	Social Democrats	47
Public gross fixed capital investment		Danish People's Party	24
Per cent of GDP	1.8	Conservatives	18
		Social Liberals	17
		Socialist Peoples's Party	11
		Left Alliance	6
		North Atlantic	4
		Total	179

Last general elections: 8 February 2005

Next general elections: 8 February 2009 (at the latest)

THE FOREIGN TRADE

Exports, 2005		Imports, 2005	
Exports of goods and services		Imports of goods and services	
Per cent of GDP	48.6	Per cent of GDP	43.9
Decomposition of merchandise exports (% of total)		Decomposition of merchandise imports (%t of total)	
Agricultural products	9.0	Intermediate goods for agriculture	2.1
Manufactured products	73.5	Intermediate goods for other sectors	39.1
of which : Machinery and instruments	26.6	Fuels and lubricants	6.6
Other manufactured products	46.9	Capital goods	14.1
Fuels, etc.	17.5	Transport equipment	6.9
		Consumer goods	28.4

THE CURRENCY

Monetary unit: Krone		Currency units per US$	
		Average of 2005	6.003
		2 May 2006	5.898

Note: An international comparison of certain basic statistics is given in an annex table.

Executive summary

The Danish economy is performing very well, reaping the benefits of 25 years of well-managed economic reform. In 2005 growth picked up to 3%. Even though unemployment has declined to a historical low, inflation remains subdued and there are no signs yet of accelerating wages. The output gap has closed and growth is projected to stay above potential in the short term, with almost only the automatic fiscal stabilisers in place to slow a potentially overheating economy. Looking further ahead, a significant downward trend in labour supply is looming that will tend to reduce the potential growth rate. In the longer term, a declining workforce and ageing-related expenditure increases make the current public welfare system difficult to sustain. Although labour force participation is high, the number of hours worked is low, not least because of high marginal taxes. One area where reforms have not yet made enough progress is housing, which is overregulated and absorbs too many subsidies and tax expenditures.

Avoiding an overheating risk in the near future. *The fixed exchange rate framework continues to serve Denmark well. However, in situations like the present one when the Danish economic cycle differs considerably from that in the euro area, other policy instruments need to show extra flexibility. Monetary conditions transmitted from the euro area via the fixed exchange rate regime will most likely remain too expansionary in the near future since the main drivers of the economy (investment, exports, consumption increases driven by rising housing wealth) continue to steam ahead. Measures are therefore needed to damp demand and boost supply. Fiscal policy must remain tight and structural reforms must go on. All sources for increasing labour supply should be tapped now – including reducing public employment by reaping efficiency gains from the municipality reform, cutting unemployment benefit duration and opening the labour market more effectively to job searchers from other parts of the EU.*

Raising labour supply to secure fiscal sustainability. *The tight labour market provides a fertile environment for reforms to boost labour supply. The government's proposals to increase the age thresholds for early retirement by three years and the age pension by two years for citizens younger than 50 years today followed by an indexation of the retirement age to life expectancy are commendable and a major step to secure the sustainability of public finances. However, it would be preferable to phase out the voluntary early retirement scheme altogether and much will depend on how indexation will be implemented. The number of disability pensioners is high and continued effort to keep more of those with some remaining work capacity in employment is warranted. Furthermore, an updated medium term fiscal strategy should include timed, targeted and fully financed tax cuts which are much needed to make work pay better.*

Enhancing human capital and using it better. *Skill formation is not sufficiently effective for a high income country and it is urgent to address the culture of delaying tertiary studies. The government's proposal to reduce study grants for those delaying the start of tertiary studies by more than two years is welcome. For the longer term, a system should be developed whereby tuition costs and grants are subject to repayment after graduation, with such repayments creditable against income taxes. That could reduce the incentives to work short hours or to leave the country after graduation. It could also make the tertiary education sector more dynamic.*

Reducing subsidies and tax expenditures for housing and easing regulation for the rental market. *Denmark is well endowed with housing and its vast support programmes are not very well targeted. Tax concessions for housing should be given up and used to create room for reducing other, more distorting taxes. Regulation of rents should be phased out and the supply of new housing should be made more flexible.*

Assessment and recommendations

Economic performance is impressive …

1. The Danish economy is performing very well, reaping the benefits of 25 years of well-managed economic reform that have produced sound macroeconomic policies, a flexible labour market and a competition-friendly regulatory environment. Temporary factors such as revenue from oil exploration have also contributed to strong public finances. After some years of slow growth, the economy started to recover in late 2003, and accelerated to a GDP growth rate of 3% in 2005. Private consumption, exports and investment are all expanding. Consumer confidence is close to its highest level since records began three decades ago. Unemployment is historically low, and firms still expect to hire more people in most sectors of the economy. So far, wage inflation has been remarkably subdued, but that could change rapidly as labour shortages are now very clear in construction and seem likely to spread to other sectors.

… but overheating is a near-term risk …

2. While the Danish economy is in good shape, GDP growing much faster than its potential rate in 2005 and a closed output gap pose the immediate challenge to be vigilant in the face of an overheating risk. House prices have grown strongly and added about half a percentage point to consumption growth each year *via* wealth effects and mortgage equity withdrawal. With the recent acceleration of house price increases, private consumption and housing construction could have plenty of steam well into 2007. And neither world trade nor investment show signs of weakening. Wages seem set to rise somewhat faster than productivity next year, and experience from other small open economies shows that an overheating scenario can then set in very quickly. Monetary policy cannot be tightened autonomously because with the fixed exchange rate regime it is *de facto* set by the ECB, and it will most likely continue to add stimulus. In this context, policy makers must be very attentive to how the economy evolves, and stand ready to take swift measures to mitigate the risk of overheating. The following areas should receive particular attention:

- In general, automatic stabilisers function well and the cyclical response of the fiscal balance is the strongest among OECD countries, but recently the real estate tax has been frozen in nominal terms for each dwelling. Now only the smaller land tax follows increased valuations, putting only a weak check on the house price boom.

- Some oil exporting countries like Norway smooth their oil related revenues in funds, which establish a firewall between the economy and fluctuations in oil prices. Denmark does not have such a fund and keeps all oil-related revenues in the budget, leading to large swings in the budget balance. Such temporary revenues should be used to reduce public debt, as excessive public spending growth should be avoided not least in municipalities.

- The labour market is more flexible than in most OECD countries, but a number of factors still hinder adjustments. Administrative procedures for firms to employ foreigners from the new EU member states have been relaxed somewhat, but rules remain cumbersome. High marginal taxes on labour set in already from average incomes and reduce the incentive to work more hours when wages increase. Long duration of unemployment benefits, in particular for seniors, may reduce the intensity of job search.

…and there are challenges ahead in the long term

3. Looking further ahead, ageing would reduce growth in GDP *per capita* to below 1% a year from an average 1¾ per cent during the two decades to 2005. Over the coming three decades, the labour force is projected to contract by 10%, if participation rates remain unchanged, bringing the economy into a regime quite different from the steady labour force growth of the recent decades. The number of children and over-65's will increase by a quarter relative to those in working age. Under current policies, the primary budget balance would deteriorate by 4% of GDP over the coming three decades. In this context three medium-term challenges need to be addressed to circumvent the slow-growth scenario:

- It will be difficult to sustain today's welfare society unless there are profound reforms to raise labour supply. More people working gives an especially large fiscal gain in countries with high taxes and generous social benefits.

- To boost living standards, it is vital that Denmark continues reaping the full benefits of globalisation, with human capital and innovation being the key issues.

- Reforms are necessary also in areas that are sheltered from international competition, but where inefficiencies nevertheless put a drag on development, create unnecessary costs for public budgets and restrict mobility and flexibility. One such policy area is housing – the in-depth chapter topic in this *Survey* – which, despite some progress, still needs less subsidy and regulation.

Monetary policy may remain too expansionary in the near future

4. The fixed exchange rate regime which shadows the monetary policy stance of the European Central Bank continues to serve Denmark well. It is highly credible as indicated by only small fluctuations of the krone around its central parity *vis-à-vis* the euro and by a minimal interest-rate differential. One contributing factor has been that fiscal policy has held course so far, avoiding destabilising the economy. At the current juncture, with a strong boom in Denmark, and considerable slack in the euro area, ECB policy rates are well below the appropriate level for Denmark and are likely to remain so in the near future, adding stimulus that is not needed in the next couple of years. Moreover, over the recent decade, structural changes in the mortgage market have gradually changed how monetary policy functions. In particular, the transmission of short-term interest rates to the real economy has become stronger. This probably reflects the increased use of adjustable rate loans which have raised the exposure of households to changes in short-term interest rates, as well as mortgage equity withdrawal which has been facilitated by rising house prices in an environment of lower interest rates. The currently low level of interest rates is thus likely to have a larger effect on aggregate demand and economic activity than previously. Hence, an appropriate policy mix requires tighter fiscal policy and measures to increase the supply elasticity of the economy in order to balance the current excessive monetary stimulus.

The first priority is to establish fiscal sustainability and then create room for tax cuts

5. Denmark has achieved much in terms of bringing down debt and recorded a budget surplus of almost 4% of GDP in 2005. General government net debt has been reduced to just 10% of GDP by the end of 2005, down from about 30% of GDP a decade ago, and will probably be eliminated by 2010. Removing old debt has provided a strong position for tackling the ageing challenge. Looking ahead, policy should focus on genuine reforms to extend working lives. *In an updated medium term fiscal strategy, it would be appropriate to aim for small budget surpluses, provided initiatives currently under way succeed in alleviating the longer-term budgetary pressures*. *This strategy needs to be implemented vigilantly. Room for tax cuts to make work pay better should then be created by further reforms.* However, timing is important to avoid overheating the economy. Despite the present surplus there is no room for lax fiscal policy in the short run. The tax freeze has succeeded in ending the upward drift in municipal income tax rates, and it is important that municipal spending growth is kept modest to match this.

Labour supply must be raised quickly to prevent overheating

6. In addition to tight fiscal policy to damp excess demand, all options must be used to free labour supply rapidly, thereby increasing potential growth. The tight labour market provides a fertile environment for reforms to boost labour supply. In this regard, specific priorities are:

- First, to *reap the potential efficiency gains from the municipal mergers taking effect from 2007. Municipalities should reduce employment as much as possible.* This should give a welcome boost to labour supply for the private sector.

- Second, to *enhance job-search incentives by reducing the maximum unemployment benefit duration from 4 years to something like the 1-2 year duration in the other Nordic countries. Also, as proposed by the government, to abolish all exemptions in unemployment benefit rules and activation for people in their 50s.*

- Third, to *use foreign labour more intensively: removing barriers for skilled workers from abroad; speeding up the administrative procedures to issue residence and working permits for those from the new EU member states; and helping firms connect to unemployed workers in these countries as well as in other parts of the EU where there are skilled but unemployed workers.* Some improvements have recently been agreed in Parliament.

But increasing labour supply is not just a short-term priority. It is primarily a long term challenge, and the following paragraphs identify policies needed in this regard.

Later retirement is key to ensure fiscal sustainability

7. Since 1960, the average number of years spent in retirement has increased by *half* to currently 19 and 23 years for men and women respectively. One cause is distortions to retirement decisions from large fiscal subsidies to early retirement. In fact, most of the reduction in labour market participation among seniors is due to expansion of the voluntary early retirement pension available for 60-64 year olds. It was introduced in 1979 to reduce unemployment, and to make early retirement possible for seniors worn out after many years of hard manual work; but today a typical recipient comes straight from employment and has no particular health problem. Moreover, cross-country experience has shown that while aggregate demand and unemployment can fluctuate temporarily, the

number of jobs is mainly determined in the long run by how many are actively searching for work. The government's recent proposal to raise the starting age for the voluntary early retirement pension by three years (from 60 to 63) and the regular retirement age by two years (from 65 to 67) is therefore welcome. These changes would apply for citizens younger than 50 years today and, after being phased in from 2017 to 2025, it would be followed by indexation of the retirement age to life expectancy. Together with the other elements of the government's proposals for welfare reform, these measures would handle the demographic challenge to fiscal sustainability for many years into the future. But, given the uncertainties associated with demographic developments and other spending pressures, future governments will need to be ready to take necessary measures, including adjusting retirement age in line with a longevity indexation formula. Still, the preferred option should be to remove the early retirement scheme altogether, as proposed also by the Welfare Commission.

Allowing the upswing to feed through to people currently at the margin of the labour market

8. For every ten people in employment, there is one receiving a permanent disability pension – almost twice the number of unemployed. Providing income for those who really cannot fend for themselves is a hallmark of a welfare society, although the number of benefit recipients appears to be high in international comparison. Measures have been taken to reduce the inflow, but *further attention should be given to how permanent disability status can be avoided for persons with remaining work capacity.* In this regard, there is a need to give social policy an even more active orientation, starting with prevention and early rehabilitation. Disability pensioners are to a large extent being excluded from an active work life and *more options to come back to work should be provided*. Permanent wage subsidies are available on so-called *flexjobs*, which are popular among workers, municipal social authorities and employers. *The scheme has been modified in 2006 but is still too generous and should be brought more in line with the level of related benefit programmes in order not to make expansion too expensive fiscally. Furthermore, flexjob arrangements should be reviewed on a regular basis and adjusted to changes in work ability and rehabilitation measures.*

9. The current upswing is also a unique chance for marginalised groups such as inactive migrants to get a foothold in the labour market. *One place to start is the large number of recipients of social assistance who are out of work, but are not registered as job seekers at the public employment service. The reform of the public sector should be used to align the efforts of the employment offices and the municipalities.* It is also important to ensure that those participating in activation are available for employment at short notice.

Denmark has benefited enormously from openness

10. Today's living standards could hardly have been achieved without taking advantage of the gains from new technologies and specialisation deriving from the country's openness and the resulting international division of labour. To continue reaping the full benefits of openness, Denmark needs to reinvigorate its education system and develop greater interaction between universities and firms on R&D. Other policies such as labour and product market regulations are already more adjustment-friendly than in most OECD countries so that the key requirement is to look for ways to improve human capital and raise the supply of skilled labour. Business sector R&D has trended up since the mid 1990s, reaching 2% of GDP in 2004, and special subsidies or tax credits are not warranted. According to recent government proposals public R&D should reach 1% of GDP in 2010, with additional grants provided on a competitive basis.

Mobilising the talent of all young people

11. A key weakness is the surprisingly slow progress in human capital formation. Among the 25-34 year olds, only 86% have at least upper secondary education, compared with 89%, 91% and 95% in Finland, Sweden and Norway respectively. Despite large public investments in early childhood care and compulsory education, Denmark seems to have substantial difficulties mobilizing the talent of all young people, and a large share – including many second-generation migrants – seem to be lost during school, leaving with only limited literacy skills. Some steps are being taken now. The introduction of more frequent and systematic evaluation of student achievement will help identify learning problems at an earlier stage. Allowing teachers to specialise more will improve educational performance not least in subjects like science where Danish learning outcomes are among the poorest in the OECD. *Efforts to improve compulsory education should continue including by strengthening the educational content of the introductory year for six-year olds and targeting or abolishing the voluntary 10th form. More apprenticeships should be made available, possibly helped by increasing refunding for firms taking apprentices based on higher contributions from all employers.* The government and social partners have agreed to increase resources for the already high level of life long learning.

Enhancing incentives for individuals to acquire and use human capital productively

12. High and progressive income taxation reduces the reward for studying, and weakens the incentive to choose subjects with promising job and earnings prospects. Despite both this and a narrow income distribution, private economic returns are boosted by full public coverage of tuition costs and generous grants for student living costs. Consequently, a comparatively high share of a youth cohort takes tertiary education, but the other side of the coin is a growing "culture of delay". With a typical starting age of 23 and prolonged study duration, too few years are left for reaping the fruits of the qualifications in the labour market. To counteract this, *the study grant should be adjusted to encourage young people not to postpone studies*, as proposed by the government. For the longer term, an arrangement whereby the costs of tuition and grants for living costs throughout tertiary education are treated as a loan to be repaid after graduation should be developed in order to improve the efficiency of educational choices and increase the responsiveness of universities to student needs. By granting tax deductions for repayment, the introduction of such loans can remedy the current adverse incentives for graduates to leave the country or work short hours, while not reducing the individual's economic return to education.

Tax reform should promote labour supply, notably for skilled workers

13. Previous *Surveys* have noted that high marginal taxes hold down hours worked and may encourage "informal" work, especially in sectors like construction. Tax cuts introduced in 2004 targeting people with low and intermediate earnings were welcome, but the problem is remaining particularly pronounced for those with incomes at or just above average, where the top income tax rate cuts in, with the combination of social contributions plus income and consumption taxes creating a marginal tax rate above 70% for four in ten of the full-time employed. *The first priority for tax reform to increase labour supply should therefore be to raise the income threshold from where the top tax is paid*, considering that this would strengthen work incentives more, *krone-for-krone*, than tax reductions at the lower end of the income scale. It would also raise the average skill level of the labour

supply, as people with intermediate qualifications would benefit most. Furthermore, disincentives for accumulating human capital would be reduced as the after-tax return to education would be higher.

14. Although the aim of the tax-freeze – putting an end to an upward spiral of public expenditures and revenues – can be fully shared, its narrow interpretation will become more and more problematic as it precludes meaningful restructuring of the tax system as a whole. *For instance, income taxation should be made less distorting by a revenue-neutral reform raising the real estate tax, while lowering the middle or top income tax rates.* This could improve incentives to work considerably while changing the income distribution only negligibly. It should be considered in connection with a wider reform of capital taxation, where effective tax rates on *real* return vary from 25% to 100% for two identical bonds, the one being held in a pension scheme, the other being held as a liquid investment. In particular the gap between 33% interest deductibility (which is large compared to other countries) and 15% tax on pension returns seems to encourage tax planning. Sooner or later, tax reform will most likely be necessary to accommodate changes in mobility, financial markets and other factors. The current capping of the real estate tax for each home at the nominal level it had in 2001-02 cannot be an appropriate long-run solution, as misalignment from neutrality gradually grows.

Housing policies need reform

15. Several reform measures have gradually liberalised the housing market but policies need further reform for two reasons: subsidies and tax expenditures are substantial and not well targeted, and excessive regulation on the rental market may impede labour-market mobility and encourage illegal side payments. Furthermore, supply should be made more responsive to demand in order to damp overshooting house prices. A wide-ranging reform is warranted, but gradual steps are also feasible and preferable to inaction.

Freeing up resources by reducing housing subsidies

16. In 2005, direct public subsidies for housing amounted to 1.1% of GDP, on top of which comes considerable indirect costs in the form of tax revenue foregone. That is much more than in neighbouring Sweden and also large compared to other OECD countries. These subsidies should be reduced, as housing availability is high by international comparison, and the distributional impact is not very well focused. Reform could proceed in a number of ways:

- *Increase the real estate tax for owner-occupied housing to make it neutral vis-à-vis the tax value of interest deductibility, preferably in connection with a wider reform of capital income taxation.*

- *Phase out tax exemption for co-operatives.*

- *End the tax subsidies for pension funds' investments in newly constructed private rental housing, as well as the tax exemption for pension funds' return on property bought earlier.*

- *Replace the general subsidies for housing associations with targeted support for those who are referred by municipal social authorities or in other ways are in clear need of public housing support. Increase the role of municipalities in the allocation of dwellings.* From an overall fiscal perspective, the National Housing Construction Fund should be integrated with the central government budget.

- *Reconsider the size and targeting of personal housing allowances to reduce the high marginal effective tax rates implied by their withdrawal. Reform the scheme by linking it to appropriate rents in a region instead of actually paid rents.*

Making the rental market more open and flexible

17. A well-functioning rental market is important because it allows people to make undistorted choices both concerning housing and asset structure. The distributional outcome of the current rent regulation in the older part of the private rental sector and in social housing is not well targeted and it reduces mobility with adverse effects for the labour market. Measures should focus on rent liberalisation, full cost pricing and liberalisation of co-operative share prices:

- *Let rents in private rental housing be set freely on market terms by progressively scaling back rent regulation.*

- *Let tenants in social housing pay rents that better reflect differences in quality, location and demand.*

- *Remove price regulation for shares in housing co-operatives – as in Norway. Such a liberalisation generates capital gains, and the part that reflects identifiable public construction subsidies or urban renewal subsidies might be returned to the state and municipality.*

Make supply more responsive to demand in owner-occupied housing

18. Currently, house prices are high relative to construction costs, making it attractive to build new dwellings. In most parts of the country where prices have been increasing, construction is growing rapidly. But this is happening to a lesser extent in the Copenhagen region. Quite some open farmland can be found within a 30-kilometre perimeter from the city centre, but a combination of tough zoning regulations, cumbersome administrative procedures and local reluctance means that the many smaller municipalities surrounding Copenhagen have not expanded fast enough to keep pace with increasing demand in the capital region as a whole. *Municipalities could be given more room for borrowing to finance infrastructure, schools and similar facilities when new land plots are issued for housing. Mechanisms like road pricing could allow infrastructure investment to be more closely linked to where the demand is and help avoiding congestion problems.*

Chapter 1

Reforms can help to maintain growth

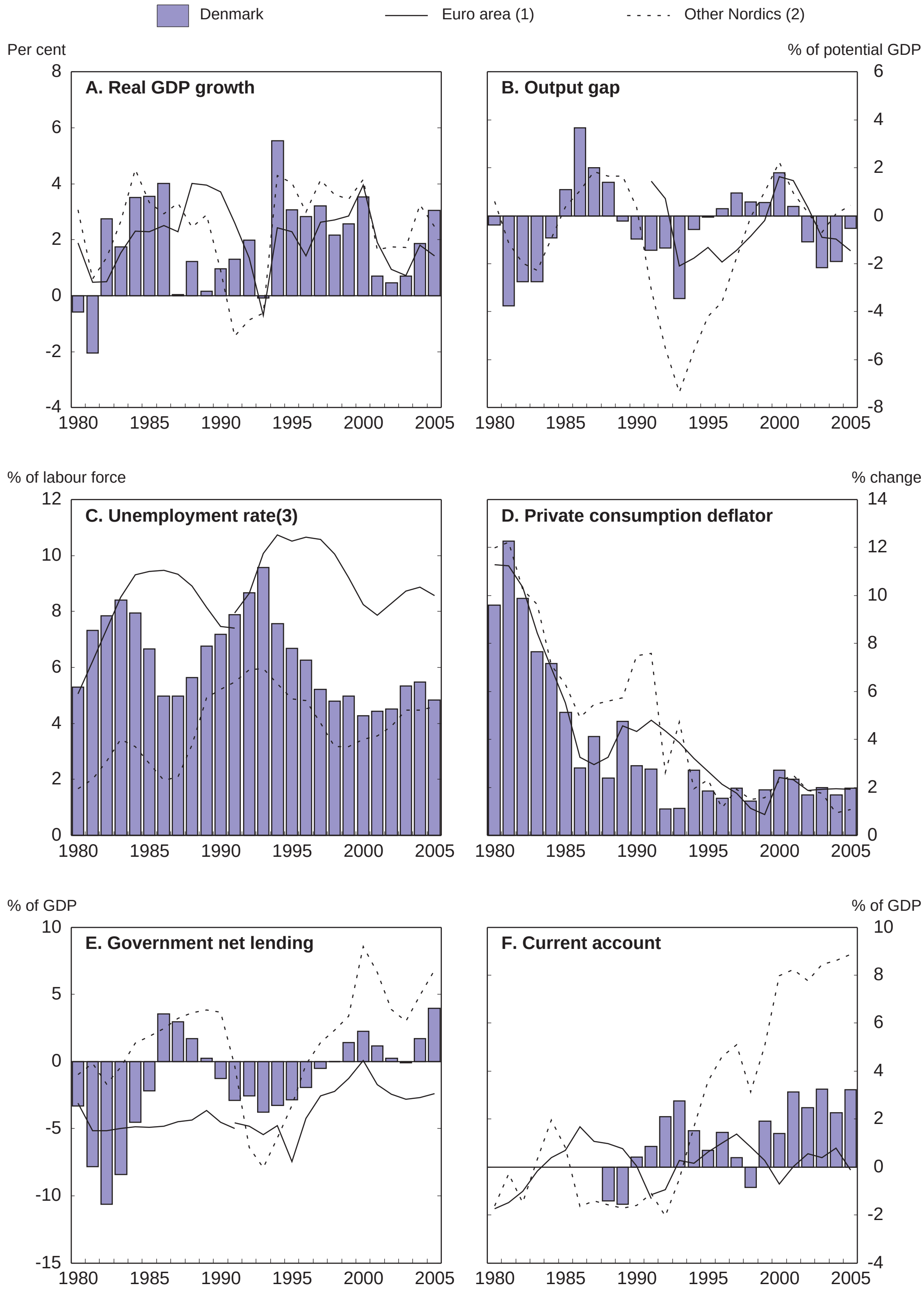
The recent performance of the Danish economy is impressive with above-trend GDP growth, decreasing unemployment and high budget and current account surpluses. However, this chapter argues that there is now a risk of overheating, not least as the monetary policy stance that Denmark "imports" from the euro area through its fixed exchange rate regime is quite expansionary in the current situation. This is reinforced by a stronger transmission of interest rate changes to the real economy than in previous cycles. Rapidly increasing house prices – which seem to lose touch with fundamentals – add further stimulus to private consumption. The chapter discusses the policy options to ease near-term capacity constraints: continuing a prudent fiscal policy and boosting labour supply. Such policies are also necessary for long-run fiscal sustainability. Finally, the chapter analyses productivity growth and the role of terms-of-trade trends, which are one aspect of how globalisation affects the economy.

The risk of overheating in the short term is growing

1.1 In line with the other Nordic countries, overall macroeconomic performance in Denmark has been impressive in recent years, in particular when compared with the euro area. GDP growth has picked up markedly after the post-2000 slump and continues to expand more rapidly than its potential rate of a bit below 2%, pulling the output gap into positive territory. Employment has strengthened significantly with the unemployment rate falling below 5%, well under the euro area average. At the same time, inflation remains low although there are signs that the labour market is becoming increasingly tight. House prices have surged recently, partly because of the low interest rates that Denmark "imports" from the euro area by operating a strict fixed exchange rate link to the euro. Moreover, the housing finance structure with its large share of adjustable rate loans and the general importance of mortgage loans amplifies the interest rate effects on the economy.

1.2 The government budget has been in surplus since 2004 supporting the current account surplus, which remains above 2% of GDP. It is quite unusual that a country in such a strong cyclical position continues running a significant current account surplus. Increasing imports and limited growth of exports due to domestic capacity constraints usually lead to declining trade and current account balances. However, the traditional relationship is blurred as the current account in Denmark is increasingly affected by shipping and oil exports (Box 1.1), which are fairly independent of domestic capacity constraints. Without the contribution of these two components, the current account would probably have been in a small deficit since 2004. Therefore, the economy might run into capacity constraints sooner than could be expected from the usual early indications.

Figure 1.1. **Key macroeconomic indicators**[1]



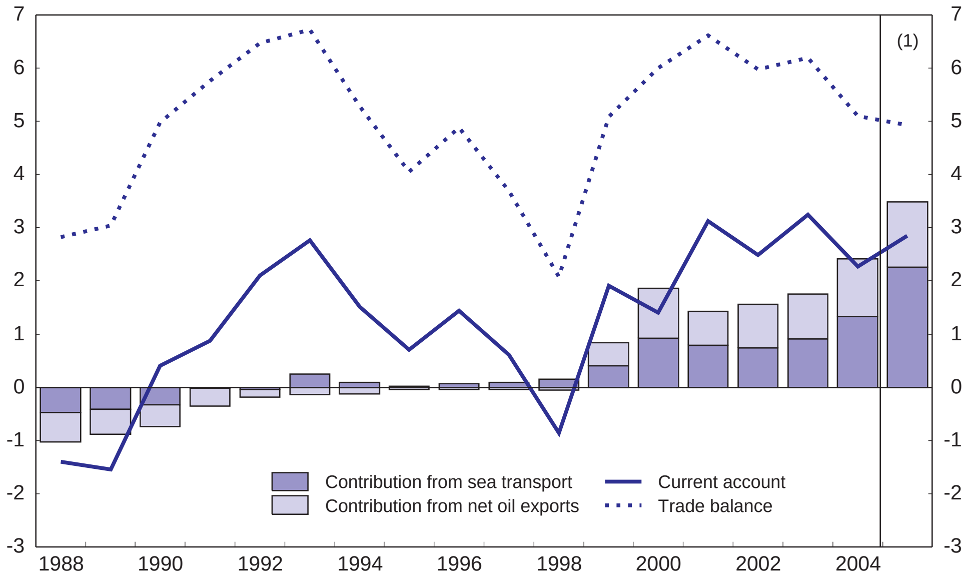
1. Break in series in 1991 for Germany: western Germany up to 1990, re-unified Germany thereafter.
2. Finland, Norway and Sweden.
3. Based on Labour Force Survey, not a claimant count.

Source: OECD Analytical database.

Box 1.1. **“Making sense of national statistics in a globalising world” – how energy exports and shipping boost the current account**

In contrast to previous business cycles, the current account is recording a solid surplus despite the strong cyclical upswing in the domestic economy. The current account surplus stood at 2.9% of GDP in 2005, mainly driven by a trade balance surplus of 4.9% (other accounts were in deficit due to interest payments and transfers to abroad). This mainly reflects two underlying developments: the increasing impact of both sea transport services and oil exports on the trade balance.[1] In 2005, about half of the trade surplus is due to net income from shipping and around one quarter can be attributed to net oil exports (Figure 1.2).[2] This represents a major structural shift as until 1999 both components were broadly in balance. Going further back, they even were negative. Both shipping and oil exports are more or less independent of the domestic state of the economy and it is therefore likely that the relationship between the surplus and measures like domestic growth or the output gap are less synchronized now than in previous years. Given this background, the current account surplus should not be taken as an indication that there is still ample capacity available within the economy.

Figure 1.2**. Contribution of shipping and oil to the current account surplus**
In per cent of GDP



1. 2005 data are based on a new compilation method, which affects in particular the sea transport component. Retrospective comparisons are therefore subject to uncertainty.

Source: Statistics Denmark.

Shipping is included in the current account if the enterprise paying for the sea freight is located abroad. With one of the world’s largest fleets, in particular of container ships, Denmark benefits especially from the strong growth in world trade and the associated demand for transport services. Maersk (the A.P. Moller Group) is the largest container shipping company worldwide with a world market share of 12%. Its acquisition of Sealand in 1999 increased the importance of this industry for external trade, contributing to the trade surplus since 1999. A significant proportion of the sea freight business is logistics, *e.g.* organizing transport from China to USA, often with rented ships. The sea freight business differs in a number of ways from other export industries. Foremost, it is more dependent on global conditions, such as developments in global trade as well as freight rates. Unlike exports of goods, which are mainly directed to the EU countries, shipping is more exposed to fluctuations in the US dollar exchange rate (as settlement takes place in US dollars). Also, Danish labour is only to a limited extent employed (only around 1% of total Danish employees) and the domestic market for shipping is small as shipping to and from Denmark makes up only about 5% of total turnover.

Similar to shipping, energy exports moved into surplus at the end of the 1990s after the initial build-up phase of facilities for the **North** Sea oil production was completed (Pedersen, 2003). In 2005, gross oil exports amounted to 2.8% of GDP, up from 0.7% of GDP in 1998. To a large extent this reflects higher oil prices, although production of oil also increased by about 30% over this period. As in the case of shipping, the surplus from net oil exports is mainly determined by global supply and demand factors, and largely unrelated to the Danish capacity situation (employment in the oil sector is significantly smaller than in shipping).

An intriguing question is to what extent the current account surplus "belongs" to Denmark or to foreigners having stakes in these sectors. Of interest in this regard are only earnings that are retained in the companies (as dividend payments to abroad automatically lead to a lower current account balance by offsetting some part of the trade surplus). In the case of a portfolio investor (non-resident with a holding of less than 10% of a company's capital), these earnings constitute a part of the current account surplus that is foreign-owned. The opposite holds for the Danish portfolio investment position in foreign shares, which more than outweighs the investment of foreigners in Danish companies.[3] In the case of a foreign direct investor (with holdings of more than 10% of the company's capital), the current account surplus does not include retained earnings, as they are counted as a foreign direct investment inflow. Anecdotal evidence suggests that foreign direct investment dominates in the oil sector. For example, two-thirds of the *Dansk Undergrunds Consortium (DUC)* is foreign-owned by two companies.[4] Thus, only those net earnings from oil exports that "belong" to Denmark are in the current account.

1. Beier and Pedersen (2005). Notwithstanding its high export earnings shipping contributes to a lesser extent to value creation (only 2% of the economy's value added (production minus input material) is due to sea freight).
2. Due to a change in the compilation method in the balance of payments starting in 2005, figures for sea freight show a significantly higher contribution in 2005 compared with 2004 (mainly reflecting a smaller level of imports than under the old method).
3. While the net international asset position of Denmark is positive for shares, the opposite holds for bonds; *i.e.* investment of foreigners in Danish bonds outweighs Danish investment in foreign bonds.
4. When Maersk was awarded the sole concession for the exploration of oil and gas in 1962, the Dansk Undergrunds Consortium (DUC) was founded to assist Maersk in the exploration of Danish North Sea oil. Today it is a co-operation between Maersk (39%), Shell (46%) and Texaco (15%) and has a market share in the oil production industry of over 75%.

1.3 Growth is projected to continue at a rapid pace of 3% in 2006 and thereafter abate a bit (Table 1.1). The output gap has already closed and is expected to reach almost 2% of GDP at the end of 2007. Business cycle indicators for Denmark show high expectations in several parts of the economy, and whereas the early phase of the recovery was driven largely by consumer spending, business investment and exports have now gained momentum. Not least export order books indicating that the expansion is set to continue for some time. The unemployment rate for construction workers has fallen drastically, and bottlenecks with labour shortages are now clearly visible (Figure 1.3). However, wage developments have so far been surprisingly subdued. It could reflect that the economy has in some structural sense become less prone to wage-and-price spirals when booming. But it could also be just a temporary phenomenon, and the situation could turn around quickly. Indeed with the recent rise in house prices, it is increasingly attractive to build new housing, and demand for construction workers is therefore likely to remain intense for quite some time.

1.4 With the economy approaching capacity limits, the main risk going forward is overheating of the economy. Two contributing underlying factors in this scenario are expansionary monetary policy and rising house prices. Both are adding stimulus to private consumption and the overall economy at a time when it is not needed. While signs of supply bottlenecks for example in the labour market are currently only indicative, experience from small open economies in the euro area shows that overheating can set in quite quickly (Hoeller, Giorno, de la Maisonneuve, 2002) – the experience of the Netherlands at the turn of the century is one recent example (OECD, 2006b). Policy makers need to be attentive and adjust policies swiftly within the context of the fixed exchange rate regime.

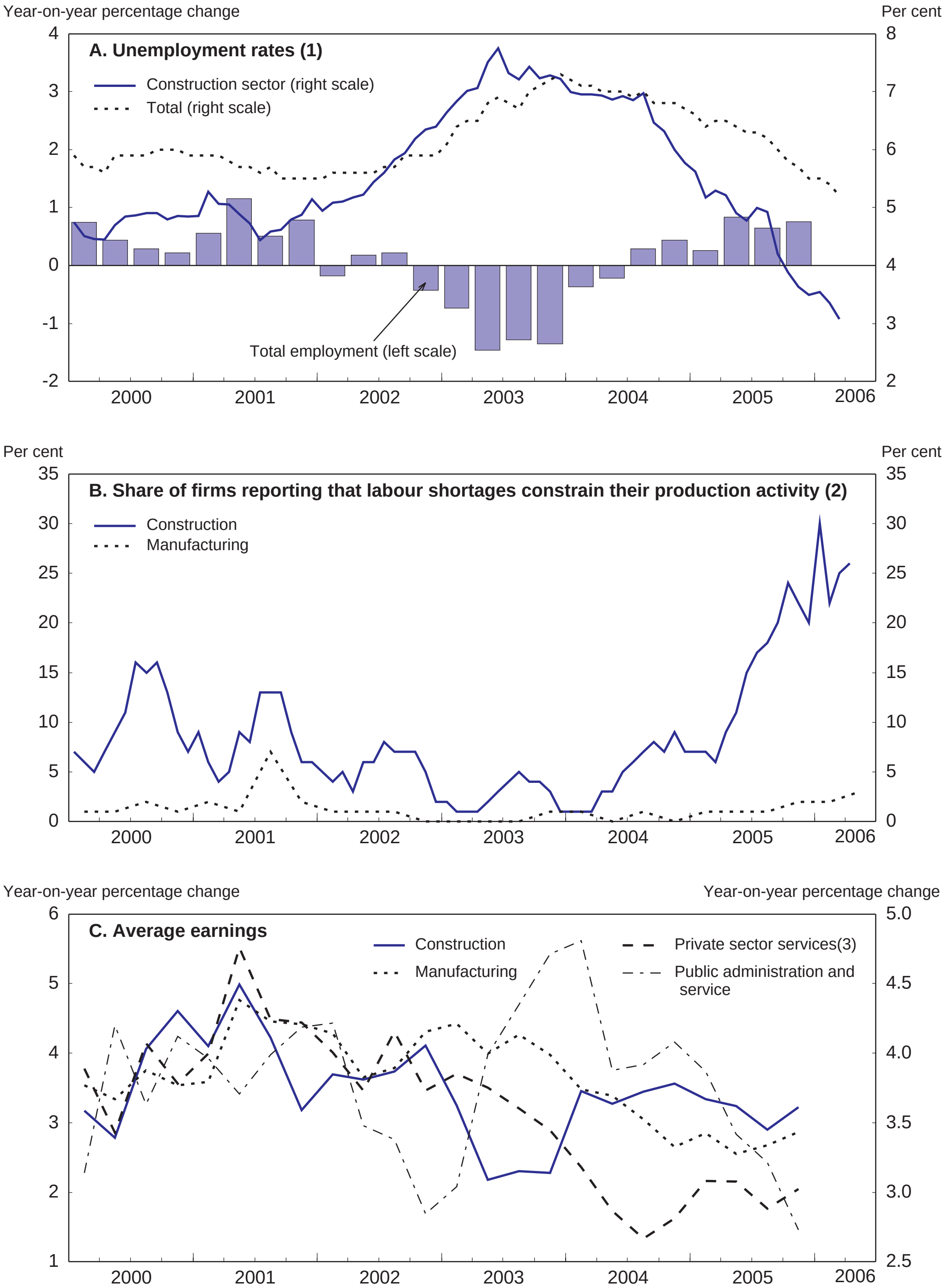
Table 1.1. **Demand, output and prices**
Projection finalised 5 May 2006

	2003 Current prices DKK billion	2003	2004	2005	2006	2007
		Percentage changes, volume				
Private consumption	675.6	1.6	3.4	3.8	2.3	2.7
Government consumption	371.1	0.2	1.5	1.3	1.3	0.8
Gross fixed capital formation	276.1	2.0	4.5	9.0	8.7	5.8
Final domestic demand	1 322.9	1.3	3.1	4.2	3.4	2.9
Stockbuilding[1]	0.7	-0.6	0.2	-0.1	0.1	0.0
Total domestic demand	1 323.5	0.6	3.3	4.0	3.4	2.9
Exports of goods and services	634.7	-1.2	2.7	7.9	6.2	4.9
Imports of goods and services	549.1	-1.7	6.4	10.8	8.1	6.1
Net exports[1]	85.6	0.1	-1.3	-0.8	-0.5	-0.4
GDP at market prices	1 409.2	0.7	1.9	3.1	3.0	2.4
GDP deflator	_	1.9	2.2	2.6	2.0	2.9
Memorandum items:						
Consumer price index	_	2.1	1.2	1.8	1.7	2.6
Unemployment rate[2]	_	5.3	5.5	4.8	4.2	3.9
General government financial balance[3]	_	-0.1	1.7	4.0	3.3	3.8
Current account balance[3]	_	3.2	2.3	3.2	2.7	2.5
Output gap[4]		-2.1	-1.9	-0.6	0.7	1.6

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see OECD Economic Outlook Sources and Methods, (http://www.oecd.org/eco/sources-and-methods).

1. Contributions to changes in real GDP, actual amount in the first column.
2. Based on Labour Force Survey.
3. As a percentage of GDP.
4. As a percentage of potential GDP.

Figure 1.3. **Tightness of the labour market**



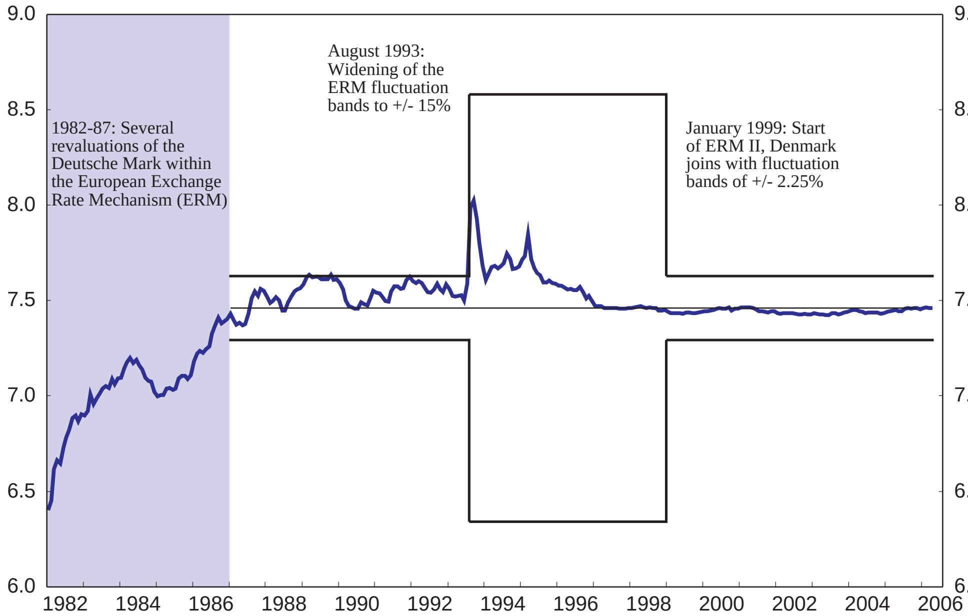
1. Unemployment among persons with full- or part-time unemployment insurance. Unemployment in the construction sector is calculated as a weighted average for the unemployment insurance funds of plumbers, electricians, painters and maritime and wood, industry and construction workers. OECD seasonal adjustment.
2. Limits to productions at the end of the previous period.
3. Electricity, gas and water supply, construction, wholesale and retail trade, hotels, restaurants, transport, storage and communication, financial intermediation, business activity.

Source: Statistics Denmark and OECD calculations.

Monetary conditions are expansionary

1.5 Macroeconomic policies have been anchored into the fixed exchange rate mechanism for over two decades. The high credibility of the regime among market participants is mirrored in only small fluctuations of the Danish krone around its central parity and in a diminishing yield differential between Danish and German government bonds (Figure 1.4 and Box 1.2). Denmark is sheltered from destabilising exchange rate fluctuations *vis-à-vis* the euro area, but on the other hand it is left with fewer instruments to stabilise the economy than countries with an autonomous monetary policy. With Denmark being out of line with the euro area business cycle – a situation which is likely to prevail well into 2007 – interest rates as set by the European Central Bank (ECB) will probably remain too low relative to the state of the Danish economy.

Figure 1.4. **Exchange rate of Danish krone *vis-à-vis* euro**



Source: Nationalbanken, OECD and Abildgren (2004).

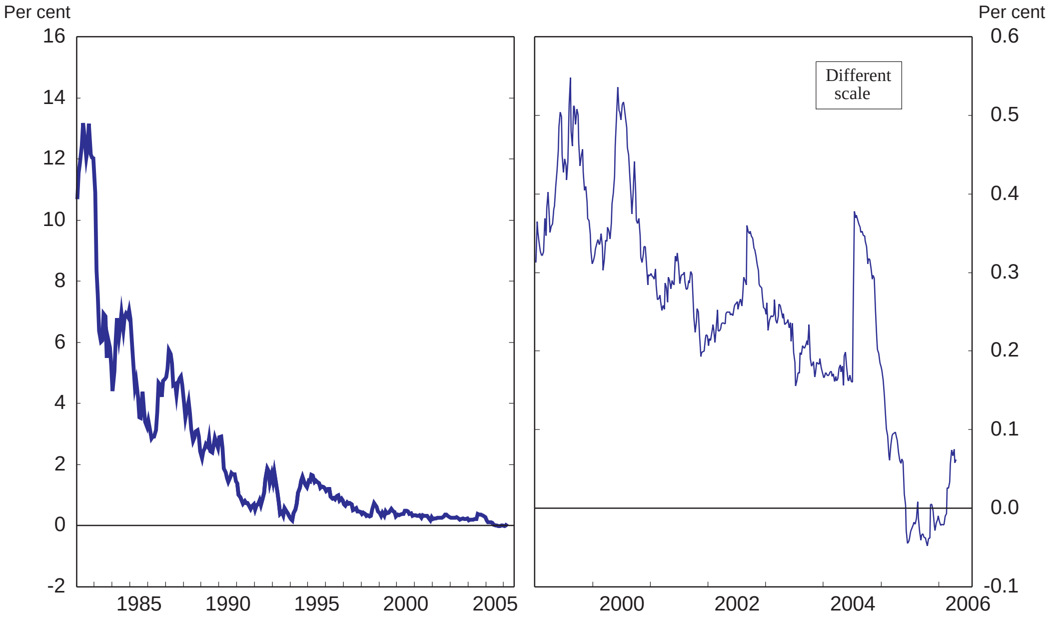
1.6 The actual ECB interest rate is somewhat below the level prescribed for Denmark using a simple Taylor rule (Figure 1.6).[1] The actual ECB interest rate has been a little lower but nevertheless quite close to the interest rate prescribed by the Taylor rule since 2001. Moreover, Denmark has been well within the band of interest rates that Taylor rules would prescribe for euro area countries, implying that ECB monetary policy has been more appropriate for the Danish economy than even for some EMU members. Recently, however, the Danish Taylor interest rate has started to deviate substantially from the actual ECB rate – and the relatively stronger cyclical momentum of Denmark will most likely reinforce this in the future. According to the Taylor rule, the most appropriate interest rate for Denmark would be around 4% at the current juncture.

Box 1.2. **Recent developments in Danish bond yields**

The spread of Danish long-term government bonds over Germany has decreased in the past decade from over 1 percentage point to around zero and currently stands at about its lowest level for close to 45 years. Even some euro area countries have a higher yield differential against Germany. Theoretically, the (positive) yield spread of Danish bonds should reflect the risk of exchange rate devaluation, the difference in the risk of default of the government and differences in liquidity of the outstanding bonds. The fact that over the longer run the spread is decreasing can therefore be a signal that financial markets judge the difference in the risk of default or exchange rate parity adjustments to have declined due to high credibility of the exchange rate peg and responsible fiscal policy (the liquidity advantage of German bonds is likely to have remained, though). Indeed, the budget and debt position of Denmark is much more favourable than in most euro area countries.

In the spring of 2005, Danish interest rates even fell below German rates and the long term yield spread turned negative. A negative spread is quite unusual for a small country that fixes its exchange rate to a larger currency area as investors usually require a premium for the risk of devaluation. Two more temporary factors might have been at play here (Nationalbanken, 2005). One is related to a lower supply of Danish long-term mortgage bonds in recent years because of a higher proportion of short-term bonds for financing adjustable-rate loans. Also, the duration of callable mortgage bonds has decreased because of the pre-payment of mortgage loans in the current low interest rate environment. Institutional investors thus increased their demand for long-term government bonds in order to extend the duration of their bond portfolios. The second factor relates to increased demand from Danish life-insurance companies and pension funds which increasingly shift their assets from equities into Danish long-term government bonds to match their assets with their long-term pension commitments (similar operations have been observed in the UK and may have contributed to the very low yields on long-term government bonds).

Figure 1.5. **Interest rate differential Denmark vs Germany**[1]

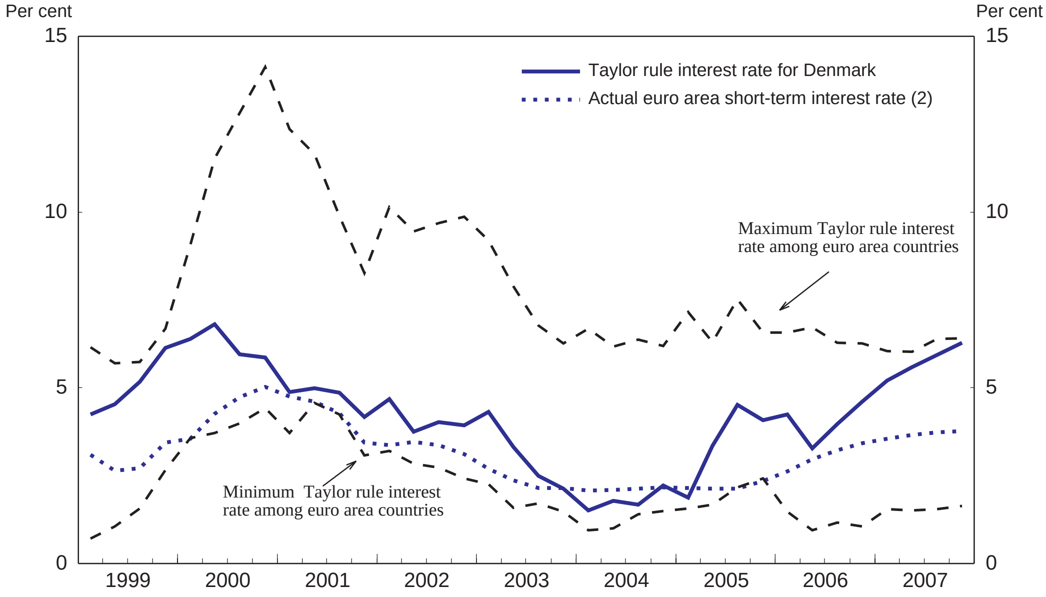


1. Based on 10-year government bonds.

Source: OECD, Analytical database; Riksbank.

1. Temporarily, the spread can also be driven by the issuance of new Danish benchmark bonds (Abildgren, Lindewald and Nielsen, 2005). While 10-year Danish government bonds are usually issued every two years, equivalent German bonds are issued every six months. At the time of issuance of the new Danish bond, there may be a leap in the spread between both bonds, reflecting the difference in remaining time to maturity between them. This explains the leap in July 2004 and September 2002.

Figure 1.6. **Taylor rule interest rates for Denmark and euro area countries**[1]



1. The Taylor rule interest rate is calculated as: i = 2 + inflation + 0.5 * output gap + 0.5*(inflation -2).
2. Market expectations from 2006 Q2 onwards.

Source: OECD calculation and Analytical database.

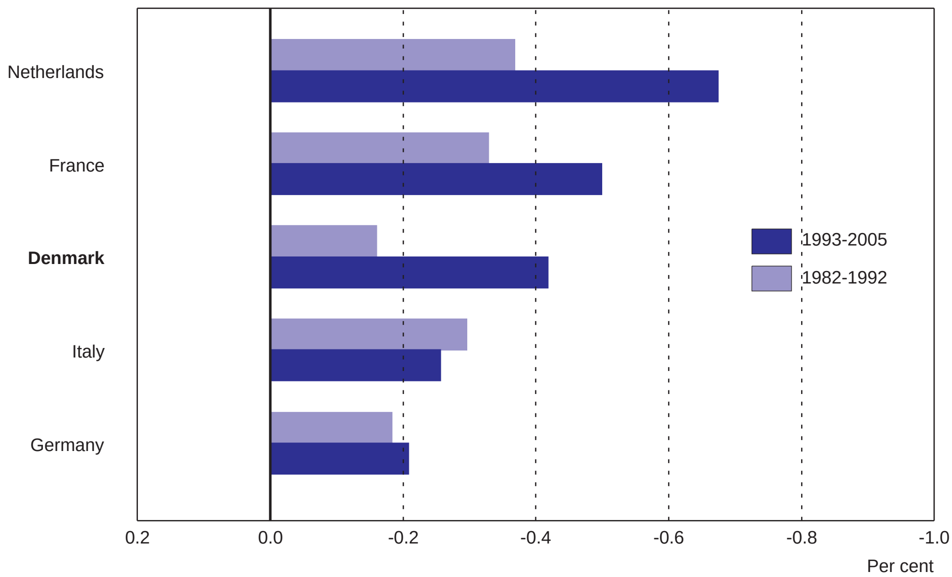
1.7 Moreover, the effects of short-term interest rates on the Danish economy seem to have become more powerful in recent years. A simple empirical analysis of the effects of interest rate changes on the real economy shows the significant change that has taken place since the mid-1990s (Annex 1.A3). Results suggest that during the period 1982-93 a one percentage point increase in short-term interest rates was on average followed by a decline in real GDP by 0.2%. In contrast, the effect on GDP following an interest rate move has been more than twice as large since 1993.

1.8 The stronger transmission is likely to reflect the changes that have gradually been taking place in the mortgage markets over the last decade (Chapter 4). While the financing options for households have increased, generating allocative gains, a more complete and market-based housing finance structure has also increased the exposure of households to changes in short-term interest rates.[2] The already relatively high level of household mortgage debt has been rising in the last decade from about 50% of GDP to 80% of GDP. Furthermore, mortgage product variety began increasing in the mid-1990s: mortgage equity withdrawal has been allowed since 1993 and adjustable-rate mortgages were introduced in 1995. While adjustable-rate mortgages played only a limited role in the second half of the 1990s, they now account for half of all outstanding loans. A larger share of adjustable rate mortgages is of particular relevance for monetary transmission, as changes in short-term interest rates will lead to a higher sensitivity (and faster pass-through to retail interest rates) of housing-related interest payments which affect disposable income and thus consumption.[3] However, at the same time, a growing share of adjustable-rate loans now has an interest rate cap (preventing the mortgage rate from increasing above a certain threshold). Going forward, this will limit the sensitivity of households to higher interest rates somewhat.[4]

1.9 Monetary transmission has been altered not only through the income effects of changing interest payments. In addition, wealth effects are likely to be playing a growing role over time, in particular with the enhanced opportunities to raise supplementary mortgage credit since 1992. As changes in interest rates have an impact on house prices, the availability of mortgage equity withdrawal allows households to increase consumption (Catte *et al.*, 2004), thereby amplifying the income effect from interest rate changes.[5] Further analysis in the above econometric framework suggests that a bigger interest rate effect on consumption is the main transmission channel that has changed in Denmark, supporting the claim that income and wealth effects are contributing to the increase in the interest rate impact on GDP over time.

1.10 Monetary transmission is growing stronger also in several euro area countries, presumably reflecting the increased use of market-based financing elements exposing households and firms more directly to market interest rates. However, on average the transmission effect in the larger countries (Germany, France and Italy) now seems to be somewhat lower than in the smaller countries like Denmark and the Netherlands (Figure 1.7).[6] The larger countries have housing finance structures that are quite different from Denmark and the Netherlands (Mercer Oliver Wyman, 2003): the level of mortgage debt is smaller, overall mortgage product variation is smaller and early repayment (in order to switch to a lower interest rate loan, so-called “re-mortgaging”) and mortgage equity withdrawal is not prevalent. According to estimates by the ECB, mortgages with a fixed interest rate for at least ten years prevail in the euro area (ECB, 2004).[7]

Figure 1.7. **Reaction of GDP to an increase in interest rates**[1]



1. Based on 3-variable Vector Autoregression (VAR) including GDP, CPI and short-term interest rates. The figure displays the response of GDP to an increase in short-term interest rates by 1 percentage point after 4 quarters.

Source: OECD calculations.

1.11 During the second half of the 1980’s and the early 1990’s, the Danish economy was possibly more desynchronised from Germany than what it is today *vis-à-vis* the euro area. The situation where other policy instruments have to compensate for a Bundesbank/ECB interest rate not being ideal for Denmark is therefore not entirely new. In the meantime, however, monetary transmission has grown stronger, thereby amplifying the effect of the too loose monetary policy stance and contributing to the risk of overheating. The old lesson that prudence in fiscal and other domestic policies is a key requirement is therefore as essential today as in the early phase of the fixed exchange-rate regime. One area where the effect of the low level of interest rates and their transmission to the real economy *via* mortgage markets is most visible is in house price developments.

Speed of house price increases raises concerns

1.12 Since 1995, house prices have increased substantially with an average yearly growth rate of 8% (6% real).[8] The ratio of house prices to disposable income has risen over the same period by 70%. This has supported consumption growth, not least because the increased flexibility of the mortgage market made it easier to borrow against higher house price values. Over the last year, the speed of price increases has been particularly strong: During 2005, house prices rose at double-digit annual rates, reaching 21% in the fourth quarter – the largest increase in nearly 20 years – and this trend continued at the beginning of 2006. While there are good fundamental reasons to believe that house prices should be higher today than in 1995, recent growth rates look increasingly exaggerated and it seems likely that further price increases would bring valuations significantly out of line with fundamentals.

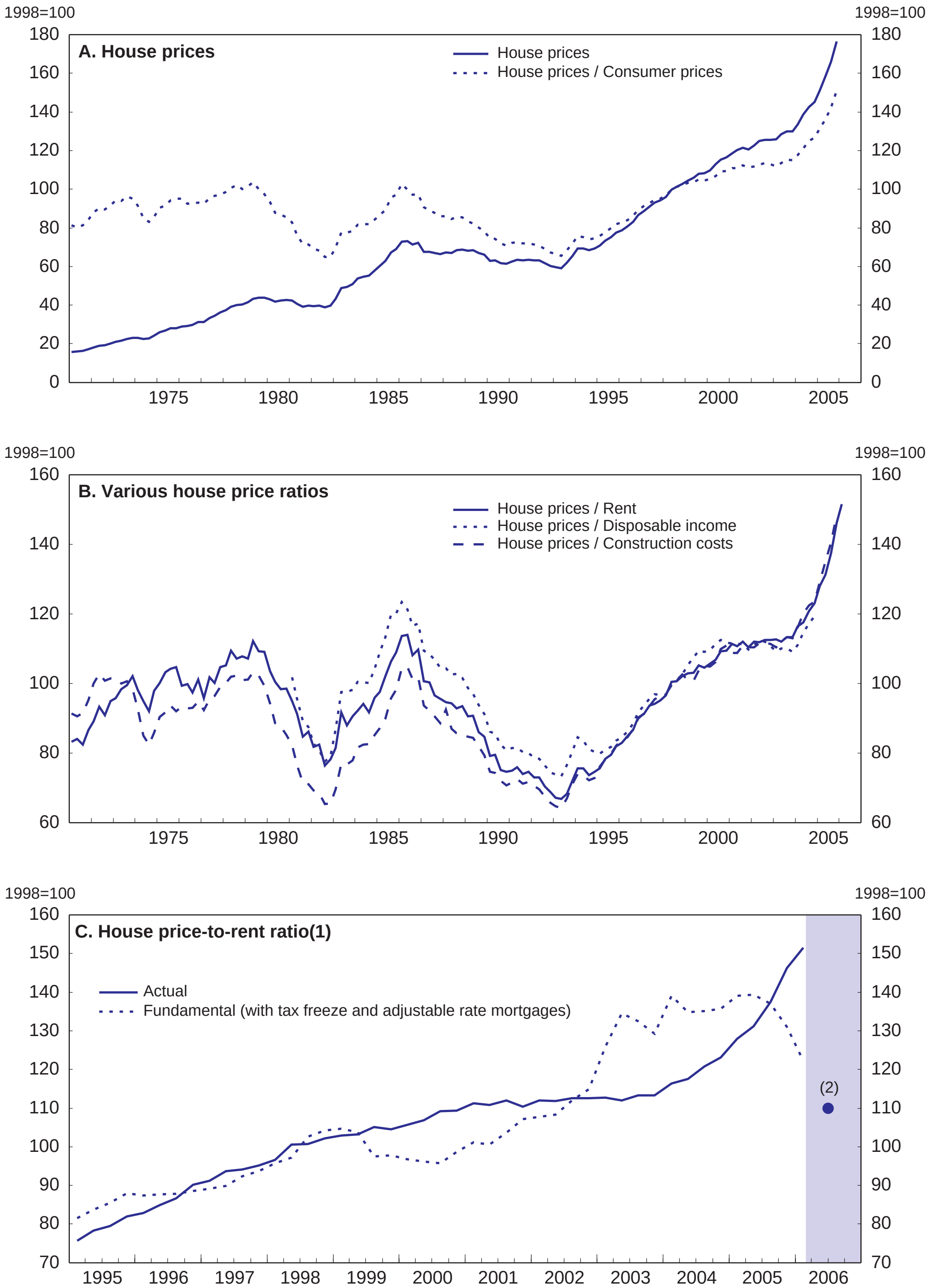
1.13 A common method to asses the valuation of house prices is the "asset-pricing approach" which focuses on the house price-to-rent ratio (OECD, 2005a). The higher this ratio, the less lucrative it is to buy a house and the more attractive it is to rent.[9] However, an increase in the ratio can also be warranted by a decrease in the costs of owning a house ("user costs"). Lower user costs justify higher house prices. A simple measure of these costs is derived from adding (after-tax) nominal mortgage interest rates, property tax rates and holding costs and subtracting expected capital gains.[10]

1.14 Figure 1.8 shows that the house price-to-rent ratio fluctuated around its average from 1970 to 2000 and increased significantly since then to its highest value so far. A large part of this recent increase can be related to an improvement in fundamentals, *i.e.* a fall in the cost of owning a house.[11] This mainly reflects the decline in long-term interest rates by about two percentage points since 2000. In addition, the effective financing costs have been reduced beyond the decline in long-term interest rates as a result of the increased use of adjustable rate mortgages since 2000. Furthermore, the tax freeze since 2001-02 has reduced the effective property tax paid by households.[12] However, even taking these factors into account there would seem to remain some overvaluation, which mainly occurred during 2005.[13] While conclusions about the correct level of house prices are surrounded by considerable uncertainty – not least as the expectations of individuals for future capital gains are unknown – the recent double-digit percentage increases are difficult to match with underlying fundamentals.[14]

1.15 Going beyond the national average, regional house price developments are quite unequal. The capital stands out with the highest price increases, while developments elsewhere have been less pronounced. This suggests that supply constraints – both natural and man-made constraints – are an important factor in explaining the development, because demand effects such as development of incomes differ much less across the country (Chapter 4).

1.16 It has to be recognised that house prices can deviate from their fundamental valuations for quite some time. However, the available evidence on house price valuations raises some warning flags. The price increases seen over the last decade *as a whole* seem to a large extent to have been warranted by fundamentals, most importantly including declining interest rates, but the most recent two-digit increases do raise concerns. Going forward, house prices cannot continue increasing at the current speed for years without getting significantly out of line with fundamentals.

Figure 1.8. **House prices**



1. Actual and fundamental house price-to-rent ratios have been set equal to 100 in the most recent year when the actual price-to-rent ratio was close to its 35-year-average. The change in house prices from 2005Q4 to 2006Q1 is based on the Association of Danish Mortgage Banks' statistics.
2. Simulation assuming an interest rate increase by 1 percentage point from the end-of-2006Q1 level.

Source: Statistics Denmark and OECD, Analytical database.

1.17 A gradual and measured increase in interest rates would be welcome, as it would help to dampen house price developments and thereby reduce the risk of macroeconomic overheating. While the future path of long-term interest rates is difficult to predict, usual valuation methods suggest some upward potential from their exceptional 2005 low. Also, prospects for European short-term interest rates seem to tilt upwards and indeed, short-term rates have already started to increase since the fourth quarter of 2005. This suggests that interest rates will cease to support house price growth; *i.e.* the costs of owning a house are likely to increase. An increase in both long- and short-term interest rates by 1 percentage point from their level at the end of first quarter 2006 would lower the fundamentally justified price by about 10%.[15] An end to house price increases would probably slow down consumption growth as well as residential investment, helping to mitigate the risk of overheating, particularly in the construction sector. A soft-landing of the housing boom is still the central scenario, but if house prices continue going up at the exceptional pace seen lately, then a subsequent downward correction cannot be excluded.

Economic policy should respond to overheating risks

1.18 Within the fixed exchange rate regime, the two main policy levers available to counter overheating are a tight fiscal policy and measures to boost labour supply. The authorities must be vigilant and apply both of these stabilisation tools effectively. Ideally, it should be done in a way that has a direct effect on aggregate demand now and also enhances overall flexibility and thereby the economy's general ability to adjust to future changes in the cyclical environment.

1.19 Fiscal restraint is essential and government spending has to be tightly controlled. Prudent fiscal policy has been an important pillar of the fixed exchange rate regime in the past and arguably contributed to the favourable macroeconomic outcomes[16]; it is necessary that it continues to do so in the future. The automatic stabilisers are the strongest among OECD countries (Girouard and André, 2005). At a minimum they have to be given full play, and in fact, this seems to be happening. Strongly volatile revenues from North Sea oil extraction and the tax on accrual returns to pension assets make it difficult to gauge the stance of fiscal policy based on the actual general government financial balance, because it is very dependent on oil and asset prices. In 2004 and 2005, these factors have each added almost one per cent of GDP to the actual fiscal balance (Table 1.2).[17] The Ministry of Finance's calculations indicate that while tax cuts stimulated the economic activity in 2004, fiscal policy is just about neutral in 2005 and 2006. Since the December assessment of fiscal policy shown in the table, data have been revised up for 2005 and now indicate a surplus of 3.9% of GDP. The stronger than expected surplus is mainly due to bigger cyclical factors including the pension revenue tax. Hence, the Ministry of Finance's assessment of the fiscal stance is largely unchanged from what is shown in the table. Notice that a revision of national account methods in summer 2005 led to the second-pillar Additional Labour Market Pension (ATP) being excluded from general government finances. Under the old methods, the fiscal balance would rise from around 1% of GDP surplus in 2003 to around 5% surplus in 2005.

Table 1.2. **Actual versus structural fiscal balance**
Per cent of GDP

	2003	2004	2005	2006	2007
Actual balance (net lending of general government excluding the second-pillar pension fund)	-0.1	1.7	3.3	2.3	2.1
Contribution from:					
Economic cycle	-0.3	-0.5	-0.1	0.5	0.7
Corporate tax revenue and special items, including North Sea oil revenue	0.0	0.7	0.9	0.7	0.2
Pension revenue tax	-0.4	0.7	0.8	-0.5	-0.3
Net interest payments and effect of suspension of special pension contributions since 2004	-0.1	0.3	0.4	0.5	0.4
Structural balance	0.7	0.5	1.3	1.1	1.2
Stimulatory effect of fiscal policy on economic activity[1]	-0.2	0.8	0.1	-0.1	
Public consumption, volume growth in per cent	0.3	2.0	0.6	0.3	0.5

1. This shows how much of GDP growth (percentage points) is due to the cumulative stimulatory or contractionary effect of fiscal policy.

Source: Ministry of Finance (2005a); *Økonomisk Redegørelse*, December.

1.20 Realising the projected neutral fiscal stance in 2006, however, requires that local governments stick to their agreement with the state, so that total public consumption growth is kept at a modest 0.3%. In practice, municipalities and counties most often spend more than agreed, and as they account for over half of all public spending and most public services, this lack of coordination is a key weakness of the fiscal framework (OECD, 2002). Slippages on public consumption are particularly problematic at the current juncture, because their effect on economic activity is more direct than fiscal measures on the tax side, which may be counteracted by changes in private savings (Hoeller, Giorno and de la Maisonneuve, 2002). A major structural reform will come into force from January 2007 reducing the number of municipalities from 271 to 98 and replacing the 14 counties by 5 regions. This gives a strong platform for improving public sector efficiency, and if pursued vigorously, it should enable municipalities to keep spending under control so that public consumption growth can be limited to the stipulated 0.3% in 2006 and 0.5% in 2007. It should be possible to help staff find jobs elsewhere in cases where the new municipalities can fulfil their tasks with fewer people than previously needed. Freeing some of these labour resources will in a very direct way help to prevent the economy from overheating, because being on average quite skilled, municipal workers would probably be sought by private firms having difficulties finding persons to recruit. A similar "double dividend" could be achieved by reducing staff in the funds organising unemployment insurance where administrative costs are much higher than in other OECD countries.[18] A political indication that municipal employees would not lose their jobs as a result of the structural reform was given some time ago in the context of a quite different macroeconomic situation. The issue should be looked at again.

1.21 Automatic stabilisers could be strengthened by re-establishing the link between house price movements and real estate taxes that were frozen five years ago. In fact, Denmark has been held up as a role model for housing taxation because of its elaborate system giving annual up-to-date public assessments of each house's value as a basis for real estate taxation (Muellbauer, 2005). Letting real estate taxes move in tandem with each house's value create an automatic stabiliser for house prices, because movements in housing demand are dampened by higher taxes when house prices increase and lower taxes when demand and prices decline. As expectations of future house price increases would also be affected, the extent of speculative housing investments would possibly be reduced. From 2001, however, a tax freeze was introduced holding all tax rates and all nominal excise duties constant, while at the same time capping the real estate tax for each home at the nominal level it had been in 2002 or in 2001 +5%. Now only the smaller land tax somewhat increases in line with values (Chapter 4), putting only a weak check on the house price boom. Applying the tax freeze in a more flexible way and keeping the tax rate constant while letting the tax payment vary with house values would help to reduce house price fluctuations. Also raising the real estate tax rate would help even more, as the indirect subsidy associated with the current low tax rate most likely adds to price volatility (Box 1.3). Implementing such changes now would also have a direct tightening effect on aggregate demand. In contrast to fiscal measures, regulatory measures aimed at cooling the housing market are a mixed blessing.[19] In particular, rolling back the financing flexibility for households achieved through mortgage market liberalisation should be avoided.

Box 1.3. **Housing taxation and volatility in house prices**

Cycles in owner-occupied housing markets produce swings in household wealth that in turn amplify economic fluctuations (Boone and Girouard, 2002). House price cycles may typically stem from a relatively inelastic supply of housing which for natural reasons cannot respond quickly enough to offset variations in housing demand due to changes in income or income expectations, real interest rates, demographics, preferences or other factors. This volatility in house prices, however, may be exacerbated by tax incentives stimulating house ownership (Van den Noord, 2005).

By international comparison, Denmark has experienced a bit more volatility in house prices than on average in other countries during the last three decades (Table 1.3). Most likely, part of this volatility has been caused by the subsidies provided through the tax system, which mainly stem from homeowners' rights to deduct mortgage interest payments in income taxation while paying a low real estate tax compared with taxes on other assets.

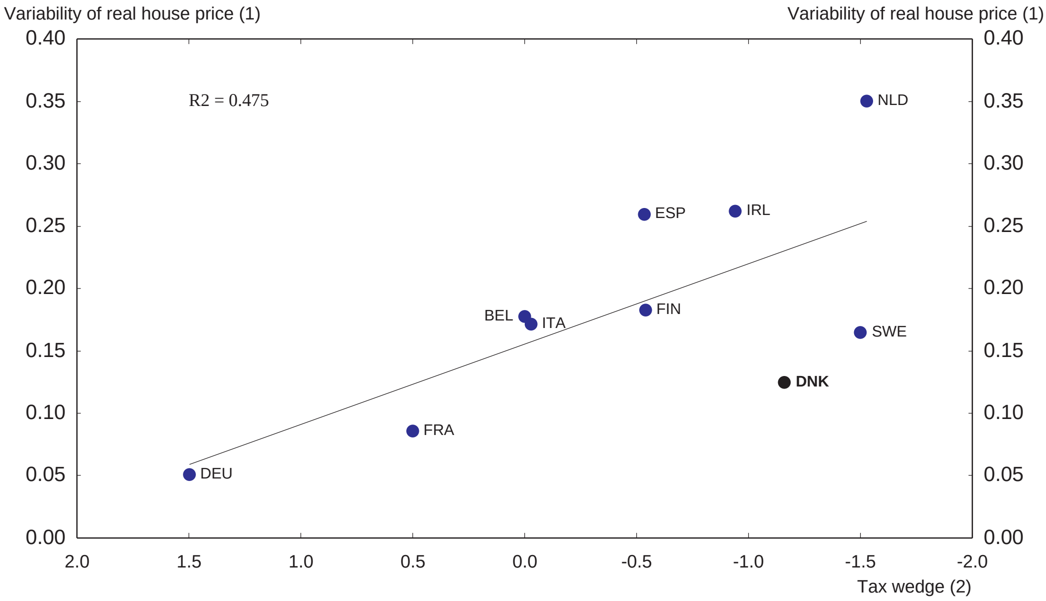
Table 1.3. **Volatility in real house prices**[1]

	Annual change in house price inflation[1]	Difference between actual and OLS trend house price[2]	Difference between actual and HP trend house price inflation[3]
Netherlands	9.1	24.3	7.3
Spain[4]	10.1	19.2	8.0
Ireland	7.9	23.5	5.4
Finland	9.8	16.8	8.7
United Kingdom[5]	10.1	16.5	8.5
Italy	9.8	14.7	8.3
Denmark	**7.7**	**15.0**	**7.0**
Norway	7.3	15.5	6.0
New Zealand	8.1	12.6	7.0
Sweden	6.8	15.1	5.8
Japan	6.6	14.1	5.6
Switzerland	6.3	13.8	5.5
Australia	6.2	10.8	5.1
Canada	6.4	9.8	5.6
France	4.8	9.0	3.7
United States	3.2	6.3	2.6
Germany	2.7	4.9	2.2
Average	7.2	14.2	6.0

1. Annual data for 1970-2004 if not stated otherwise. Volatility is measured by the standard deviation. The countries are ranked in descending order of volatility based on a simple average of the standard deviations of the three series.
2. Ordinary least squares.
3. Hodrick-Prescott filter (lambda = 100).
4. 1971-2004.
5. 1969-2004.
Source: OECD database.

Price variability of owner-occupied houses is likely to be largest in countries where the tax breaks are largest. In a cross-country analysis, almost half of the variation in house price volatility could be explained by the tax wedge on housing, the most striking example being the Netherlands, which combines the largest tax breaks with the highest price variability (Figure 1.9).

Figure 1.9. **Correlation between tax wedge and variability of house prices**



1. Root mean square deviation of real house price from trend, 1970-2001.
2. Difference between after-tax and pre-tax real interest rate on mortgage loans; 1999 tax rules, interest rates and inflation.
Source: OECD calculations.

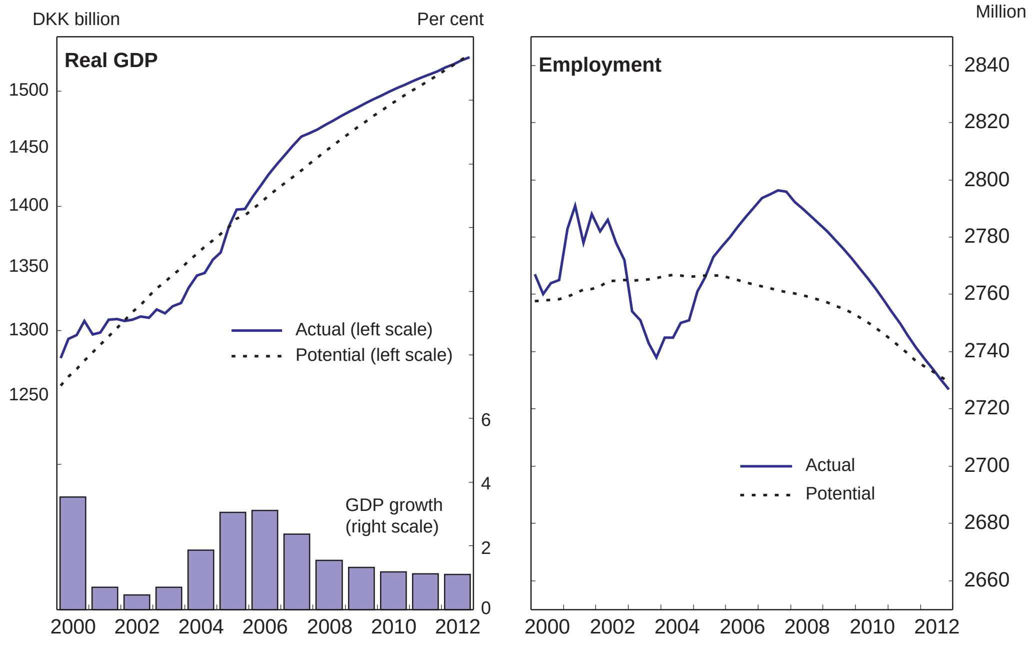
1.22 Scaling down subsidised housing and possibly postponing approved projects that have not yet started would have a very direct and potentially large effect on construction sector capacity shortages, as publicly subsidised housing represents about a third of all new dwellings being constructed.[20] As part of a package to reduce direct and indirect subsidies for housing, Chapter 4 recommends to end the subsidies for pension fund's investment in new rental housing and to replace the general subsidies for housing associations with targeted support for individuals in need. Taking these initiatives and unfreezing the real estate tax would both reduce distortions in the housing market and reduce the risk of overheating.

1.23 A number of measures could be taken in the labour market to directly increase labour supply now and at the same time make the labour market more flexible. Indeed, the Netherlands' downturn following its boom of the late 1990's has been prolonged not least of labour market rigidities (OECD, 2006b). The Danish labour market is already quite flexible, but rigidities still exist. In particular, the standard 4-year unemployment benefit duration and the special rules implying duration of up to 9 years for people in their 50s weaken incentives for active job search and geographical mobility. And foreign workers with skills in bottle-neck sectors like construction often face lengthy bureaucratic procedures when coming to Denmark. Chapter 2 analyses options for reform in these areas which could have an immediate effect on labour supply if implemented swiftly.

The medium and long-term outlook is rather weak

1.24 Looking beyond the short-term outlook, the economy should be expected to slow. Firstly, much of the current strong expansion in output and employment is cyclical. In 2005, GDP growth of 3% was considerably stronger than the potential rate of a bit below 2% a year. With a continued economic boom, the OECD therefore projects a positive output gap widening to almost 2% of GDP at the end of 2007. In one way or the other, capacity constraints will force the economy to slow in a few years time; either as a soft landing with GDP returning smoothly to trend, or with overheating and loss of competitiveness leading to a protracted downturn. In any case, growth cannot continue at its 2005 speed for long. In the OECD medium term baseline scenario, the output gap is by construction set to close gradually between the end of the short-term forecast horizon and the end-year 2012. This scenario shows that growth would have to stay at 1% or below during five years, for the level of GDP to come back to trend (Figure 1.10). Secondly, ageing is gradually having an impact on labour supply and thereby potential employment, which in turn brings down potential GDP growth. Consequently, the current boom will at some stage be matched by a period of slow growth. The best to do is to pursue structural reforms that can boost potential output, while keeping the current boom going for long enough to draw marginal groups into employment. Such workers might as a result develop a foothold in the labour market that is strong enough to raise potential employment above the baseline scenario considered here.

Figure 1.10. **Growth is currently strong, but will come down over the medium term**



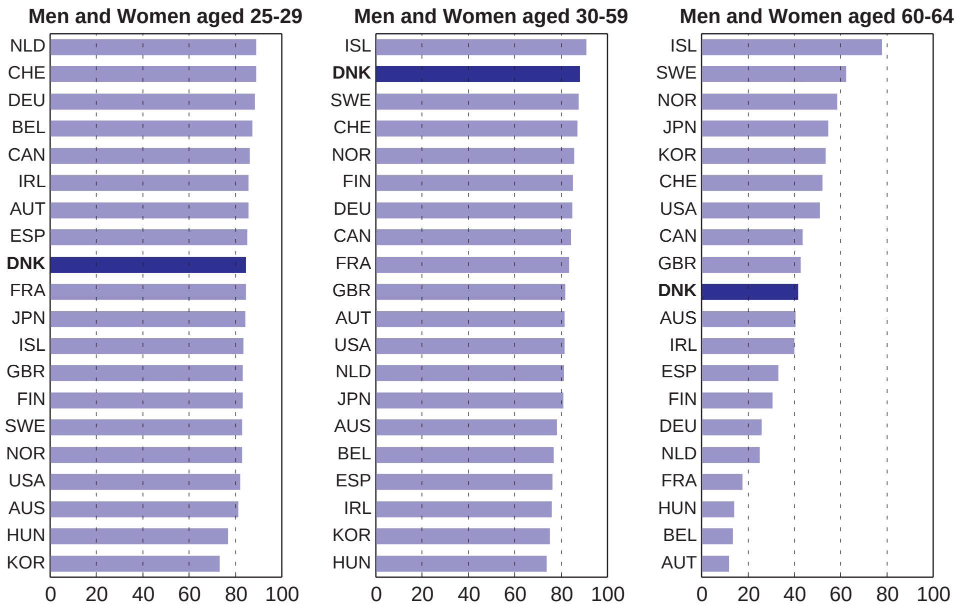
Source: OECD Economic Outlook 78 database.

1.25 Looking further ahead, the effect of ageing grows stronger. The 2005 *Survey* estimated that annual growth in GDP per capita would fall to ¾ per cent in the 2020s and 2030s – less than half of the average 1¾ per cent recorded during the two decades to 2005. Based on the Welfare Commission's estimates, the labour force is projected to contract by 10% over the next three decades, bringing the economy into a regime quite different from the recent decades' steady labour force growth. The number of children and over-65s relative to those in working age will rise steadily as from a couple of years from now, before reaching a plateau 25-30% above today's level in the 2030s. Aside from some minor fluctuations, this dependency ratio is then projected to remain at that level. Under current policies and service standards, the primary budget balance would deteriorate by 4% of GDP over the coming three decades. The actual balance (general government net lending) would deteriorate by 5% of GDP (Welfare Commission, 2006).

1.26 Thanks to a sound fiscal framework well anchored in medium-term objectives, Denmark has achieved much in terms of bringing down debt. General government net debt has been reduced to just 10% of GDP by the end of 2005, down from about 30% of GDP just a decade ago. By 2010, it is expected to be gone, with Maastricht debt coming down to 21% of GDP (Ministry of Finance, 2005b). Debt was built up during the 1970s and early 1980s partly reflecting the great difficulties for economic policies to adapt to the oil price shocks. Removing this legacy of the past has given a stronger position for tackling the ageing challenge. However, pre-saving is not a sufficient response to ageing, partly because of the uncertainties associated with demographic developments (Welfare Commission, 2005). Going forward, policy should focus on genuine reforms to extend working lives.

1.27 The main options for increasing labour supply are at the two ends of the age spectrum (Figure 1.11). Since 1960, the average number of years spent in retirement has increased by *half* to currently 19 and 23 years for men and women, respectively. Thereby seniors now on average spend a bit over a fifth (men) and a bit over a quarter (women) of their lives in retirement.[21] The government's recent proposal to raise the starting age for the voluntary early retirement pension by three years (from 60 to 63) and the regular retirement age by two years (from 65 to 67) is therefore welcome. These changes would be phased in from 2017 to 2025, and thus do not apply for citizens younger than 50 years today.

Figure 1.11. **Labour force participation compared internationally**[1]
Per cent of population, 2004



1. Based on labour market status, which does not exclude that some are at the same time receiving a pension.

Source: OECD Labour Force Statistics Database.

1.28 Together with the other elements of the government's proposals for welfare reform, the employment effect is estimated to reach 125 000 in 2025 relative to a scenario with unchanged policies. Two thirds of this comes from later retirement and one third from faster study completion, labour market reform and integration of migrants. As a whole, it would improve long-run fiscal sustainability by 1½ per cent of GDP, two fifths of which is to be reserved for investments in education and research. These additional allocations for investments in education and research will grow gradually to DKK 13 billion in 2015, *i.e.* before the main initiatives to postpone retirement will start to be phased in from 2017. For the period beyond 2025, a principle of raising retirement age thresholds in line with life expectancy for 60 year olds is proposed, with the total employment effect growing to 155 000 in 2040. If implemented in its current ambitious form, the proposed reform package would handle the *demographic* challenge to fiscal sustainability for many years into the future. General government net lending would stay in the range from balance to 1% of GDP surplus in the 2010-40 period, following a higher surplus in the years 2006-09.

1.29 Given the uncertainties associated with demographic developments and other spending pressures, future governments will need to be ready to take necessary measures, including adjusting retirement age in line with future increases in longevity. Indeed, the assumption used by the Welfare Commission and the government that life expectancy of 65 year olds will grows by no more than half a year per decade may tend to underestimate the future demographic challenge. The assumption is based on the 1960-2000 experience, but recent mortality data indicate that life expectancy at 65 for men has gone up 1¾ years from 1994-95 to 2004-05 and by 1¼ year for women, as the traditional gap between longevity in Denmark *versus* other countries has narrowed a bit. It might be that a 3-year increase in the threshold for early retirement is not even enough to keep pace with longevity over the next two decades, and it is therefore crucial that the level of reform ambition does not fall below a 3-year increase. How to reform early retirement and raise employment among those with long-term sickness, not-too-severe disability, and others at the margin of the labour market is analysed in Chapter 2. Getting young people to start and complete studies earlier could also boost labour supply and is analysed in Chapter 3. The proposals of the government-appointed Welfare Commission are listed in Annex 1.A2, and the government's subsequent reform proposals are listed in Annex 2.A1.

1.30 On top of the demographic pressures, rising demand for publicly funded services poses an equally large fiscal challenge. Looking back, at the last couple of decades, demographics have not changed in a way that would warrant much rise in public service spending. Nevertheless, public employment has grown by ½ per cent annually on average since the mid-1980s. Popular demand for service improvements are not likely to go away. Moreover, much of the spending pressure may come in areas where public insurance and funding make some economic sense, such as in health care with new and expensive medical technologies. It will therefore be necessary to focus public spending on what is truly essential to welfare. In particular one question is increasingly posing itself: is it really necessary to allocate 2.7% of GDP to direct and indirect public subsidies for housing? It is more than a third of total public spending on healthcare. It would seem reasonable to assume that most adults are themselves capable of choosing how to live. Public support making housing cheaper relative to other consumption is therefore hardly needed. How to scale down subsidies and increase flexibility in the housing market is analysed in Chapter 4.

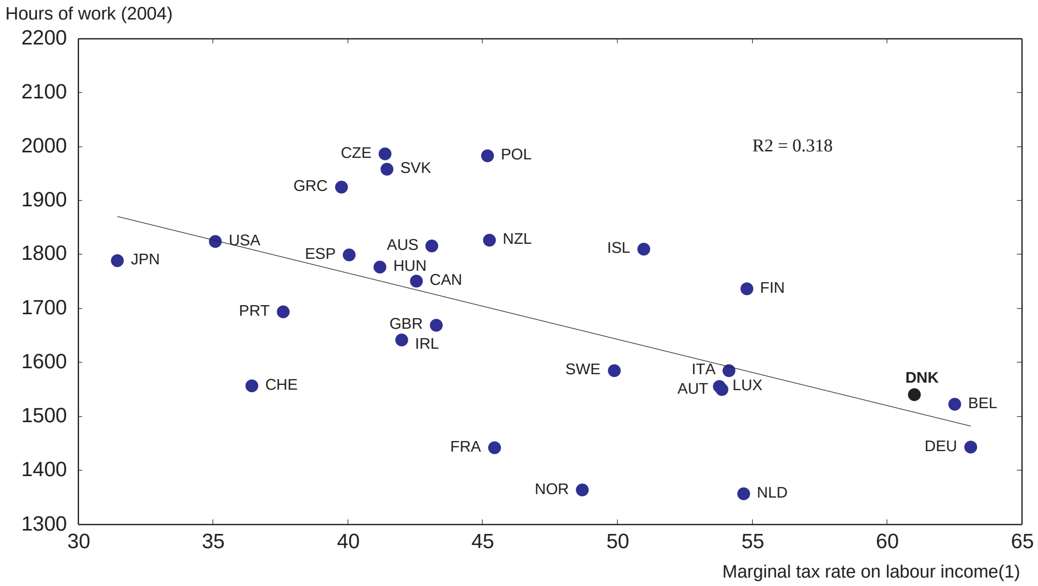
Is there room for tax cuts?

1.31 If genuine reforms are made to boost labour supply, then the need for pre-saving to tackle ageing-related fiscal pressures will be reduced. With the exceptionally large revenues associated with North Sea oil exploration, it is currently difficult to assess exactly how much room there is in the budget relative to fiscal sustainability. That depends *inter alia* on the trajectory of future oil prices. In this context it would be natural to update the medium term fiscal strategy looking beyond 2010, and a reduced surplus could seem to be a natural guideline, as effectively also recommended by the Welfare Commission (2006). This should give room for tax cuts which are much needed to make work pay better. However, timing is important to avoid overheating the economy. Despite a surplus above 3% of GDP in 2005, there is no room for easing fiscal policy in the short run.

1.32 Taxes on income from work would be the first place to cut. Very few other OECD countries have marginal taxes as high as Denmark. The consequence, as analysed in the 2005 *Survey*, is that average hours worked are relatively low (Figure 1.12). Quite remarkably, four out of ten full time employed now pay the highest marginal income tax, compared with one out of ten in the 1980s. The top tax sets in at just around average production worker earnings, meaning that many for whom this was not intended are now subject to a marginal tax rate going above 70% (considering the combined effect of social contributions, income and consumption taxes). Thereby, the incentive to work few hours affects a wide range of professions. A nurse taking an extra night shift, for example, is faced with a fiscal penalty larger than 70% of the extra income earned and spend; her colleague choosing spare time does not pay. Not surprisingly, most "prefer" to work short hours. Workers like electricians, bricklayers or carpenters often do not find it attractive to work extra hours to cope with high demand for housing construction. During 2004-05, total hours worked in construction increased by 7.8%, of which only 1.7% came from more hours worked per person, illustrating that overtime as a safety valve in the adjustment to capacity pressures appears to be shut off.[22] Meanwhile "informal work" is a problem. One in ten of the 16-24 year old finds it "OK" to have work while avoiding income taxes or to employ someone who does, *even* if at the same time receiving public income transfers. For those over 50, who grew up and formed their habits at a time when the tax pressure was somewhat lower, it is just one in a hundred who shares this attitude.[23] The 2005 *Survey*'s assessment was that reducing these very high marginal tax rates, for instance by raising the threshold for where the top tax sets in, is therefore likely to strengthen work incentives more, *krone-for-krone*, than tax reductions at the lower end of the income scale. Indeed, raising hours worked is where the largest potential gain from tax reform lies, but as this issue is well understood already, this *Survey* analyses what effects tax reform could have on incentives for human capital formation (Chapter 3).

1.33 Income from savings is taxed at rates that differ widely depending on how the savings are placed. For example, someone who owns identical bonds in a pension scheme and as ordinary savings will have the nominal interest receipts taxed by only 15% within the pension scheme, but by 59.7% for the bonds held outside the pension scheme, if the person is in the top income tax bracket. At a 5% nominal interest rate and 2% inflation, this is equivalent to real tax rates of 25% and 100%, as nominal capital taxation implies that the investor also pays tax on the return that is merely compensation for inflation. Recently, tax rules for income from shares held outside pension schemes have been simplified. From January 2006, differentiation by duration of ownership and size of holdings have been abolished, although progression remains as the tax rates are unchanged at 28% for share income up to DKK 43 300 per year and 43% above that threshold. This simplification is welcome, but more could be done to equalize taxation for different types of investments. The Welfare Commission proposed a uniform tax rate for investments held outside pension schemes, at a rate equal to the current 33% for negative capital income.[24] In the commission's proposal, pension savings would continue to be taxed at the somewhat lower rate of 15%, while corporate taxation would be reduced from 28% to 25% (Welfare Commission, 2006). The Economic Council has previously made a similar proposal for a uniform capital income tax at a lower rate of 20-25%, but including also pension schemes (Economic Council, 2001).

Figure 1.12. **Hours of work are low because taxes are high**



1. Marginal income tax rate plus employee contributions and indirect taxes, single person with no children, earning the average wage.

Source: OECD (2004), *Taxing Wages*; Analytical database.

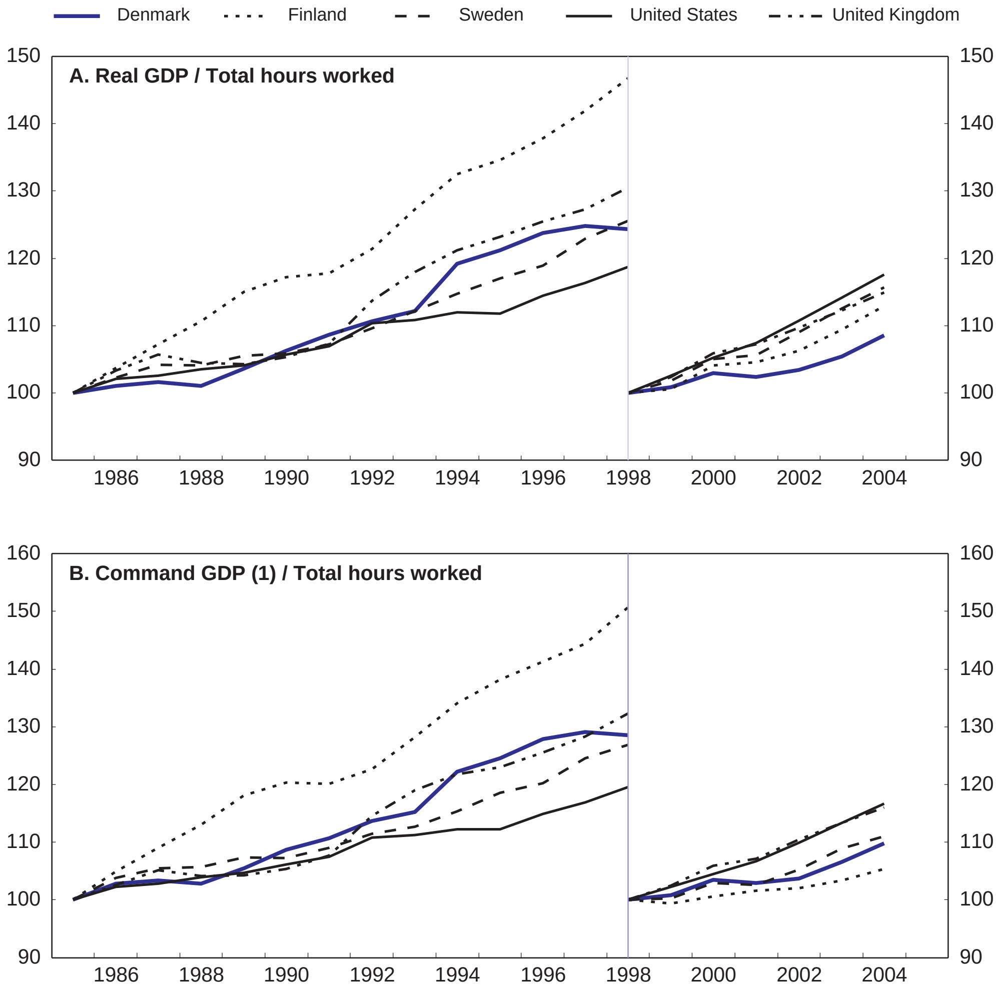
1.34 Housing taxation deserves particular attention, because at a 0.55% average effective rate in 2005, the real estate tax is far too low to ensure neutrality *vis-à-vis* alternative investment, given the current level of interest deductibility. The result is a substantial indirect subsidy inducing increased housing consumption, which concerns owner-occupied housing most directly, but also other segments of the housing market, as analysed in Chapter 4. The tax value of interest deductibility has been reduced in a series of reforms bringing it to 33% for all since 2002 from a peak of 73% in 1986 for those in the top income bracket.[25] At its current level, the tax value of interest deductibility is still larger than in other countries. In Finland and Sweden, the interest on housing debt up to a specified limit can be deducted at 29% and 30%. In Germany, France and the United Kingdom, there is no tax deductibility of interest expenditure, although that is mirrored by no or only limited imputed rent taxation (Baunkjær, 2004; ECB, 2003). The Danish tax reforms of the 1980s and 1990s took place in a context of macroeconomic savings imbalances and current account deficits. From a low averaging 12% of GDP in the first half of the 1980s, aggregate savings have risen to a 2000-05 average of 21% of GDP, and motivating higher savings is not a concern (Ministry of Finance, 2004). However, the gap between the 33% interest deductibility and the 15% tax rate for returns on pension savings may invite forms of tax planning that were not easily possible at the time of the 1998 “Whitsun” tax reform. Interest-only mortgage loans were introduced in 2003, but now already account for almost a quarter of all outstanding mortgage debt. Shifting to interest-only loans instead of paying down mortgage debt provides a strong tax subsidy to increase pension savings. With house prices now being far above what anybody had imagined in the 1990s, the net-present value of the tax revenue loss from such an arrangement may easily exceed DKK 100 000 in a typical example, part of which accrues to financial intermediaries.[26] Financial market development and mortgage liberalisation are beneficial, but may require renewed attention to skewed tax incentives.

Mediocre productivity growth, but upward-trending terms of trade

1.35 Denmark remains near the top of the income ladder of OECD countries with GDP per capita 14% above the OECD average in 2004. While it lags the US by about 20%, Danish per capita GDP was around 3% and 10% higher than in Sweden and Finland, respectively. However, Denmark has slowly been losing ground and the income gap with the two other Nordic countries has narrowed. Growth in per capita GDP averaged only 1.7% over the last decade, significantly lower than Finland and Sweden (2.9%) and the OECD average (2.4%). This development is due in particular to weak productivity growth since 1998 (Figure 1.13). Previously (over the decade 1988-98), labour productivity growth (measured as GDP per hour worked) managed to broadly keep up with other OECD economies such as Sweden and the United States. Over the period 1998-2004, however, productivity growth has averaged only 1.4%, compared with 2.1% in Finland, 2.5% in Sweden, 2.2% in the OECD and 1.7% in the euro area.[27] As the Nordic countries, but also the OECD on average, were in a similar cyclical position to Denmark in 1998, the lower Danish productivity is probably not a cyclical phenomenon, as it is mirrored by trend improvements in the terms of trade.[28]

1.36 In contrast to other countries, and in particular Sweden and Finland, Danish productivity growth has been due to capital deepening, with multi factor productivity (MFP) playing almost no role at the economy-wide level. Sectoral differences are obviously at play here as ICT-producing sectors are much more prominent in Finland and, to a lesser extent, in Sweden (accounting for a share of 8.3% and 6.5% of GDP, respectively), reflecting the impact of two world-leading telecommunications companies.[29] Rapid technological development in these sectors is usually seen as a major driver of MFP growth, and indeed a large share of labour productivity growth in Sweden and Finland can be traced back to these industries (Annenkov and Madaschi, 2005). The smaller Danish share of ICT-production (4.6% of GDP), which is closer in size to the euro area, thus partly explains the lack of MFP growth. In contrast, ICT-using sectors, which are characterized more by capital deepening than by MFP growth, are more prevalent in Denmark compared with the two other Nordics. Taken together, the lagging behind of Denmark in overall labour productivity (and particularly in MFP), at least when compared with Finland and Sweden, reflects to some extent the lower importance of high tech producing sectors.

Figure 1.13. **Productivity**



1. Command GDP = TDDV + XGSV * (PXGS/PMGS) - MGSV, where TDDV is real domestic demand, XGSV and MGSV are, respectively, volume exports and imports, and PXGS and PMGS are the export and import deflators.

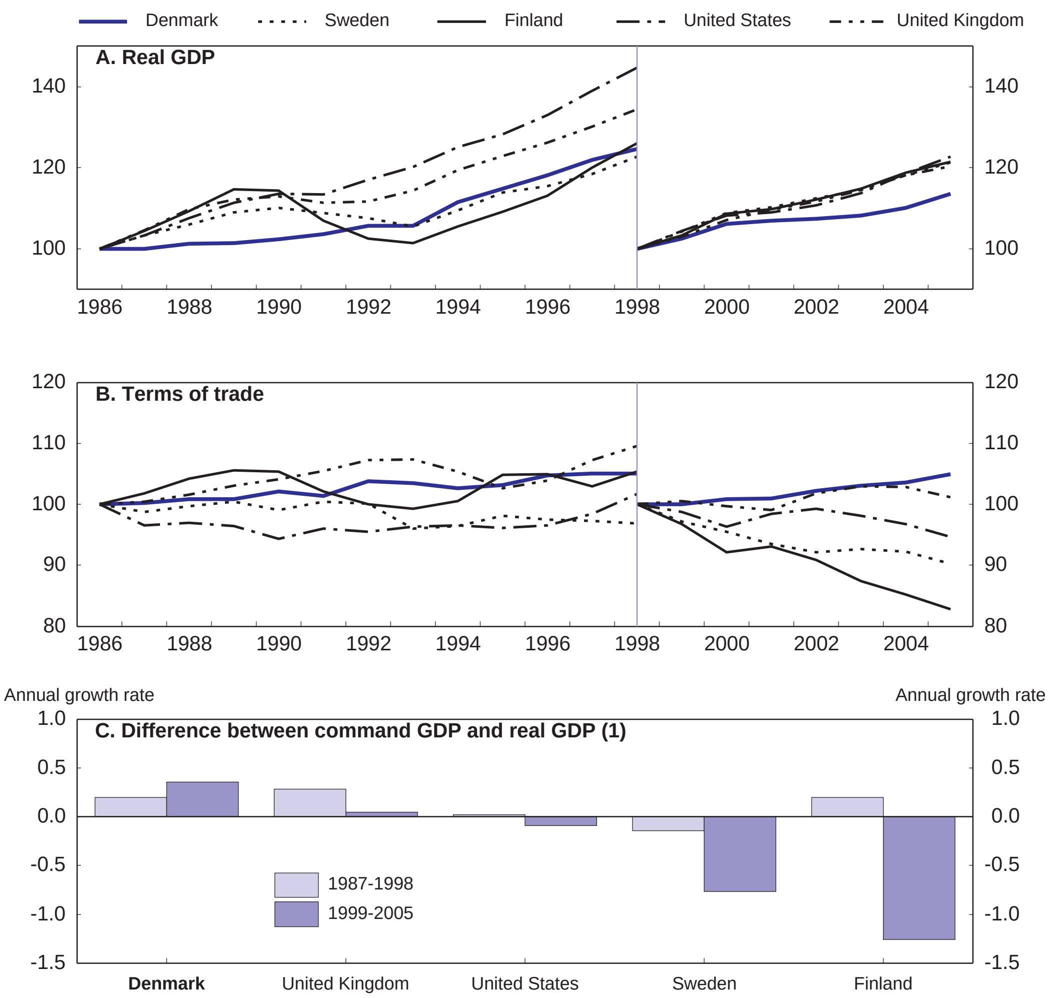
Source: OECD, productivity database and calculations.

1.37 Being highly exposed to ICT-production is, however, a two-edged sword for an economy, as the ICT-industry is characterized not only by rapid technological progress, strong competition and high labour productivity, but also by significant price declines. Major ICT-producing and -exporting countries are therefore faced with falling export prices and consequently terms of trade losses. ICT-using countries on the other hand can, on balance, lock in terms of trade gains through lower import prices. The benefits of ICT are thus likely to accrue more to the users than to the producers of ICT (Bayoumi and Haacker, 2002).

1.38 Indeed, this distinction has been exemplified in the Nordic countries. The differences in the composition of exports and imports show up in considerable trend divergences in the terms of trade, in particular since the late 1990s. Between 1986 and 2005, Denmark's terms of trade improved by 8%, in contrast to Sweden and Finland which both saw a decline by 13% and 14%, respectively.[30] Prior to 1986 the development was broadly similar in the three countries, pointing to structural changes in the trade composition over time. Some of the Danish terms of trade improvement can be attributed to net exports of oil since the late 1990s. However, even after taking out the impact of oil an increase of about 5% since 1986 can be observed.

1.39 The terms of trade improvement have positive economic effects which need to be taken into account and put the slower productivity developments of Denmark somewhat into perspective. An increase in the terms of trade means that more goods can be imported with the same volume of export goods, *i.e.* the purchasing power of domestic income increases. Traditional GDP accounting does not take such relative price changes into account as all items are expressed in terms of base year prices. To approximate effects from terms of trade changes on the purchasing power of domestic income, nominal exports can be deflated using the import price deflator, to create an indicator called command GDP. According to such a measure of overall consumption possibilities of an economy, Denmark's yearly growth in terms of command GDP has on average been 0.4 percentage points higher than real GDP growth since 1998 (Figure 1.14). This is similar to the UK, while in Sweden and Finland the effect works in the other direction (OECD, 2004).

Figure 1.14. **Various concepts of GDP**



1. Command GDP = TDDV + XGSV * (PXGS/PMGS) - MGSV, where TDDV is real domestic demand, XGSV and MGSV are, respectively, volume exports and imports, and PXGS and PMGS are the export and import deflators.

Source: OECD, Analytical database.

1.40 Adjusting for the gains in the terms of trade also puts the productivity gap since 1998 *vis-à-vis* Sweden and Finland into perspective. This can be seen in the lower panel of Figure 1.13 which displays command GDP per hours worked. While still lagging behind the US and the UK, Denmark now appears on the same level as Sweden and way ahead of Finland, which experienced the largest terms-of-trade losses. Thus, while labour productivity in Denmark might be lower compared with a more high-tech producing Nordic country like Finland, Denmark produces and exports goods which sell at higher prices and thereby raise the purchasing power of the economy at large.

1.41 This is not to say that Denmark could not perform better in terms of productivity even without moving more towards ICT-production. In this respect, there is certainly scope to increase labour productivity in the service sectors by reaping more of the benefits from the increased use of ICT equipment (OECD, 2005b).

Reaping the full benefits from globalisation

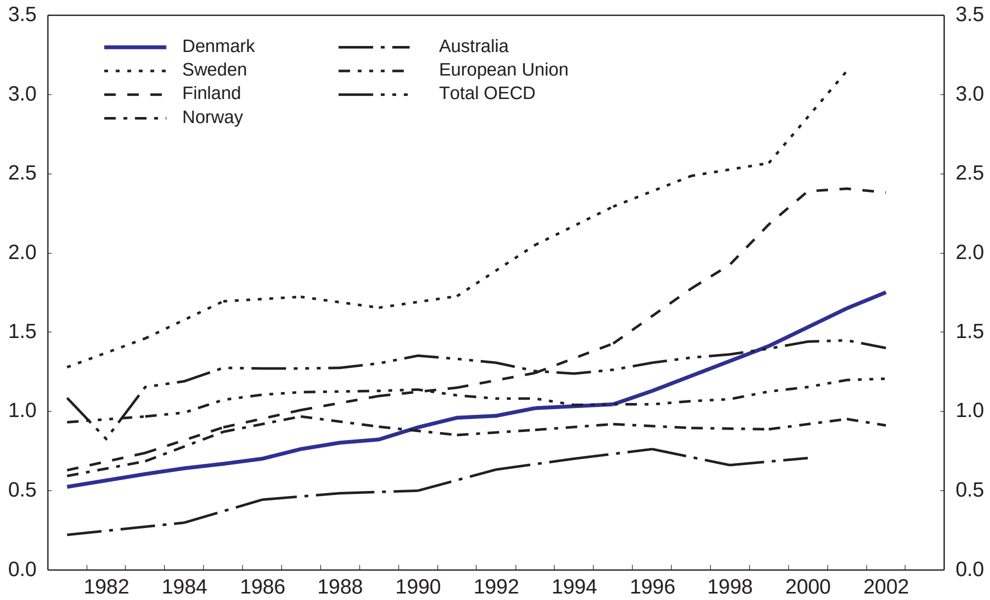
1.42 Denmark could not have attained today's living standard if not for globalisation and economic integration within the European Union, because a small country is not able to fully reap the gains from new technologies and specialisation without being open to foreign trade and investment. The integration of new member states in the EU, and of large developing countries like China and India into world markets, is providing the chance to large numbers of low-income workers in these countries to improve their living standard by manufacturing products hitherto produced in rich OECD countries at a higher cost. But this means that for Denmark to continue getting the most from globalisation, the economy must be able to adjust and move towards more knowledge-intensive activities.

1.43 Thanks to a flexible labour market, the economy has been able to absorb changes fairly well. For example studies of textile workers show that more or less all were in other jobs after a couple of years (Olsen *et al.*, 2004). Market regulations are relatively competition-friendly, but still structural change is slow with the size of different industries changing less over time than in other countries. As recommended in the previous *Survey* and in *Going for Growth*, general competition policies can still be strengthened including *via* a better leniency programme and a reduction in domestic merger thresholds (OECD, 2005b and 2005d, 2006a; Annex 1.A1). Another factor holding back structural change is the high and very progressive income taxes which reduce incentives to seek more profitable jobs.[31]

1.44 Perhaps the most essential challenge associated with globalisation is to address human capital shortages. Speaking in broad terms, educational attainment compares well with other OECD countries, but the picture of a country that is leading in skills is no longer true. This is despite public education spending totalling 8½ per cent of GDP, higher than in any other OECD country.[32] How to improve the provision of education and ensure individual incentives to improve competencies and skills is analysed in Chapter 3.

1.45 Business R&D has increased strongly over recent years (Figure 1.15). This has happened without special subsidies or tax credits, indicating that such measures are not needed. Nurturing more interaction between business and universities may, however, be warranted, as the limited extent of university research being funded by business could indicate that contact is lacking. Allocating more of the public research funding on a competitive basis and allowing private and semi-private entities also to bid for such funds might help in this respect. Reducing the tax rate on income from shares held outside pension schemes might improve access to high-risk capital by stimulating funds supplied by business angels (OECD, 2006a).

Figure 1.15. **R&D spending continues to grow**
Business-sector spending, excluding defence, per cent of GDP

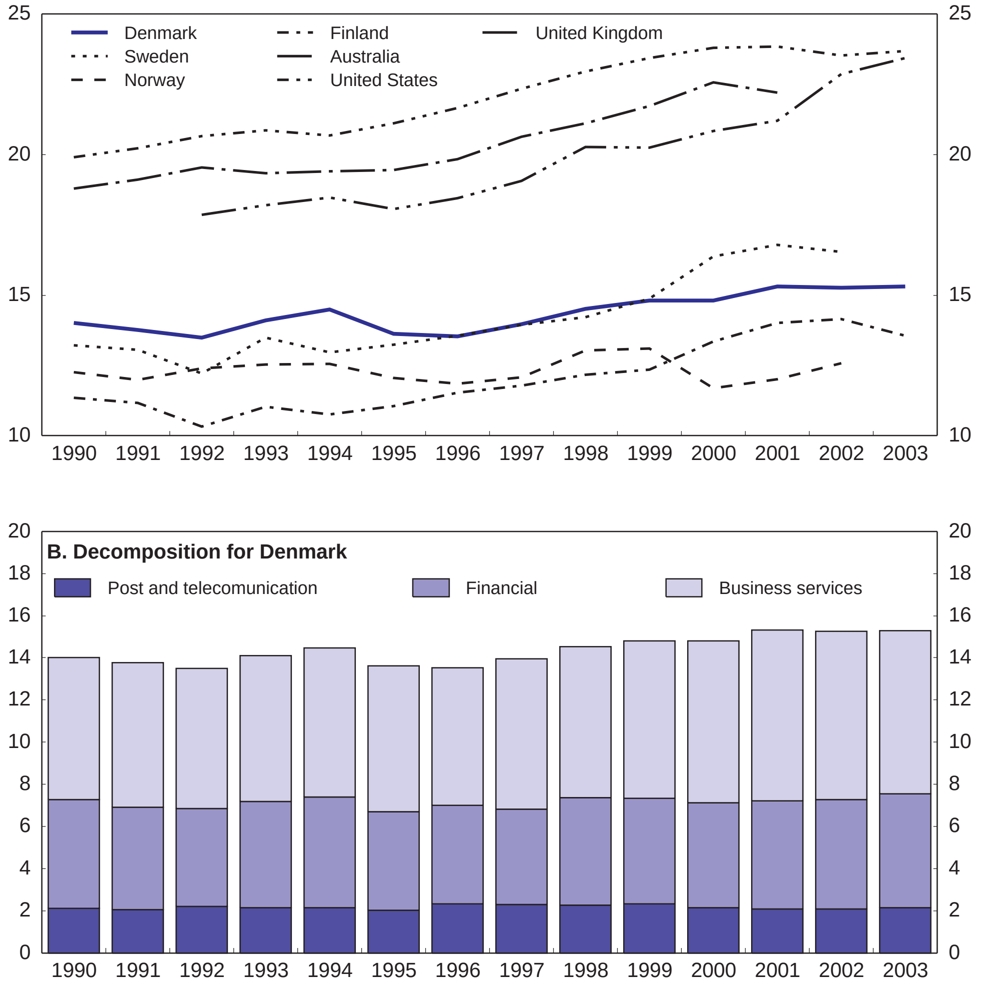


Source: OECD, Main Science and Technology Indicators.

1.46 Policy does need to pay attention to removing regulatory hindrances so as to give knowledge intensive services more freedom to grow. Financial and business services account for only a slightly larger share of value added now than a decade ago (Figure 1.16). In this respect Denmark and the other Nordic countries are remarkably different from a number of English-speaking countries where knowledge-intensive service sectors are large and growing. Ownership restrictions for law firms, real estate agencies etc. hinder competition, as identified in the 2005 *Survey* (Annex 1.A1). Developing a more "vibrant" higher education sector, including giving universities access to charges for tuition (Chapter 3), could play an important role by spurring partnerships between universities, consultancy firms and other actors in the "knowledge economy". Finally, but not least, opening publicly funded services to more competition could create a market for private providers to grow and gain professional experience that can also be used abroad. This applies not just in healthcare, but also in child care which is a market with large growth potential in Europe.

1.47 Surprisingly, Denmark still spends ½ per cent of GDP on state aid, in respect being fourth largest among EU-15.[33] About half of it is spent on achieving environmental and energy savings objectives. The large windmill industry is one of the recipients, but any arguments for supporting it are significantly weaker now as energy prices have increased, including market expectations for future prices. Demand for renewable energy technology is therefore likely to increase even without subsidies (Box 1.4).

Figure 1.16. **Knowledge intensive services**
In per cent of gross value added



Source: OECD, Main Science and Technology Indicators.

Box 1.4. **Windmills – any case for support has vanished as energy prices have soared**

Supporting the production of energy from renewable sources, in particular windmills, is a key element of Danish environmental policies and has received considerable attention in previous *Surveys*. Not only does wind energy today cover around 20% of domestic electricity consumption, manufacturing of windmills is a major industry accounting for about 5% of manufacturing employment in Denmark and having a 40% world market share. Today, 90% of manufactured turbines are sold abroad, making up about 3% of total Danish exports.

Subsidizing energy from windmills was part of the policy to ensure that windmills could gain competitiveness compared with more traditional power plants in the 1980s. The subsidies paid to the owners of wind turbines for electricity generated from windmills allowed the industry to accumulate experience and gain a strong position in the global market for this kind of renewable energy, and studies show that windmills over time became more productive (Madsen, Jensen and Hansen, 2003). However, these subsidies were enormously costly, and cost benefit analysis indicates that the additional costs of producing electricity from wind instead of fossil fuels has exceeded the benefits from reduced CO_2-emissions and learning-by-doing benefits for windmill manufacturing (Economic Council, 2002). The same analysis finds, however, that government grants to research and development in the windmill technology were a good investment, in particular as the implementation of a government standard for the technical quality has supported the sale of windmills.

Support for wind-based electricity began as a fixed feed-in tariff but has been switched to a premium above the market price, normally modified in accordance with the market price. Today, older turbines are eligible for a subsidy that together with the market price ensures a tariff of 80 €/MWh or 57 €/MWh depending on the production volume and size until the turbine is 10 years old. Subsequently, a premium of 13 €/MWh is made available until the turbine is 20 years old, but the premium is modified in accordance with the market price, as the total of the two cannot exceed 48 €/MWh. For turbines from 2003 or newer, the latter scheme applies throughout the turbine's first 20 years. New offshore wind is supported by a tendering system. By incorporating competitive elements, this system offers a more market oriented approach than the past feed-in tariff scheme. The above-market payments for renewable electricity generation are recovered from electricity customers as a component of the Public Service Obligation (PSO), with a levy placed on every kWh of electricity sold in Denmark.

The new scheme where the premium is reduced when electricity prices increase, is a positive step to incorporate market elements into the support framework. Nevertheless, remaining subsidies to support domestic production are hard to justify and should be phased out quickly. First, while in the early years nearly all produced windmills were sold domestically, now by far the largest part of windmill production is sold abroad. Domestic demand for electricity from windmills does not matter much for the industry. Second, an environment of high and rising oil prices will naturally lead to a re-focusing of energy demand towards renewable sources. Demand for windmills is thus likely to rise anyway, making it increasingly difficult to justify public financial support. Third, the market for CO_2 allowances, started in 2005, is a market-based instrument for achieving the desired CO_2 emissions. Hence, subsidies or goals of specific market shares for renewable energy will not be an efficient tool to reduce CO_2 and will probably make the incentives to use renewable energy too high.

Notes

1. Following Taylor (1993), it is assumed that the central bank attaches equal weight to deviations of inflation from its target and to the output gap. Moreover, a 2% inflation target and a 2% neutral real interest rate are used for the calculation.

2. Giuliodori (2005) shows that the impact of monetary impulses on consumption (*via* house prices) differs across EU-countries depending on the degree of financial liberalisation.

3. Changes in interest rates affect borrowers and lenders in opposite directions. The benefit accruing to lenders from rising interest rates thereby offsets to some extent the negative effects for borrowers. However, since many bondholders are financial institutions and non-residents rather than households, the overall effect of an interest rate increase is likely to be lower consumption (Christensen and Kjeldsen, 2002).

4. The rising share of deferred-amortisation loans (interest only loans with annuity payments) may also have affected the sensitivity of households to interest rate rises. On the one hand, interest payments increase when interest rates rise, in particular for adjustable-rate loans. On the other hand, however, the market value of debt for fixed-rate deferred-amortization mortgages is more sensitive to interest rate changes than traditional loans and could to a larger extent dampen the volatility in housing equity.

5. According to Iacoviello and Minetti (2003), house prices react more strongly to monetary policy in countries with a more liberalised housing finance structure.

6. This result also holds if the GDP reaction after six or eight quarters is compared across countries.

7. The differences in mortgage financing structures between large euro area countries and non-EMU members have been a major issue in the debate over the UK entry into the euro area (HM Treasury, 2003a, 2003b).

8. The following analysis is based on the price index for one-family houses.

9. The idea behind this approach is that in equilibrium the expected cost of owning a house should be equal to the cost of renting. Whenever house prices are too high relative to rents, potential buyers would find it more attractive to rent, putting downward pressure on house prices and vice versa. The house price-to-rent ratio is calculated by dividing nominal house prices by the rent component of the Consumer Price Index. In Denmark, the rent component includes rents of both private rentals as well as social housing. Despite rent control, the increases in rents are comparable with other countries that do not have rent control, suggesting that rent control only introduces a level effect and does not affect growth rates.

10. Nominal mortgage interest rates are taken from Abildgren (2005) and Statistics Denmark and relate to 20-30 year callable mortgage credit bonds. Interest rate deductibility is taken into account and after-tax interest rates are computed using marginal tax rates for capital income. The holding costs comprise depreciation, maintenance and a risk premium on residential property and are kept constant at 4%. The 5-year moving average of consumer price inflation is used to approximate expected capital gains on house prices.

11. Wagner (2005) estimates an econometric model of house prices over the period 1984/4-2005/1 and also finds that most of the long-term increase is warranted by fundamentals except for the most recent period.

12. Long- and short-term rates are weighted according to the increasing share of adjustable-rate loans since 2000. The effective real estate tax rate has been lowered linearly from 0.75% in 2001 to 0.55% in 2006 due to constant tax payments (reflecting the tax freeze) despite increasing house prices.

13. One factor frequently mentioned as contributing to house price increases since 2003 is the introduction of deferred-amortisation ("interest-only") loans which might have fostered increased speculation on future house price increases. As these loans temporarily lower the monthly mortgage payments, their increased use might also have prevented forced sales of property in case of divorces, thereby reducing the supply of real estate available for purchase.

14. A further source of uncertainty relates to the issue of quality-improvement and whether this is corrected for in the price measures. Indices measuring house prices are not adjusted for changes in the quality (a price increase may therefore reflect only an improvement in amenities), while the rent component of the CPI is quality adjusted. Thus, the numerator and the denominator of the house price to rent ratio are conceptually different. The ratio thus overstates the true extent of price increases somewhat (McCarthy and Peach, 2004). Data for the US suggest that the difference between the increase of a quality-adjusted and a non-adjusted house price index can amount to roughly 1.3 percentage points per year.

15. From business cycle considerations, significantly higher short-term interest rates would indeed be appropriate, as shown by the Taylor rule interest rate in Figure 1.6. Nevertheless, it would probably lead to major valuation adjustments in the housing market. As a thought experiment, if Denmark had operated an autonomous monetary policy in the past, short-term interest rates already would have been increased to a higher level – closer to the one prescribed by the Taylor rule – thereby probably preventing the buoyant house prices increases. However, now that house prices have adjusted to the low level of interest rates, they would be affected by interest rate increases.

16. Danish fiscal policy mainly relies on automatic stabilisers rather than discretionary policy and thereby serves to dampen shocks hitting the economy rather than being a source of destabilisation itself. This is often mentioned as an important reason for the success of the fixed exchange rate regime and contributed to the comparably low volatility of both the output gap and inflation over the last decade (Christensen and Hansen, 2003).

17. The OECD's cyclically adjusted general government balance increased by 2% of GDP from 2003 and 2005, but for Denmark this measure is not an adequate indication of discretionary fiscal policy moves, because it does not take into account the effect of oil and asset prices on revenues from North Sea oil extraction and pension revenue tax.

18. Being above 0.23% of GDP, the costs of operating the unemployment funds is far larger than what other OECD countries spend on administrating unemployment benefits, even when it is taken into account that the Danish unemployment funds also administer the voluntary early retirement pension. In Finland and Sweden, the costs of operating unemployment insurance funds are only 0.05% of GDP (OECD, 2005c). These funds are private entities, but most of the costs are covered by public subsidies. Therefore it is warranted to scrutinize how administrative staff could be freed for alternative employment thereby generating public savings.

19. It would be feasible, for example, to lower the loan-to-value ratio for deferred-amortisation mortgages, in order to cool down house purchases based on speculation that continued price increases would give a capital gain. It might be an effective instrument, but at 80%, the overall loan-to-value ratio for new loans is already well within international practice. Also, it might create other distortions as it complicates the access to deferred amortisation which might cushion a potential housing downturn by making it possible for stretched households to avoid default.

20. In 2005, initial data releases indicate that construction was commenced for a total of 23 000 dwellings. Subsequent counts typically lead to substantial upward data revisions, so the actual number of dwelling starts may be 30 000 or a bit below. In the same year, 10 500 subsidies dwellings were to be commenced. A bit more that half of this is in housing associations (mainly one-family homes and adapted homes for older persons) and most of the rest is subsidised private rentals. In 2006, the total number of commenced subsidised dwellings is to fall to 7 400, but then grow again to 8 500 in 2007 (Ministry of Finance, 2005a).

21. In 1960, men reaching 65 could expect to live to the age of 79. With 12 years left after the average effective retirement age of 67, men spend 15% of their life in retirement. As women live longer, and retire earlier, they could expect to spend 15 years (19% of their life) in retirement. Currently, men reaching 65 can expect to live to 81, on average they retire at 62 and thereby spend 19 years (23% of their life) in retirement. For women, the expected years in retirement has gone up to 23 currently (27% of their life).

22. During 2001-05, on average 19% of the annual adjustment in total hours worked in construction reflected changes in average hours worked, the rest be changes in employment. During 1997-2000 it was 49%.

23. Gallup survey for the Ministry of Taxation among 1 000 Danes aged 16+ (www.skm.dk; *Tænk hvis alle arbejdede sort*).

24. The Welfare Commission's proposal would also reduce geographically variation. Currently, interest income (positive as well as negative) is liable to municipal taxation meaning that the rate varies by 8 percentage point across the country depending on the municipal income tax rate. In the Welfare Commission's proposal, there would be a uniform national capital income tax rate of 33% roughly equal to the current 33.3% average for negative capital income. At a 5% nominal interest rate and 2% inflation, a 33% nominal tax rate is equivalent to a 55% real tax rate.

25. Taxation of interest income is based on the *net* of interest receipts and expenditures, and couples are treated as one unit in this respect. If the net interest income is positive, it is added to income from work and taxed on the progressive scale. This is the same today, as in the 1980s. What has been changed is that if net interest income is negative, it is now deductible at 33% irrespective of what marginal tax the person is paying for income from work. To be precise, the tax value of the "first krone" of interest expenditure is still equal to the person's marginal tax rate for income from work, as long as there is interest receipts to deduct against, but for most homeowners, this doesn't matter at the margin, because mortgage interest expenditure is far larger than interest receipts from assets held outside pension schemes. Interest income in pension schemes is not considered when calculating net interest income for the purpose of personal taxation.

26. Consider a couple aged 45 buying a house or flat worth DKK 2½ million. They use their liquid savings and need mortgage finance for the remaining DKK 1½ million. One option is to take a loan with linear repayment over 30 years, meaning DKK 50 000 annually. Their income is sufficient to pay such a mortgage, and following common practice, the mortgage credit institute is therefore willing to offer them an interest-only loan as an alternative. Using this loan, they can channel the DKK 50 000 into their individual pension schemes. If (for simplicity of illustration) they buy the very same bond in the pension scheme as is issued for their mortgage loans, they will earn the same interest rate as they pay, say 5%. With interest expenditure of 5% * 50 000 = 2 500, their income tax payments will be reduced by 33.3% * 2 500 = 833, whereas the pension savings tax on the interest income is only 15% * 2 500 = 375. The net result is a tax subsidy of DKK 458 in the first year, and with another DKK 50 000 being moved into pension savings every year, the tax subsidy grows above DKK 15 000 in the year they are 65. From thereon it gradually declines when they retire and start repaying the mortgage with the extra pension income. In net-present-value terms, the couple saves tax payments in

the order of magnitude DKK 100 000 – 200 000, depending *inter alia* on how they liquidate the pension savings and the mortgage in old age. It is about the equivalent of one year's earnings net of income and consumption taxes for one average production worker. Fees from financial institutions will absorb some but not all of the taxes saved: additional mortgage borrowing costs (the so-called contribution rate) are typically 0.5% of the increase in outstanding debt, which is about half of the taxes saved if nominal interest rates are at 5%; holding the bond in the pension savings plan is not expensive. For simplicity, this calculation abstracts from the fact that pension contributions are deductible from income taxes when made while pension receipts are taxed as income, since this is neutral as long as person faces the same marginal tax rate when working and pension life. In practice many face a lower marginal rate when retired, in which case the reduction in tax payments from the described arrangement is larger.

27. This number refers to the un-weighted euro area average; the weighted average is 1.4%. International comparisons of productivity can be distorted by lack of perfect harmonisation of labour input and capital stock estimates as well as by the treatment of the hard-to-measure public sector output.

28. The period breakdown was chosen in order to avoid cyclical developments blurring the productivity analysis. Both in 1988 and in 1998, most countries had an almost closed output gap. Cyclically (HP-filtered) adjusted productivity data show a similar picture.

29. The sector shares are based on annual averages for 1996-2002 (Annenkov and Madaschi, 2005).

30. Norway recorded significant terms of trade gains but is left out of the comparison as export prices are driven by higher oil prices.

31. In particular, moving to another part of the country to take up a better paying job often doesn't pay for a family when considering the combined effect of moving costs and on top of that individual taxation. Even though the couple's joint gross income increases, the net income can go down if the higher-earning spouse moves to a better-paid job while the lower-earning spouse has a wage decline.

32. The closest "rivals" are Norway and Sweden each spending 7½ per cent of GDP. These numbers include spending for educational institutions as well as for student grants; primary, secondary and tertiary education (OECD, 2005e).

33. Numbers refer to total aid less agriculture, fisheries and transport and are based on the State Aid Scoreboard of the DG Competition of the EU Commission.

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ANNEX 1.A1

Progress in structural reform

This table reviews policy action taken since the latest *Survey* from spring 2005. It is indicated where recommendations were introduced with the latest *Survey* or with the spring 2005 issue of *Economic Policy Reforms, Going for Growth* (2005 EPR). Other recommendations date further back, but many of them were also addressed in the latest *Survey*. Housing policy is covered separately in Annex 4.A1.

Past recommendations	Actions taken and current assessment
LABOUR SUPPLY	
Labour market participation, sickness and leave	
Reduce scope for early withdrawal from the labour force. Reform the voluntary early retirement pension (VERP; *efterløn*). The best option would be to abolish the VERP.	Following the Welfare Commission's report from December 2005, the government has announced a set of initiatives to raise the effective retirement age (Annex 2.A1).
Promote a more inclusive labour market. Ensure stringent eligibility assessment for the flexjob scheme. *2005 EPR*: Make it easier for disability benefit recipients to rejoin the labour force part-time, and periodically review all cases where a disability is not permanent.	In February 2006, a political agreement has been reached to reform the flexjob scheme (Chapter 2).
2005 Survey: Make a doctor's certificate compulsory for receipt of public sickness benefits, *i.e.* after two weeks.	Medical assessments are now to focus on work ability but are no longer required after eight weeks – it is up to the municipality when to require an assessment.
Introduce a waiting period of a few days for the sickness benefit. Enforce the current 12 months time limit.	No action.
Consider whether the parental leave system is now so generous that it is hurting employment prospects of women. Rebalance by putting more emphasis on child care relative to leave.	No action on maternity/parental leave, but child care charges have been reduced by increasing public subsidies.
Structural unemployment	
Reduce unemployment benefit generosity and duration, such as lowering the highest replacement rate and have benefits decline with the length of the unemployment spell. Extend the waiting period for unemployment benefits.	No action regarding benefits generosity, but the government has now proposed to shorten duration for seniors to the standard 4 years (Annex 2.A1). For couples where both receive social assistance, conditions were tightened in 2005.
Efficiency of active labour market programmes	
Ensure that greater flexibility does not reduce the "push" back into the workforce. *2005 Survey*: Earlier but shorter activation.	The government has now proposed to introduce full-time activation for all having received unemployment benefits for 2½ years (Annex 2.A1).
Introduce competition to the public employment service for placement services and for educational activation programmes.	External providers are increasingly involved in placement activities as well as the regular contacts with the unemployed.
Integration of immigrants	
Monitor municipalities' implementation of integration policies. Encourage the social partners to lower the minimum wage for low-skilled immigrants. Extend to all immigrants the policy of a qualifying period for full unemployment benefits. Consider introducing a temporary in work benefit targeted on immigrant groups facing the weakest economic incentives to seek work.	The "New Chance for All" package from June 2005 included strengthened incentives for municipalities to help immigrants into work and a range of other initiatives. This is continued in the government's welfare reform proposals (Annex 2.A1). No action on lowering wages for low-skilled migrants yet.

Progress in structural reform (*cont)*

Past recommendations	Actions taken and current assessment
HUMAN CAPITAL	
Consider making the introductory year prior to primary school (*børnehaveklasse*) compulsory and strengthen its educational content. Consider abolishing the voluntary tenth grade of lower secondary education.	The government intends to make the introductory year compulsory and more learning focused as well as targeting the 10 form, but legislative proposals are not yet presented.
2005 Survey: Have more frequent monitoring of students' and schools' outcomes in compulsory education. Increase the weight placed on intellectual development. Allow teachers to become more specialised. Plug the gaps in teacher training, including in-service training opportunities. Increase teachers' classroom hours. Shift resources from non-teaching to teaching staff.	Legislation to introduce national tests in reading, mathematics, science and English was presented in December 2005. Legislation to clarify the purpose of compulsory education and enhance core subjects like Danish was presented in March 2006. A political agreement about teacher training was reached in late March 2006.
Improve "catch up" programmes for immigrants falling behind in school.	The "New Chance for All" package from June 2005 included early linguistic stimulation for bilingual students as well as better guidance and help with homework etc.
Reduce excessive time spent in the education system: Introduce tuition fees, backed by an income contingent loan scheme. Change the time profile of student income support (more earlier, less later). Tighten rules so that students cannot take a paid year off in the middle of their course. Set stricter time limits for completion of higher education.	The government intends to adjust the student grant and university funding to encourage earlier start and faster progression (Chapter 3).
2005 Survey: Continue giving more autonomy to universities. Put more emphasis on stand alone bachelor's courses that include employment related skills. Consider making a single ministry responsible for the whole post secondary system.	The government's globalisation strategy gives universities more flexibility to attract top academics. It also aims to expand tertiary education with new programmes at bachelor level (Chapter 3).
Strengthen quality and cost effectiveness in adult education. Introduce sizeable user charges on adult education and training for the employed and cut back on public funding for courses with firm-specific content.	A joint committee comprising the government and the social partners has in February 2006 proposed a reform of adult education and financing thereof (Chapter 3).
INNOVATION, RESEARCH, AND BUSINESS START-UP	
2005 Survey: Shift further towards project based rather than institution based public research funding. Move to a single, contestable funding pool. Allow private firms to bid for funds on equal terms. Tie funding to quality. Remove remaining restrictions on setting up technology transfer companies and science parks.	The government's globalisation strategy implies a shift to more contestable research funding and more weight on quality assessments when allocating research grants.
2005 Survey: Revise taxation rules if they are discouraging pension funds from entering the venture capital market.	Taxation of pension funds has been simplified from January 2006. Furthermore, pension funds will have a temporary 5% tax relief for investment *via* SME market places 2005-2008.
2005 Survey: Ease the bankruptcy rules and allow greater opportunities for informal corporate rescue plans.	Bankruptcy rules were eased October 2005. A committee is considering adjustments to allow more informal rescue plans.
COMPETITION	
Legislative framework and institutions	
2005 Survey: Reduce merger thresholds and improve the leniency programme. Abolish either the Competition Council or the Appeals Tribunal; for example, a specialist commercial court could also replace the Tribunal, mirroring the EU system. But if they are to be retained, the Council should be slimmed down, it should hand responsibility for merger decisions to the Authority, and the Tribunal should be strengthened by giving it more economic expertise. Have an independent arbitrator (*e.g.* the Competition Authority) decide whether restrictions on competition are necessary to achieve the purpose of a particular regulation.	No action yet, but an amendment to the competition act is planned introducing a leniency programme, and possibly changes in the composition of the Competition Council.

Progress in structural reform (*cont)*

Past recommendations	Actions taken and current assessment
Network industries	
2005 Survey: In electricity, the new system operator should push for establishing more capacity on the inter connectors out of the country. Redesign the structure of the price system to make a larger part of households' electricity bill dependent on the market price of electricity.	The new transmission and system operator intends to build an interconnector between Funen and Zealand and considers a link to Norway as well as upgrading the link to between Jutland and Schleswig-Holstein. The price system has been restructured as recommended.
Increase vertical separation in the energy distribution sector. Remove the financial disincentives for divestment by local governments.	High-voltage transmission has been separated from other parts of the system, but the low-voltage grid remains vertically integrated.
2005 Survey: In the gas market, make sure there are no barriers for foreign suppliers entering the market. Privatise the incumbent (DONG) before letting it diversify into other sectors (diversification should be approved only if significant synergy gains can be demonstrated).	The gas transmission grid has been transferred to an independent government owned entity. DONG is in the process of merging with a number of Danish electricity companies, with an initial public offering being expected in 2007.
2005 Survey: In water supply, open up access to networks and allow consumers to choose their supplier.	No action, as the authorities consider consumer choice not to be profitable in water supply.
2005 Survey: In telecommunications, change price regulation to ensure that users of shared lines pay only once for raw copper rental. Consider introducing price regulation for termination fees in the mobile network. Ensure that full number portability takes place.	Alternative solutions are being investigated. Full number portability between mobile and fixed networks was to have been achieved by April 2002 but in 2005 it has been concluded not to be technically feasible yet.
2005 Survey: In passenger rail, ensure contractual requirements are the same for private and public providers.	
Other industries	
2005 Survey: In the construction sector, abolish the sharp division among professions, and eliminate special approval requirements on EU building materials.	A ministerial task force is working on the issue.
2005 Survey: In the retail sector, remove the needs based elements in the Planning Act that govern approval of establishment of shops. Withdraw the fixed price exemption on the book market. Make the bottle return system independent of industry interests. Replace the fixed price system with maximum prices and allow free entry into the retail market for pharmaceuticals. Liberalise shop opening hours.	Considerable liberalisation of the book market is expected from July 2006. New legislation allowing for a gradual relaxation of restrictions on retail opening hours, in particular on Sundays, came into force in July 2005. No major action has been taken in other areas.
2005 Survey: Remove ownership restrictions in a number of professional services. Change price regulations in dental care so the current fixed price setting is replaced by maximum prices. Persuade labour market partners to allow employees to decide on who should administer their pension savings.	No action.
2005 Survey: Open the taxi market to price and quality competition.	No action.
Market mechanisms in the public sector	
2005 Survey: In areas where there are well developed private markets, these should be exploited more by the public sector, for instance *via* greater tendering and free choice arrangements. Make sure there is a level playing field for private and public providers by improving accounting and management information systems and aligning tax rules, and strengthen cost and quality evaluation.	Since mid 2005, legislation has allowed private entities to operate child care centres. From January 2007 the access to choose a private hospital or clinic on public funding will take effect for patients having waited more than one month, down from two months currently.
2005 Survey: Impose an obligation to tender on local governments (above a reasonable threshold). Improve the rules on the challenge right by removing the possibility of refusing a reasonable offer; such an offer should either be accepted or lead to an open tender.	No action.

Progress in structural reform (*cont)*

Past recommendations	Actions taken and current assessment
2005 Survey: Clarify the conditions under which government players can operate on competitive markets and ensure the playing field is always level. Restrict operations to core public sector services. Intensify privatisation efforts, and focus more on the functioning of competitive markets than on raising revenue.	Several privatisations took place in 2005, including the sale of 25% of the shares in the postal services incumbent.
PUBLIC SECTOR	
The budget process	
Introduce a politically binding expenditure ceiling. Getting political agreement on the overall spending level before budget negotiations with local governments would strengthen top down control.	No action. The tax freeze introduced from 2002 helps to contain public spending growth, provided there is sufficient coordination between state and municipalities.
Improve multi-year budgeting, for example by producing better forecasts of future spending and revenue, and integrating it with the medium-term projections.	No action.
Local governments	
Give counties and municipalities power to set property tax rates, and give them more power to set user charges.	No action.
Encouraging greater co-operation and mergers between municipalities.	A major restructuring of local government is taking place. The number of municipalities is being reduced to 98, and the health system will be run by five regions. Elections for the new municipal and regional boards were held in November 2005, and the 271 old municipalities and 14 counties will cease to exist by the end of 2006.
Clarify responsibilities between different levels of government and match responsibility with taxing power.	The reform of federal structure has clarified responsibilities. However, regions will not have their own taxing powers.
Administrative efficiency	
Make more use of performance-improving instruments such as activity-based funding and performance-related pay.	The use of activity-based funding has increased in health care.
Continue developing the strategy for e-government and ensure that savings are collected for centrally determined reallocation.	The e-government unit has recently been integrated in the Ministry of Finance to increase focus on savings.
Funding and user charges	
Increase or improve the structure of user charges in home help, child care and adult and tertiary education. Give municipalities more discretion in setting charges.	The maximum that municipalities can charge users in child care has been *reduced* from 33% to 25% of total costs.
TAX AND DISTRIBUTION POLICIES	
2005 EPR: Modify the tax freeze so that revenue-neutral changes can be made, for example cutting taxes on earned income while raising taxes on property.	The tax freeze remains in place in unchanged form.
Reduce marginal income tax rates, especially the highest rate. Increase the threshold for paying the top tax rate or reduce its rate. Broaden the income tax base to allow rate cuts (*e.g.* the interest deduction is high by international standards).	Income taxes were cut in 2004, reducing marginal taxes for middle-income earners. The government has stated that additional tax cuts will be made provided that the long-term fiscal position permits.
Align the tax treatment of positive net capital income with that of interest outlays. Simplify the taxation of share income and unify the dividend and capital gains tax schemes.	The taxation of share holdings has been simplified as of January 2006 (Chapter 1).

Progress in structural reform (*cont)*

Past recommendations	Actions taken and current assessment
ENVIRONMENT	
2005 Survey: Convert the fixed tariff commitments given to wind turbine owners into a diminishing fixed term government subsidy.	This recommendation has been implemented (Chapter 1).
Revise water charges to treat users equally. Remove the major rebates given to industrial users. Shift to a tax on net nitrogen discharges from farms or establish a tradable permits scheme.	No action.
Extend the cap and trade system to cover all carbon emissions with the aim of encouraging reductions to be made where abatement costs are lowest across all sectors.	No action.
Make transport policies more consistent in encouraging emissions reductions. Re-examine the taxation of car transport in conjunction with road pricing.	Since January 2005, a tax rebate is given to bio-fuels. Since January 2006, diesel vehicles with particle filters pay a reduced registration fee.
Allow economic instruments to function in waste management. Abolish national targets, and instead allow economic incentives to achieve the optimal mix of recycling, incineration and landfill.	A ministerial task force is working on the issue.

ANNEX 1.A2

The Welfare Commission's main reform proposals

The Welfare Commission was appointed by government in 2003. Its mandate was to analyse the effects of ageing for public finances and make proposals for reforms to promote labour supply and employment, so as ensure the sustainability of the welfare society without increasing taxes. The final report was presented on 7 December 2005, and then published along with comments from interest groups in January 2006.

I. A society that is robust to growing life expectancy

Starting more quickly

1. Compulsory school should start earlier and the 10th form (which is a voluntary year following the 9 years of compulsory education) should be targeted at students who are likely to have difficulties when continuing in post-compulsory training.

2. Introduce a bonus for young people who begin studies quickly after completing the programme needed for entry. The bonus would be DKK 1 000 per month during 2 years for those beginning studies right away, and the same amount but during only one year for those waiting a year before beginning studies.

3. The extra year of study grants should be converted to debt if the person begins studying more than three years after completing the programme needed for entry.

4. Those completing studies on schedule or faster should get a bonus in the form of unused study grant being converted into reduction of study debt or paid out in cash.

Retiring later

5. The public pension age (currently 65) should be raised by one month each year, starting in 2013.

6. The Voluntary Early Retirement Pension (*efterløn*) should be phased out by lifting the starting age by four months each year, starting in 2009. Entry to the scheme should end in 2028.

II. A more active society with better possibilities and encouragement to participate on the labour market

The young should get active

7. The special arrangements for unemployed below 25 years should be extended up to 30 years. Unemployed who have not taken upper secondary education should do so. Others should go into activation quickly. For those without upper secondary education, unemployment benefit should be replaced by a new lower youth benefit equal to the study grant.

Quicker into job

8. The duration of unemployment benefits should be shortened from 4 to 2½ years. A full year of employment or completion of an education should always be required to regain unemployment benefit entitlement, whereas today unemployment benefits are regained after half a year in work.

9. A new basis benefit should be introduced for unemployed not entitled to unemployment insurance benefits. It should equal 60% of maximum unemployment benefits.

10. The basis benefit should not be means tested against spouse income. Thereby the gain from going into work will increase for married couples.

11. The special rules for seniors, whereby 55-59 year olds have extra long unemployment benefit duration and 58-59 year olds are exempted from activation, should be abolished.

12. If there are no other job opportunities, then unemployed should be offered re-training for a sector with labour shortages.

13. Job-search requirements and unemployment benefit duration under the flexjob scheme should mirror those of the ordinary job market. The wage subsidy for those in flexjob should be capped, for example at the level of maximum unemployment benefits.

Empowering the weakest

14. Social assistance recipients should have a right and a duty to ongoing activation comprising education as well as health and social elements.

15. Back-to-work bonus during two years for those who have received passive benefits for many years.

16. Into-work bonus for newly arrived migrants moving off passive benefits.

Reducing taxes on work

17. Personal income taxation should be eased by abolishing the middle tax, raising the threshold where the top tax sets in, and enlarging the earned income tax credit – partly financed by gradually increasing the real estate tax rate to 1.5% in 2030.

Social partners should take more responsibility

18. The government, municipalities and the social partners should agree to ensure sufficient numbers of apprenticeships and job training for unemployed, migrants and others with limited skills.

19. Learning jobs with wages matching skills should be introduced for those with very weak Danish skills.

20. If the social partners do not do enough over the coming years to improve integration of migrants, obligations should be introduced for firms to employ people with weak Danish skills.

III. A more forward-looking society where it is attractive to study, work, invest and establish enterprise

Education should be strengthened

21. The scheme for reimbursing employers taking apprentices should be used more actively.

22. Three-to-five year olds with weak Danish abilities should have access to linguistic stimulation and early school start. Reading should be strengthened, and all-day school be mandatory for 6-9 year olds.

Attractive to invest and establish enterprise

23. Corporate taxation should be reduced from 28% to 25%. All kinds of income from individual and company investment should be taxed at 33%, with the exceptions of pension savings only.

Migration

24. Tuition fees should be introduced for university studies at masters' level with a possibility to cover fees by loans. For students at masters' level, state grants should be replaced by loans. For those staying in Denmark after completing their studies, the loan repayments will be reimbursed completely *via* tax credits, while those moving abroad will have to pay the loans back.

25. Migrants achieving sufficient points on a new scale should be allowed to work and settle in Denmark with their family.

26. Migrants coming *via* the proposed point system need to get a bank guarantee before entering Denmark.

27. For family reunification, the required bank guarantee size should be based on a point system.

28. For new migrants, there should be an integration exam. Once passed, the person should have time-unlimited residence permission and social assistance eligibility.

IV. A society with more solidarity where public benefits are prioritised for citizens with ill health and limited means

A modern pension system

29. Saving for pension should be mandatory also for the unemployed and inactive with each person making a minimum 6% contribution to private pension savings.

30. For a minimum part of private labour market pensions, payments should continue as long as the person lives.

31. The basic rate, the means-tested part and the supplementary benefit of the public pension should be increased from 2010.

32. A number of special benefits for seniors should be phased out.

A housing market without subsidies for bricks and mortar
(See a list of the Welfare Commission's detailed housing proposals in Annex 4.A1).

33. All direct and indirect subsidies for housing should be made visible and gradually phased out.

34. The housing benefit (*boligsikring*) should primarily be targeted at families with children, pensioners and disability pensioners with low income.

A targeted child benefit

35. The child benefit (*børnechecken*) should be lowered and made identical for children irrespective of age. After-school-hours care should be free of charge.

Enhanced coordination between public and private insurance

36. Payments from mandatory private indemnity insurance should have precedence over public income replacement and therefore be deducted completely in public benefits.

37. It should not be possible to take out labour market pensions or insurance compensation for loss of work ability as a one-off sum and thereafter get public income replacement.

V. A society that can handle increased demand for publicly funded welfare services in the context of tight public budgets

A more efficient public sector

38. The various publicly funded services should be reviewed on a regular basis.

39. The authorities should develop quantitative metrics to make activities, results and resource use more transparent, covering all providers of publicly financed services.

40. Managers in all public institutions should be faced with clear result requirements, and their pay and employment conditions should reflect how well they deliver.

41. The municipal grant and equalization scheme should to a larger extent promote efficiency, for example by gradually reducing the general state grant.

Slightly higher user charges

42. User charging should be raised slightly in health care.

43. Limited user charging should be introduced for home care in the case of practical help, but not personal care.

Source: Welfare Commission (2006), *Fremtidens velfærd – vores valg* (Future Welfare – Our Choice), www.velfaerd.dk.

ANNEX 1. A3

Monetary transmission analysis

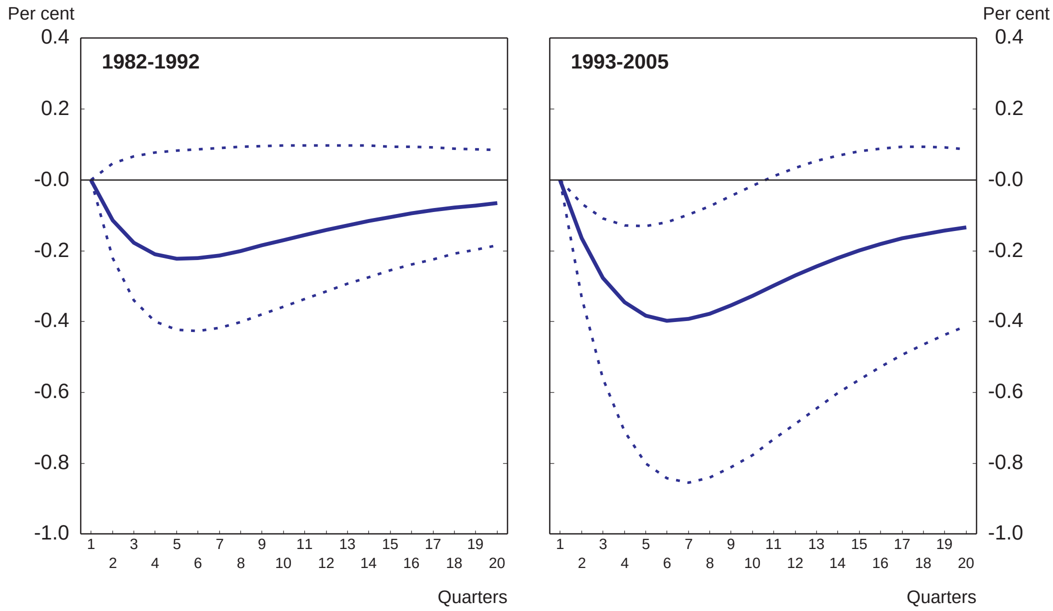
The analysis of the monetary policy transmission follows the econometric specification used in Ramaswamy and Slok (1998). A vector autoregressive (VAR) model of the following form is estimated

$$x_t = A_1 x_{t-1} + ... + A_i x_{t-i} + u_t$$

where x_t is a vector of variables at time t, A_i is a matrix of coefficients and innovations u_t. The variables are the level of output, the level of prices and a three-month interest rate with a lag length i of 1 (according to the Schwarz-criterion). Data are in quarterly frequency and are taken from the OECD Economic Outlook Database (series names GDPV, CPI, IRS). Following the usual practice in the literature on monetary transmission, an unrestricted VAR is estimated in levels, even though standard unit root tests indicate non-stationarity of the variables.[1] The monetary policy shock is identified with a traditional Cholesky decomposition, assuming that changes in short-term interest rates have no contemporaneous effect on income, *i.e.* the interest rate is ordered last and thus the real economy and prices are reacting to the interest rate shock only with a lag (additionally, no contemporaneous effect of prices on income is assumed). The magnitude of the output decline following an increase in the interest rate generated by the model is comparable to other studies.[2]

We split the sample period into two sub-samples (1982q1-1992q4; 1993q1-2005q3) to analyze whether the monetary policy transmission to the real economy has changed over time (Figure 1.16). The choice of sub-samples splitting the sample period in 1993 is motivated by the changes in the mortgage market that took place in Denmark in the early 1990s, including easier access to take out housing equity *via* mortgage loans in 1992 (adjustment to the Mortgage Credit Act) and the subsequent introduction of new products such as adjustable rate loans in 1995 (Knudsen and Sand, 2004). 1982 is chosen as a natural starting point due to the introduction of the fixed exchange rate regime. From a more technical point of view, the individual samples are large enough to obtain meaningful estimation results.

Figure 1.A3.1. **Denmark: Response of GDP to an interest rate increase**[1]



In further steps, we refined the analysis by including more variables. Private consumption was added as one additional variable to the baseline model and the response of this variable to an interest rate increase shows a similar change between the two sample periods as for the GDP variable. This supports the claim, that in particular households became more exposed to interest rate changes over time. To control for the importance of the exchange rate in most of the countries during the ERM period, we included the nominal exchange rate against the D-Mark as a robustness check. However, results were not altered in any significant way.

Notes

1. For an extended discussion of this issue see Ramaswamy and Slok (1998). In short, they argue that a VAR specified in differences will generate efficient estimates, but will ignore potential important information in the form of long run relationships. If cointegration exists (as is the case with our variables) another option would be to estimate a vector error correction model to allow for the existence of cointegration. However, Ramaswamy and Slok argue that if the true cointegration relationships are unknown and are also not in the focus of the analysis, a VAR specification in levels without imposing any restrictions might be more appropriate. (They also demonstrate that the shape of the response does not change if cointegration is imposed.) In addition, the separate time periods we study are arguably not rather short to allow for a cointegration analysis.

2. When estimated over a sample period covering 1979-2005, the effects on GDP amount to -0.18% deviation from a baseline scenario after two years. This is close to the effect of the central bank's MONA model, which finds a response of -0.13% (Nationalbanken, 2003). Summarizing the result of several econometric studies, De Grauwe and Costa Storti (2005) report a mean output effect of -0.16% for Denmark.

Chapter 2

Raising labour supply to safeguard welfare

In order to safeguard the welfare state, labour supply must be boosted from a wide range of sources to compensate for the growing share of the population that will be in retirement in the future. This chapter first looks at core workers. Previous OECD Surveys have recommended significant changes to stem early retirement, and the initiatives currently being debated are evaluated on this basis. At the same time, more of those at the margin of the labour market could be helped to enter an active working life, including those with long-term sickness and not-too-severe disability, limited skills or migrant background. Finally, the chapter considers how Denmark could benefit from removing barriers for workers from the new EU member states. The related issues of how tax cuts could motivate more labour supply and how to get young people to start and complete studies earlier are addressed in Chapter 3.

2.1 Previous *Surveys* have repeatedly stressed the need for increasing labour supply in order to safeguard the welfare state in the context of ageing. Since the latest *Survey* was published in March 2005, the government-appointed Welfare Commission and a number of other bodies have given their recommendations for welfare reform. Most lately, in the first week of April 2006, the government has presented its reform intentions with the aim of reaching an agreement with other political parties this spring (Annex 2.A1). Simultaneously, strong economic growth during 2005 led to an increasingly tight labour market with very low unemployment and a sharply increasing number of construction firms reporting that their activity is constrained by labour shortages (Chapter 1). Consequently, now is the right time to introduce reforms to boost labour supply: persons encouraged to intensify job search will more easily succeed in finding a job now than if reforms are introduced during an economic downturn, while for marginalised groups the current situation is a unique chance to get a foothold in the labour market. This chapter therefore gives particular emphasis to adjustments that could raise employment of migrants as well as of people with limited skills or not-too-severe disabilities. There seems to be a political feeling that reforms to early retirement can only be introduced with some delay, so that senior workers know the conditions on which they can retire well in advance. If that is so, then other measures must be implemented quickly to mitigate the risks of an overheating economy.

Enhancing the employment of core workers

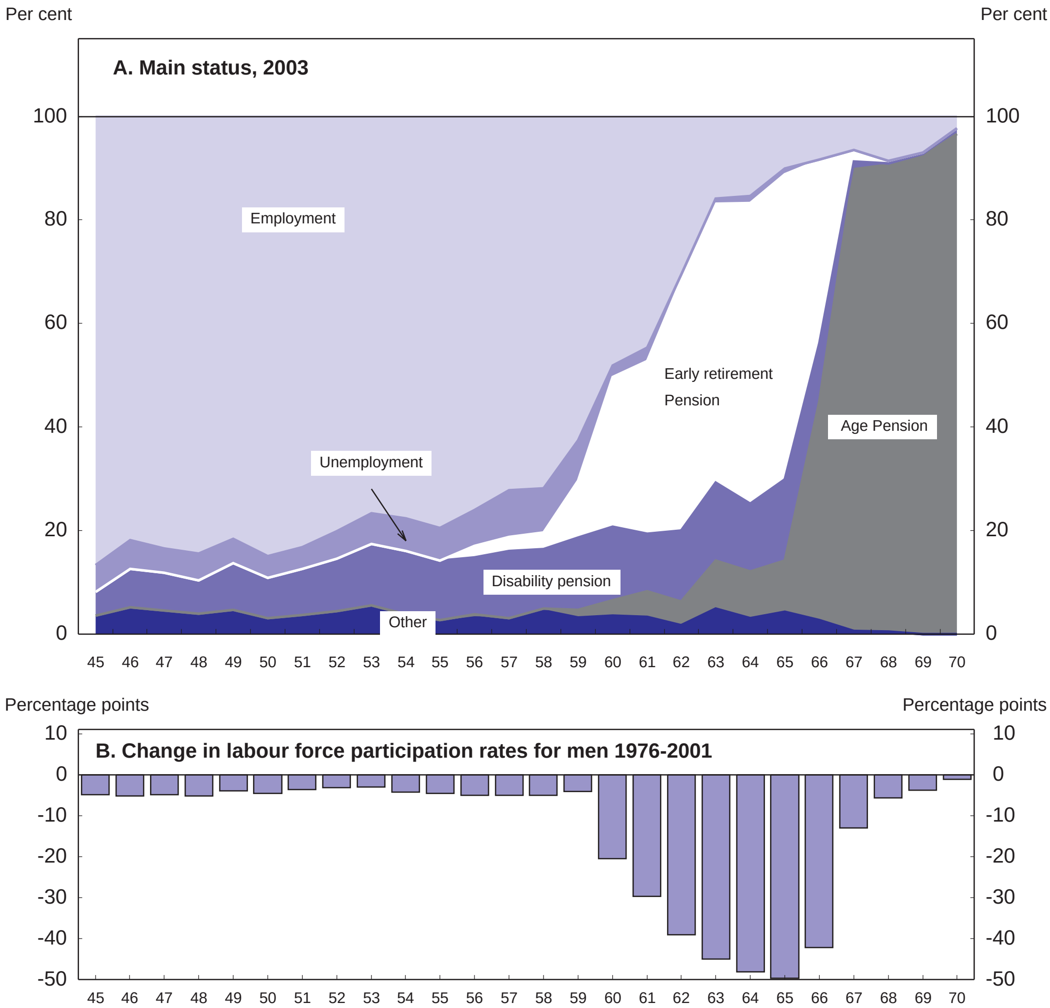
2.2 The employment of core workers could be enhanced in a number of respects. Students could begin and complete studies earlier, as discussed in Chapter 3. It could be worth reconsidering, whether the costs of the long duration of maternity leave and subsequent family leave might outweigh the benefits, as suggested in previous *Surveys*. Sickness absence represents another large loss of labour supply with the average person being absent for 8 days a year. In this regard, previous *Surveys* have recommended *inter alia* making a doctor’s certificate obligatory to establish entitlement to public sickness benefits after the first two weeks of a sickness spell (Annex 1.A1). Rebalancing taxes away from labour income would also help in a number of ways, as currently very high marginal tax rates even also for people earning just-above-average income encourage the choice of more leisure in the form of shorter workweeks and longer holidays, as well as reinforcing the incentives to take early retirement and prolonged leave periods.

2.3 Raising the statutory retirement age would help, but not by much if taken as an isolated measure, because many retire well before the statutory age of 65. Thus with respect to seniors, the main need is to address early retirement and special privileges in the unemployment benefit and activation systems, which are analysed in the following section.

Early retirement

2.4 The comparatively low employment rate of those above 60 is predominantly a result of the voluntary early retirement pension (VERP, *efterløn*). Over half of those aged 63, 64 and 65 have left the labour market to join this programme, resulting in a large reduction in male labour force participation compared to the situation before this early retirement option was introduced in the late 1970s (Figure 2.1).

Figure 2.1. **Labour market attachment of seniors**
By year of age

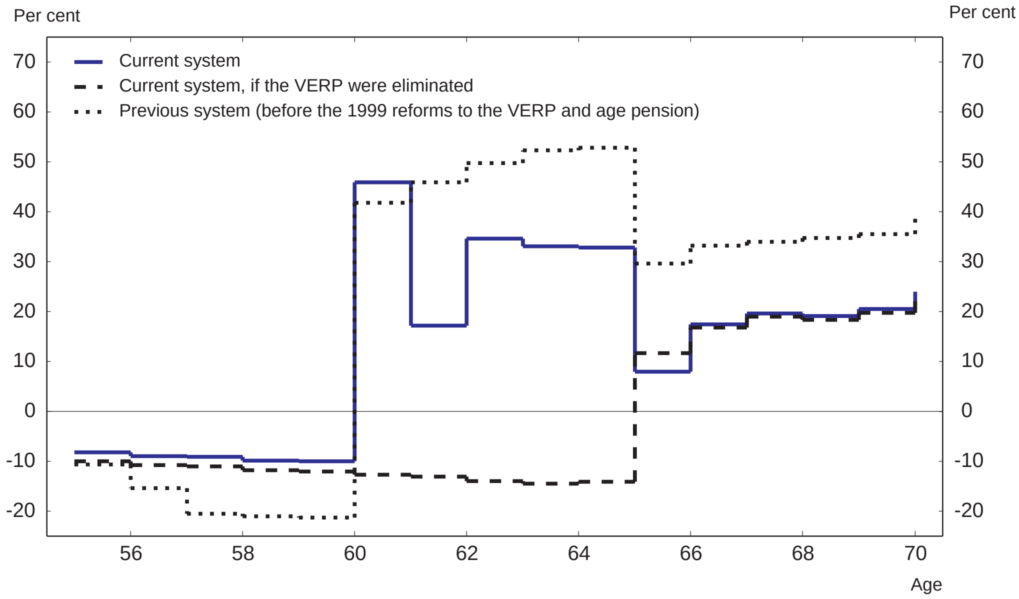


Source: Statistics Denmark, Register based labour force statistics and The Danish Employers' Confederation (2003), Seniors and the Labour Market.

2.5 One of the original intentions was to make early retirement possible in particular for seniors worn out after many years of hard manual work; but today a typical person using the voluntary early retirement pension comes straight from employment and has no particular health problems. The low-skilled are a bit more likely to use the voluntary early retirement pension than medium- and high-skilled, but the over-representation of the low-skilled is much more pronounced for the disability pension (*førtidspension*). That the voluntary early retirement pension is not particularly benefiting marginalised groups is revealed by the fact that less than a third of those using this scheme are unemployed immediately before entering the scheme. When asked, only one in eight indicates "being laid off" as a reason for going on early retirement, and merely one in twenty say that they felt forced out by the management or colleagues. Instead, the typical motive is to get more time to pursue hobbies and to be with family and friends. With data from individual medical files, it is possible to compare the use of medical treatment, and again the results are revealing: the average senior person on disability pension spends almost four times as much on medication, stays over five times longer in hospital and consults general practitioners and specialists a bit more often than seniors in employment. By contrast, the use of these medical services shows next to no difference for those on voluntary early retirement pension versus seniors remaining in employment (Welfare Commission, 2006).

2.6 Against this background, it is hard to justify the large public subsidies for early retirement. Public outlays for the voluntary early retirement pension amount to 1¾ per cent of GDP, as the individual contributions cover less than a quarter of total payments. As a result of these subsidies, it does not pay for many seniors to continue working after 60, and they are in fact punished financially for working longer in the sense that their total expected pension receipts are reduced (Figure 2.2). The current arrangement thereby doesn't give seniors a neutral choice, and probably many retire earlier than they would have preferred if not for the public subsidy of the VERP. The best solution would therefore be to abolish or phase out the voluntary early retirement pension as recommended also by the previous *Survey* and the recent *OECD Ageing and Employment Policies* review (OECD, 2005a and 2005b).

Figure 2.2. **Implicit tax on continued work**[1]

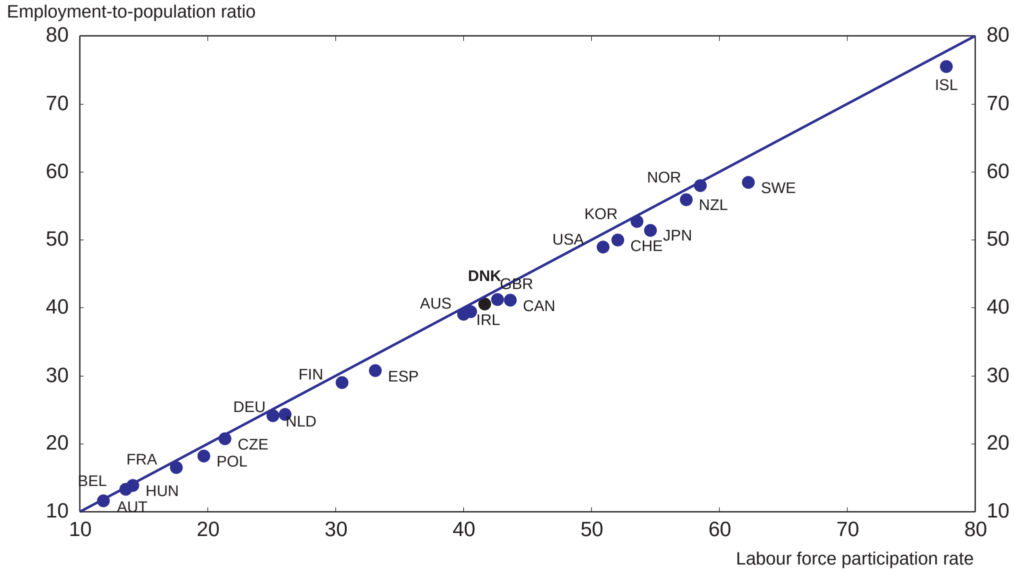


1. The implicit tax is equal to the negative of the change in net pension wealth from working an extra year. The figures are for someone with pre-retirement earnings equal to the average wage.

Source: OECD calculations.

2.7 Cross-country evidence indicates that phasing out early retirement would *not* leave seniors unemployed. Originally, the voluntary early retirement pension was introduced in the belief that withdrawing some from the labour market could "redistribute" jobs to others, and similarly today it is sometimes argued that reducing options for early retirement will simply lead to increasing unemployment. Comparison across countries, however, vividly illustrates that the notion of a "fixed pool of labour" does not hold. In countries where seniors are on the labour market, they typically get a job (Figure 2.3). It is true that unemployment is higher in the years preceding the 60-year threshold for access to early retirement. But comparisons with the other Nordic countries clearly show that the somewhat higher unemployment rate for 58-59-year olds is an endogenous response to the early retirement option. In Sweden and Norway where early retirement is less common than in Denmark and Finland, the rise in unemployment rates sets in later (Figure 2.4).

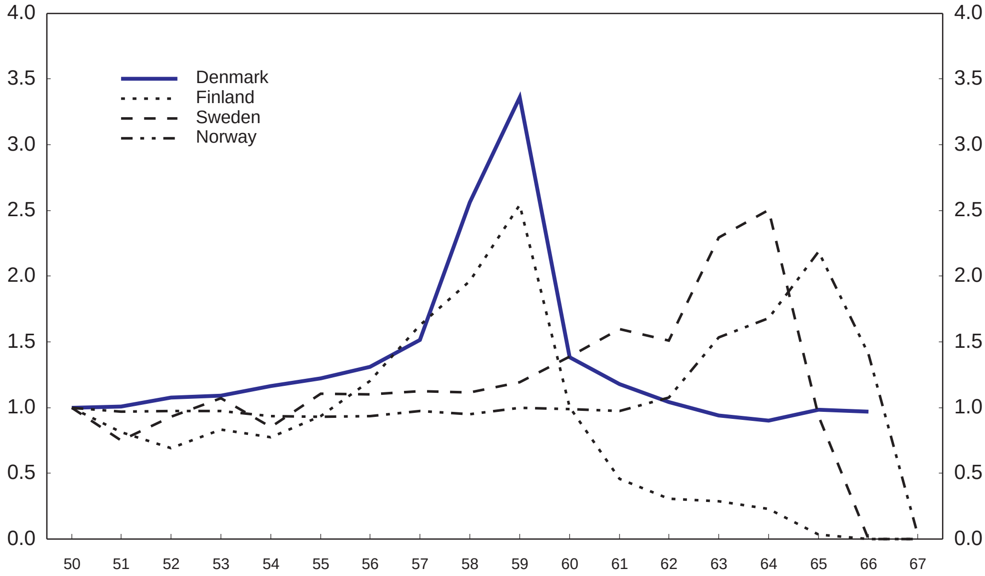
Figure 2.3. **In countries where seniors are on the labour market, they typically get a job**
Men and women aged 60-64, per cent, 2004



Note: Based on labour market status, which does not exclude that some are at the same time receiving a pension. The vertical distance to the diagonal reflects unemployment.

Source: OECD Labour Force Statistics Database.

Figure 2.4. **Unemployment of seniors in the Nordic countries**
Index of unemployment rate relative to that of 50-year olds



1. Denmark average for years 2000-03, Sweden average for years 2001-04, Finland 2001 and Norway 2004.
Source: Welfare Commission (2006) based on national statistical agencies, OECD and Eurostat.

2.8 Proposals to raise the early retirement age are currently being discussed, but changes would only be phased in starting a decade into the future. The voluntary early retirement pension is currently accessible from the age of 60 and continues until 65 when all citizens become eligible for the public age pension (Box 2.1). The government's proposal to raise these thresholds to 63 and 67 is welcome, although it only concerns those below 50 today. Moreover, even once the full reform is phased in, the net-of-tax benefits received by a person using the VERP for the full four years would be three time as high as the contributions made by the person, meaning that two thirds of the costs are carried by public subsidies. For someone continuing work and then using the VERP for two of the four years, it will be half-half. The proposed reform thereby leaves a system in place with a substantial fiscal reward for those choosing early retirement thereby favouring them relative to citizens continuing to work.

2.9 More flexibility in the pension system and on the labour market could also help seniors to stay longer in work, as stressed by the *OECD Ageing and Employment Policies* review in autumn 2005. The current age pension, available for all citizens from age 65, can be deferred with higher payments later if the person continues to work. However, this is subject to the rigid condition that the person works at least 1 500 hours per year, which is actually a bit more than the average hours work for the entire workforce. This rule could be relaxed to give room for gradual retirement with part-time employment. It could also be considered to introduce actuarially reduced age pension before age 65 as an option for those wishing to shift to part time work before the official retirement age. All such options, however, must be carefully crafted so as to ensure that they do not in the end increase public costs. Collective agreements between unions and employers also need attention, because some make retirement mandatory even before reaching 65 years. In Sweden, a law was introduced in 2003, making it impossible for collective agreements to require retirement before the age of 67. In a Danish context, where employment protection legislation does not make it too difficult for employers to lay off staff in cases of underperformance, it is hard to see any justification for mandatory retirement age clauses. With the government's proposals for welfare reform it would seem that a set of initiatives will now be taken to remove rules forcing early retirement. Continuously developing workplace practices to accommodate special needs of older workers can also be important in some cases, but it is remarkable that only 1% of those above 50 answer confirmatively when asked if they or others in their workplace are exposed to age discrimination – less than in any other European country.[1]

Box 2.1. **Voluntary Early Retirement Pension – current rules and reform proposals**

The voluntary early retirement pension (VERP, *efterløn*) was introduced in 1979 for 60-66 year olds. In its current form it is available for those aged 60-64 and pays 91-100% of the unemployment benefit maximum which is about half of the average production worker's earnings.

In the beginning, there were only few entry requirements other than being a member contributing to an unemployment insurance fund. With the 1998 reform it was made a requirement to have been a member of a recognised unemployment insurance fund for at least 25 out of the last 30 years. At the same time, a special VERP-contribution was introduced, and from 2024 it will be a requirement to have paid this for 25 out of the 30 years prior to entering the scheme.

To encourage seniors to stay longer on the labour market, the 1998 reform introduced a gradually increasing tax-free premium for those waiting to at least the age of 62 before taking early retirement. That has brought down the number of 60 and 61-year-old entrants a bit, but overall the average early retirement age has not grown, because those who previously would enter at age 63 and 64 now tend to enter at 62 instead (Employer's Confederation, 2006).

The Welfare Commission's recommendation, presented in December 2005, was to phase out the VERP by lifting the entry age by four months a year. The government's proposal, presented in the first week of April is to maintain the voluntary early retirement pension, but to raise the age threshold from when it is available by one year in 2017, 2019 and 2021 thereby going up from 60 to 63. The maximum duration would be shortened from 5 to 4 years, as the age threshold for the public age pension would be raised by one year in 2023 and 2025 thereby going up from 65 to 67. From 2025, these age thresholds would be raised in line with life expectancy for 60 year olds, meaning that the number of years in retirement remains constant. The voluntary early retirement pension continues as a contributory scheme, but the extent of public subsidies would be reduced by requiring 30 years of contributions, up from 25 today, and requiring that contributions start before the person is 30 years old. Moreover, the annual contribution would be raised slightly by DKK 667 (€ 90), with a similar reduction in the contribution paid by members of unemployment insurance funds. Nobody should be enrolled as contributor by default, and those who no longer wish to contribute following a reform, should have the possibility to leave with all their contributions being transferred to their individual pension savings plan before 2009 with an additional bonus of 65%. The tax-free bonus rewarding those who continue working during at least two years when eligible for the voluntary early retirement pension would be raised by 50%.

The proposal made by the opposition social-democratic party back in early autumn of 2005 was to raise the entry age for VERP and public age pension in parallel by two years, but only very gradually between 2015 and 2026. Moreover, they proposed to abolish the special VERP contribution, to lower the benefit paid out, and require 38 years of membership of an unemployment insurance fund for those younger than 24 today, thereby seeking to target the VERP to persons who have less education and have been longer on the labour market.

Unemployment insurance benefits and special privileges for seniors

2.10 The replacement rate of unemployment insurance benefits is among the highest in the OECD for low-income persons. For those earning an average or high income, replacement rates are somewhat lower because unemployment benefits cannot exceed a maximum amount equal to 51% of average production worker (APW) earnings. A high replacement rate provides an important safety net, but combined with long duration, it weakens the incentive to actively search for a new job. The problem is most pronounced for seniors, who can continue receiving unemployment benefits for up to nine years.

Maximum duration is four years, but a special rule says that unemployment benefits cannot be ended for persons aged 55-59 who will be eligible for the VERP at age 60. Consequently, a person becoming unemployed at age 51 can receive unemployment benefits continuously during nine years. In the extreme case of somebody becoming unemployed at age 46½, finding a job at age 50½ and losing it again when having regained benefit rights six months later, unemployment benefits can be received for 13 years out of a 13½ year period (Ministry of Employment, 2005a). Moreover, 58 and 59-year olds are not subject to activation. How much unemployment benefit duration matters is vividly illustrated by what happened when the special senior rules were scaled back starting in 1999 so as not to cover the 50-54 year olds. When economic growth subsequently slowed down, the number of those being out of work for more than a year increased by 18% for the 55-59 year olds from 2001 to 2004, but actually *fell* by 27% for the 50-54 year olds (Ministry of Employment, 2005b).

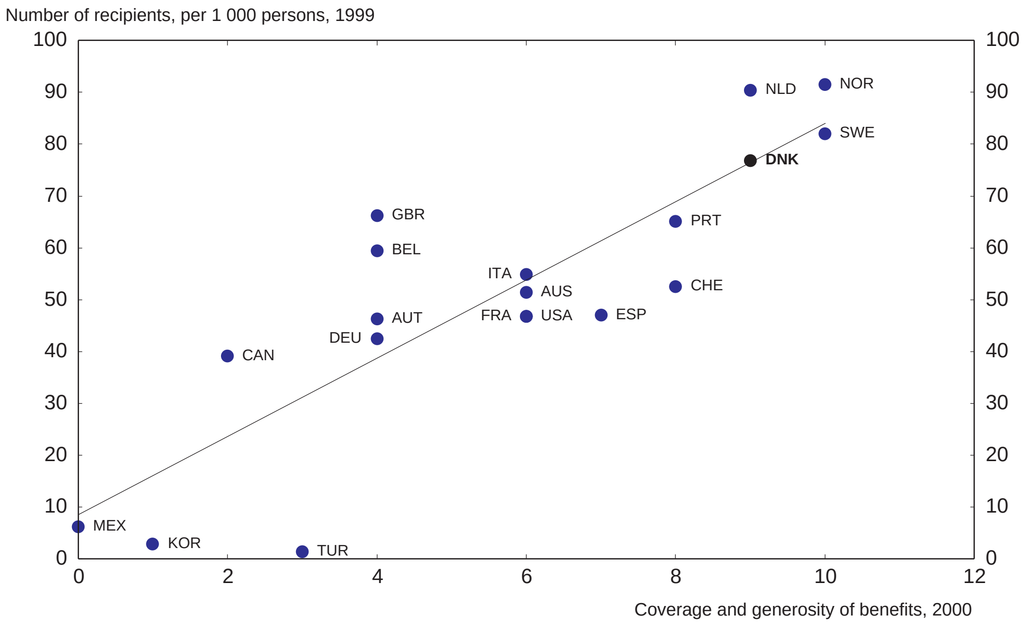
2.11 Against the background of this success, the remaining special senior privileges should be ended, and the standard duration of unemployment benefits should be shortened. The current four-year unemployment benefit duration is contrasted by about two years in Finland and Norway, and just a bit more than one year in Sweden.[2] A standard duration of 1 to 2 years should be recommended for Denmark too. It would help ensure that those participating in activation are available for employment at short notice, as it strengthens the incentive to continue active job search while waiting to attend training or participating in other activation measures. Particularly in the current juncture, lock-in effects would be damaging, and duration should therefore be shortened as rapidly as possible. The government's reform proposals include the ending of special senior privileges in unemployment insurance, but no shortening of the general four-year benefit duration. Instead, full-time activation is proposed after 2½ years of unemployment, but how much this helps will depend much on how it is implemented.

Better including those at the margin of the labour market

People with long-term sickness and not-too-severe disability

2.12 The number of persons receiving a permanent disability pension (*førtidspension*) grew rapidly from 100 000 in 1960 to a peak in the mid-1970's a bit above the current level of 250 000 recipients. The inflow of new recipients has declined since the mid 1990s, partly because persons above 60 are now less likely to receive disability pension, but more likely to use early retirement; the inflow of younger age groups has also been reduced, but less strongly. The average 2001-04 inflow broken down by age corresponds to a long-run stock of about 210 000 – 240 000 recipients.[3] The public disability pension is always given on a full-time and permanent basis and ends when public age pension becomes available at age 65. Following a reform implemented in 2003, the pension pays an amount equal to the maximum unemployment benefit (equal to half of the average production worker's pre-tax earnings) and 85% of this for persons living in a couple. There is some deduction for spouse income and, if the disability pensioner has income from work, private pensions or investment above a threshold, then the public disability pension is reduced by 30% of this. Compared to other OECD countries, coverage and generosity of the disability pension is thereby relatively generous, and its financial attractiveness may be part of the explanation for the relatively large number of disability pensioners (Figure 2.5). Paying a fairly generous pension serves the natural purpose of maintaining a good living standard for the disabled, but it does necessitate that access is strictly limited to those who are genuinely unable to work. In the current context where early retirement is being reformed, it is particularly important to ensure that gate keeping to the disability pension works well.

Figure 2.5. **Coverage and generosity of working-age disability pensions *versus* number of recipients**



Source: OECD (2003a), *Transforming Disability into Ability*.

2.13 Starting in the 1990s, social policy has been given an *active* orientation with the aim to retain more people in work *via* enhanced rehabilitation efforts, but it would seem that more can still be done to achieve this worthwhile objective. From 1998, it was established that all possibilities for activation and rehabilitation must be depleted before a disability pension can come into consideration. And from January 2003, the assessment of the person was shifted from an "incapability" to a "remaining capability" perspective, including both the person's current situation and her/his potential for developing job-related capabilities. Yet, just over a quarter of all Danes receiving disability benefits do not classify themselves as disabled, and only a third would themselves say that they are severely disabled (OECD, 2003a) – a problem also known in other countries.

Changing composition towards mental health problems

2.14 An increasing share of those entering into the permanent disability pension are registered as suffering from mental health conditions, but this may reflect changing administrative practices as much as changes in the underlying prevalence of mental and behavioural problems. Municipal social administrations can make the final decision to put a person on disability pension *without* involving medical professionals. Although medical professionals typically will be consulted, this may lead to more persons being labelled with mental and behavioural problems, and – more worryingly – that the individuals concerned are not getting the appropriate help in terms of treatment and rehabilitation. Indeed, professionals as well as associations of mentally ill point to a lack of specialised knowledge among municipal social workers, so that opportunities are missed for helping the persons concerned back to work and permanent disability pensions are granted in cases where it is not strictly necessary. The merging of municipalities from January 2007 should provide better quality in handling these cases. Moreover, there is a general trend to focus more on mental issues among medical professionals and society in general.[4] In 2004, 37% of all new entrants to disability pension were registered with a mental and behavioural problem as their main diagnosis, up from 27% just five years earlier, and today four out of the top five conditions motivating permanent disability pension are mental. By contrast, being physically worn out with musculoskeletal conditions has declined in relative importance (Table 2.1). A large and growing share of disability benefit recipients having mental health problems is seen also in other OECD countries.

Table 2.1. **Mental health conditions among recipients of disability pension**

Proportion with mental health conditions among those entering disability pension in 1999, per cent		Top-15 main diagnosis of those entering the Danish disability pension, per cent[1]	1999	2004
Switzerland	34	Post-traumatic stress disorder	1.8	5.7
Netherlands	33	Stroke	4.0	4.2
- *non-contributory*	52	Recurrent depression	1.8	3.7
Australia	32	Schizophrenia	3.8	3.6
Germany	28	Personality and behavioural disorders other than dissocial and emotional unstable personality	2.1	3.4
Denmark	27			
France	27	Lumbago due to displacement of intervertebral disc	2.8	3.0
United Kingdom	26	Mental retardation	3.1	3.0
- *non-contributory*	35	Polyarthrosis	1.9	2.3
Canada	25	Sprain and strain of cervical spine	2.1	1.6
Norway	25	Alcohol dependence	0.8	1.5
Sweden	24	Anxiety except phobic, obsessional and other specific anxieties	0.8	1.4
United States	22	Fibromyalgia and similar rheumatism	2.0	1.4
- *non-contributory*	40	Harmful use of alcohol	1.4	1.4
Austria	17	Multiple sclerosis	1.8	1.3
		Aggressive, borderline and similar emotionally unstable personality disorders	1.0	1.3
		All mental and behavioral disorders	27	37
		All diseases of musculoskeletal system and connective tissue	25	22

1. The categories listed are the fifteen most frequent out of the 275 categories used for classifying Danish disability pension cases. This classification has a unique correspondence to the more detailed ICD-10 classification.

Source: OECD (2003a), *Transforming Disability into Ability*; Danish Employers Confederation based on administrative data from the National Appeals Board and own calculations.

2.15 From a closer inspection of each mental condition it is striking that the ones growing most rapidly are conditions for which permanent disability pension would not seem the best solution. For persons with recurrent depression, for example, adequate treatment in combination with having something to do is often better for the person's wellbeing than putting him or her aside on a permanent pension (Layard, 2004 and 2005). Possibly, the threshold for when a person is labelled with a mental health condition has lowered. If this is resulting from less stigma being associated with having mental health problems than previously, then that is a positive development, and arguably the error may be in the past where real mental health problems might often have been hidden. But even if so, a permanent disability pension is often not the right answer – it should rather be better treatment and rehabilitation as well as prevention. In this respect the set of initiatives announced in March 2006 to better support the mentally ill in work and increase awareness among colleagues and firms are welcome (Ministry of Employment, 2006).

Rehabilitation and wage-subsidy schemes are useful, but need adjustment

2.16 Several schemes aim at retaining or re-integrating persons with disabilities or similar limitations on the labour market. The rehabilitation scheme (*revalidering*) offers a package of counselling, work-place internship or training, while the flexjob scheme offers employment with a permanent wage subsidy. Like disability pension, both of these schemes are non-contributory and the basic eligibility criterion is the person's work limitation. As such they are probably the right way to go, although flexjobs in particular need adjustment. Following a political agreement reached in February, several aspects of the flexjob scheme will therefore be changed by July 2006. At the current juncture, it is particularly important that schemes like these are not locking people in who could in fact get a normal job if they keep on trying, and further tightening of both schemes should therefore be considered. The flexjob scheme has increased five fold in just five years to 45 000 beneficiaries by the end of 2005, while the number on rehabilitation has been relatively constant at 25 000. Consequently, the total number of beneficiaries on disability pension, flexjob and rehabilitation has grown by 15% over the last decade, reaching 9% of the working-age population.

2.17 Under the rehabilitation scheme, participants receive a uniform benefit equal to maximum unemployment insurance benefits (half for those under 25) for up to 5 years, although it is supposed to be as short as possible. The average duration is 2 years, and more than a third are able to make their own living thereafter, indicating some success (Economic Council, 2005). However, it is odd that about half of those undergoing rehabilitation have higher income than before joining the programme, and a quarter have an income gain above DKK 25 000 or 9% of APW-earnings (Ministry of Finance, 2003). Such an increase is fiscally expensive, but the bigger problem is that it risks creating lock-in as it may not be financially rewarding for the person to leave rehabilitation if offered a job, because they would typically not be able to command a wage much above the rehabilitation benefit. The benefit received while undergoing rehabilitation should therefore be reduced to ensure that it pays for participants to accept jobs they might be offered. The principle should be that those taking part in rehabilitation get a benefit at a level similar to what they had before, with the current uniform rate instead being a maximum, as is the case today during the initial phase of rehabilitation. Possibly, a small top-up to cover transport and other costs could be paid to those who have had very low income.

2.18 Under the flexjob scheme, a private or public employer can get a permanent subsidy equal to half or two thirds of the wage, depending on how strong the person's work limitations are. The subsidy is based on the pay for a full-time job following the minimum wage of the relevant collective agreement, or the wage that is normally paid for similar work. Never the less, the agreed working time for the flexjob would typically be less than full time, and in practice, about a third earn more in their flexjob than in their latest ordinary job. This is partly because it has until now been possible to go from an ordinary part-time job to a flexjob with pay similar to a full-time job.[5] Most strikingly, as there is no ceiling for the subsidy size, cases exist where persons on flexjob earn over DKK 800 000 annually. As a key element of the changes to be introduced from July, the maximum subsidy will be based on a wage of DKK 387 000, which is still higher than what 80% of Danes earn. As the two subsidy rates will remain at 67% and 50%, the maximum subsidy will be an amount 50% higher than the disability pension. This change is a step in the right direction, but it is hard to see the social or fiscal justification for paying a public subsidy that is larger than the costs of disability pension. While monitoring the use of flexjobs following the changes implemented now, consideration should be given to reducing the maximum subsidy further to be equal to disability pension or lower.[6] Even with such a limit, a flexjob would pay better for the person concerned than a disability pension, as the wage would be up to 50% or 100% above the disability pension.

2.19 Moreover, it is problematic that the level of pay does not reflect hours worked, as it leaves no incentive for the person to increase her or his labour supply. Being paid a wage for the hours worked and an unemployment benefit for the hours not worked would be a better arrangement, as proposed by the Welfare Commission but neglected in the recent political agreement. The issue should be revisited also for those already in a flexjob now. Finally, there seem to be interaction problems with payments from private loss-of-work-ability insurances coming on top of flexjob income, adding to the income gain realised when going from an ordinary job to a flexjob. Top-ups from private insurance make sense for disability pensioners, but not for flexjobs as long as they pay a full-time wage. The authorities should seek a dialogue with insurance companies to address this problem, as the latter should also see an interest in avoiding moral hazard.

2.20 With their rapid growth, flexjobs risk becoming an expensive "acquired right" for excessively large segments of the workforce, and therefore eligibility, administration and usage need careful review. First, administrative practice in municipalities can be improved considerably, as 80% of all flexjob cases lack documentation that possibilities for maintaining the person in non-subsidised employment have been fully tried. It is therefore welcome that from July, municipalities will *not* get the 65% state reimbursement of the wage subsidy in cases where documentation is lacking. But it is also important to periodically review whether the person still needs the large wage subsidy given initially. Some will, others not. Each flexjob case should be reviewed on a regular basis such as every two years with the wage subsidy ending unless granted anew. In cases where the person's work ability improves, it will then be relevant to gradually scale down the wage subsidy, and municipalities should be given more flexibility to do so than currently where only two rates exist, namely 50% and 67%.[7] Indeed, one of the problems highlighted by a recent study is that once in a flexjob, people rarely return to an ordinary job, even when their work limitations recede (Jørgensen *et al.*, 2006).

Letting only the most needy in: permanent disability pension should only be used as a very last resort

2.21 All administration of new cases is in the hands of municipalities. The intention is that the final decision to grant disability pension or not should be based on a holistic perspective on the person's resources rather than a narrow focus on limitations arising from health problems. The case manager at the municipal social authority collects and gives weight to all relevant information while having quite some autonomy to decide to what extent evidence is called from medical professionals and whether that should be simply the person's own general practitioner or a specialist. This is matched by decentralisation of a large share of the funding responsibility. The reimbursement from central government was reduced from 100% to 50% in 1992 and further in 1998, so that today municipalities carry 65% of disability pension expenses. Yet, benchmarking of municipal practices shows substantial variation (National Appeals Board, 2005a). This would seem to indicate that the gate-keeping function can still be improved. There is an obligation to test the work ability of all applicants except if the person has very severe health problems where it would be obvious that she or he cannot work. In practice, only 60% of the applicants are subject to this form of test, despite estimates saying that no more than 20% of applicants are obviously unable to work.

2.22 While the current system has clear advantages, procedures followed in the Netherlands might also be worth considering. There it has been found to work well to involve an outside panel of occupational health specialists, so that the final decision to grant disability benefits or not cannot be made exclusively by people who may quite naturally have developed a close relationship with the person in question. A solution in the Danish context could be to add an approval stage at the end of the current procedure so that the municipality's decision to grant permanent disability pension has to be validated by a team of "anonymous" occupational health specialists following review of the case, including both the written documentation and meeting the person concerned. In cases where the medical assessment is unclear, permanent pensions should not be granted, rather, rehabilitation and other ways of bringing the person into supported employment should be continued.

When it becomes clear that a disability pensioner can work, they should be helped to leave pension

2.23 Once on a disability pension, the ability to work typically does not improve. Nevertheless, it happens for some people, and they may not be helped very well in the current system. Remarkably many disability pensioners have earnings well over a third of that of the average production worker

(DKK 100 000 a year) on top of their disability pension. Moreover, a permanent disability pensioner became the mayor of a municipality with 62 000 inhabitants in 2005. This would seem to indicate that not all disability pensioners are incapable of working and that the mechanisms by which persons who have re-gained their capabilities are helped back to work are not functioning appropriately. For recipients under the new benefit introduced in 2003, municipalities are supposed to consider if recipients should be moved off the disability pension, whereas under the old system there is a more tangible obligation to end disability pension for anybody earning more than about 35% of the average production worker wage. Yet, less than 10 of the 10 000 persons entering disability pension in 2003 were taken off disability pension in 2005.

2.24 The general OECD recommendation is to design benefit entitlements in such a way that disabled persons are not penalised from taking up work to the extent that they can (OECD, 2003a). More specifically, the 2003 *Survey* recommended making it easier for disability pensioners to try out working while suspending their disability pension for awhile, and this has now been made possible. It also recommended making all disability pension cases subject to periodic review, to take into account, *inter alia*, medical and rehabilitation opportunities that may have become available since the person entered disability pension (OECD, 2003b). The approach to take should be a combination of "carrot and stick". The "carrot" part is important to overcome the financial and emotional risks associated with going back to work: How will colleagues think of me? What if I lose the job again? In the United Kingdom, a return-to-work credit paying an extra £ 40 per week during six months has been piloted under the Pathways to Work programme, and will now be part of the standard package for persons leaving disability benefit (OECD, 2005c; UK Department of Work and Pensions, 2006).

2.25 With flexjobs, Denmark would seem to have the right instrument for helping disability pensioners back to work, but it is rarely used for this purpose. During 2003, only one in a thousand disability pensioners went into a flexjob (Economic Council, 2005), equal to just a couple of per cent of the total inflow to flexjobs, and only about 6 000 disability pensioners have a sheltered job (*skånejob*). It would seem that municipalities could be far more active in revisiting disability pension cases; in order to help this process, an obligation should be introduced for pensioners to accept flexjob offers that the municipality can provide. Given the high wage subsidy within the flexjob arrangement, it should be financially attractive for the person concerned. Volunteering is another way an individual can build up confidence and gain valuable work-related skills, and individual stories presented in the media indicate that many disability pensioners are involved in local associations. The challenge for municipal social authorities is to respond to this and gradually lift those who can from volunteering into a real job.

Job search and activation measures for social assistance recipients

2.26 Jobless persons who are not eligible for unemployment insurance, are looked after by their municipality. If the municipality assesses that the person in question has no other problems than unemployment, the person must be registered with the employment services, but otherwise not. As a result, many are not as visible for employers as they could be. The obligation to register with the employment service should be extended.

2.27 For those below 25, the stronger activation and training approach introduced in 1996 has been a great success, and it should serve as a basis for fully extending this approach to all below the age of 30. In fact, the unemployment rate for those younger than 25 has been well below the average for all age groups – the opposite picture of what was seen in the 1980's and early 1990's, as well as in many other OECD countries. Since 2001, the enhanced training and activation offer has been available also to the 25-29 year olds, but the special benefit rules still only apply for the 18-24 year olds. It is part of both the Welfare Commission's and the government's reform proposals to extend also the special benefit rules to cover all below 30.

Integration of migrants on the labour market

2.28 Currently many migrants are inactive and outside the labour market. The employment rate of non-EU nationals living in Denmark at 50% in 2002 is less than two thirds of that of EU nationals. In Germany, for comparison, the employment rate of non-EU nationals at 51% in 2002 is more than three quarters of that of EU nationals. This simple comparison illustrates that while there is a marked difference in employments rates between native Danes and migrants, part of it reflects that migrants generally have low employment rates also when going to other European countries. One reason is the change in migrant composition that has taken place over the two last decades as asylum seekers and subsequent family reunification has become a major source of inward migration to Denmark. Today, three quarters of the foreign-born come from less developed countries, and many lack basic skills (OECD, 2003b). Over 70% of the working age migrants from Afghanistan, Iraq and Somalia receive public income transfers, whereas only about 25% of the migrants from China and Thailand do – a fraction that is similar to that of native Danes. Language competence is a key issue, as studies find that strong Danish skills and the acquisition of professional training in Denmark lift employment probabilities substantially (Tranæs and Zimmermann, 2004).

2.29 Policies should focus at skills and early activation as well as economic incentives. With the package *A New Chance for All* from May 2005, various initiatives are being implemented to strengthen language skills as well as early activation and professional training for second-generation migrants. How well activation measures function depends largely on how they are implemented locally and here practices seem to vary a lot. In some municipalities, half of the unemployed migrants are registered with the employment service, in other places not a single migrant is registered (Ministry of Employment, 2005a).

2.30 With the introduction of special introductory and start-help benefits during the first seven years, unemployment traps have been reduced. For the enhanced incentives to seek work to be effective, however, the social partners may still need to accept widening the possibilities for wages to adjust, as the gap between collectively agreed wages and the professional abilities of many migrants is quite large. Among the government's proposals in this area are targeted wage subsidies and so-called hand-held integration with enhanced guidance on the workplace.

Benefiting from workers coming from the new EU member states

2.31 The Danish economy stands to benefit from raised inflow of workers from the new EU member states, *inter alia* by relaxing capacity constraints in construction. Every citizen of the European Union has the right to work in another member state. However, for new member states that joined the union in May 2004, there is a transitional period of up to seven years. Consequently, during the transitional period, workers from the Baltic States, the Czech Republic, Hungary, Poland, Slovakia and Slovenia face restrictions on access to the labour markets in most of the 15 "old" member states, the exceptions being Ireland, Sweden and the United Kingdom. The first phase will end on 30 April 2006, but Denmark and some other member states have already notified the EU Commission that they want to prolong their transitional arrangements to the end of April 2009. In Denmark, the so-called "east agreement" (*Østaftalen*) allows citizens from the new member states to work in Denmark provided they are employed full time on terms that satisfy the collective agreements between unions and firms. There are, however, other ways of entering the Danish labour market, notably by establishing a company in Demark or by being stationed by a foreign company delivering services in Denmark, in which case there are no special transitional arrangements.[8]

2.32 So far, the inflow of workers from the new EU member states has been rather limited. By the end of January 2006, there were only 3 655 active permits, accounting for less than 0.2% of total employment. Most come from Poland (48%) and Lithuania (31%), and most work in agriculture (38%), the construction sector (13%) and business services (10%) (Table 2.2). The work they do is often seasonal or temporary, as most permits are for less than a year, with a third being for less than four months.[9] Nevertheless, there is some evidence that in sectors like construction where there are some foreign workers, they have had a dampening effect on wage inflation. Indeed for Norway, where four times as many working permits have been given since EU-enlargement, recent figures indicate that this has had a significant dampening effect on wages despite the level of activity being high.[10]

Table 2.2. **Migrant workers from the new EU member states**
Active permits by January 2006, by industry

	As share of all active permits Per cent	As share of full-time employment in each industry Per cent
Agriculture, market garden and forestry	38	4.6
Fishery	2	4.3
Health care	7	0.6
Hotels and restaurants	5	0.4
Construction	13	0.3
Textiles and leather	1	0.3
Food, drink and tobacco	4	0.2
Business services	10	0.2
Associations, culture and garbage	4	0.2
Other industries[1]	17	N/A

1. Combines industries where the number of active permits corresponds to less than 0.2% of full-time employment.

Source: Statistics Denmark; National Labour Market Authority; own calculations.

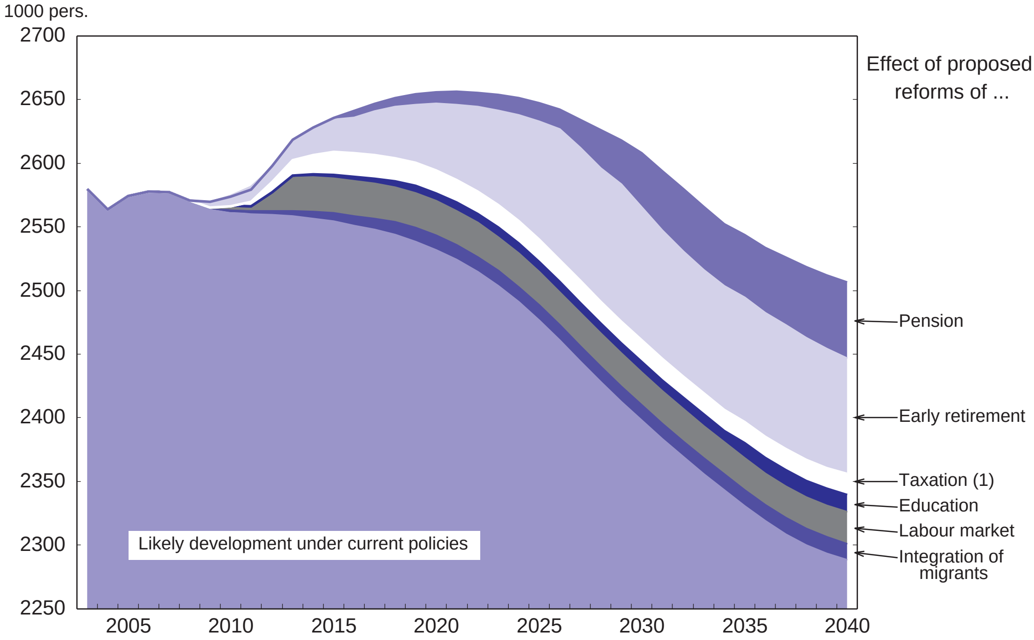
2.33 Inflows of foreign workers can help mitigate bottlenecks, such as in construction, but the time it takes to process applications and issue permits is an important barrier in this respect (Rambøll Management, 2005). For workers having a job offer from a company with a collective agreement, it takes 24 days on average. However, if offered a job by a company without a collective agreement, it takes 63 days to process an application, *inter alia* because of pre-hearing of the regional labour market board which monitors that Danish wage and working conditions are respected. In late March, a political agreement was reached aimed at reducing these administrative delays; companies with a collective agreement can now get pre-approval for hiring foreign workers.

2.34 With the increasing tightness of the labour market, it should be considered what adjustments could help Denmark get more of the benefits that countries like Austria, Ireland and Norway have gotten from inflow of workers from the new EU member states. Speeding up the administrative procedures to issue residence and working permits also in the case of firms without a collective agreement could be considered. Moreover, public employment offices could be active helping firms connect to unemployed workers in the new EU member states as well as in Eastern Germany and other EU countries where talented construction workers go unemployed. For many of those who come – and could come – the stay in Denmark is not just about earning an income, but also about gaining useful work experience. Presumably many of the Poles and Lithuanians coming to work in the countryside hope to learn from the highly skilled Danish agricultural sector and later go home and establish their own farms. That might inspire a more general model where it is accepted that workers from these countries work at fairly low salaries compared to Danish colleagues, while at the same time they learn both professional skills and about the institutional characters of the Danish labour market, including the role of unions.

Conclusions

2.35 To make the welfare society fiscally sustainable, it is necessary to increase employment – sooner or later. As the estimated effects of the Welfare Commission's proposals illustrate, a wide range of sources can contribute to this, but to get large effects, reforms have to address the retirement age, including the voluntary early retirement pension (Figure 2.6). Insufficient reforms in this respect cannot be made up for by more efforts to integrate migrants, because although integrating migrants better should definitely be pursued, it can only make a limited contribution to overall employment. The advantage of deciding on retirement reforms early is to give today's senior workers a reasonable notice. By contrast, there is no need to wait or give advance notice for reforms of unemployment duration, flexjobs, and disability pensions as presumably nobody is planning ahead to make use of these schemes.

Figure 2.6. **Employment effects of the Welfare Commission's proposals**[1]



1. The effect shown here is the increase in the number of persons employed, on top of which comes more hours worked per person. In total tax reform raises labour supply by the equivalent of 40 000 full time employed.

Source: Welfare Commission.

Box 2.2. **Summary of recommendations on welfare reform and labour supply**

This box summarises recommendations given in this chapter only. How to get young people to start and complete studies earlier and how tax cuts could motivate greater labour supply is addressed in Chapters 1 and 3.

Early retirement and pensions

- Phase out the voluntary early retirement pension (*efterløn*).
- Make it easier to retire gradually by working part-time before and after the official pension age, supported by increased actuarially neutral flexibility in the public age pension.
- Abolish mandatory retirement age clauses from collective agreements.

Unemployment insurance benefits

- Extend activation to include also 58-59 year olds, and abolish the exemption which means that unemployment benefits can be received without interruption from age 51 to early retirement at age 60.
- Shorten the standard four-year duration of unemployment benefits to something like the duration in other Nordic countries, meaning 1-2 years.

People with long-term sickness and not-too-severe disability

- Reduce the benefit received while undergoing rehabilitation to ensure that it pays for participants to accept jobs they might be offered.
- Reduce the maximum flexjob wage subsidy further to be equal to the disability pension or lower. Moreover, flexjobs should pay a wage for the hours worked and an unemployment benefit for the hours not worked.
- Review each flexjob case on a regular basis, such as every two years, with the wage subsidy ending unless granted anew. In cases where the person's work ability improves, the wage subsidy should gradually be scaled down.
- Municipal social authorities should be far more active revisiting disability pension cases to take into account, *inter alia*, new medical and rehabilitation opportunities. Disability pensioners should have an obligation to accept flexjob offers that the municipality can provide.

Unemployed social assistance recipients

- Ensure that all social assistance recipients without severe problems aside from unemployment are registered with the employment service so as to make them more visible for employers.
- Extend the benefit rules applying for those below 25, so that it covers all below 30 years, thereby supplementing the stronger activation and training approach already implemented for all below 30.

Inactive migrants

- Continue improving the language and professional skills of migrants. Ensure that those municipalities where migrant are currently considered not to be ready for employment review their activation practices.

Workers from the new EU member states

- Speed up the administrative procedures to issue residence and working permits for persons seeking work in companies without a tariff agreement.
- Public employment offices could be active helping firms connect to unemployed workers in the new EU member states as well as in Eastern Germany and other EU countries where talented construction workers remain unemployed.

Notes

1. In a 2000 survey conducted by the European Foundation for the Improvement of Living and Working Conditions, people were asked: “Over the past 12 months, have you been subjected at work to age discrimination?” and “In the establishment where you work, are you aware of the existence of age discrimination. In Austria, Finland and the Netherlands, over 10% answered “yes” to one of these questions. On average for the EU-15 countries, 5% answered yes, while only 1% in Denmark.

2. In Sweden, the duration of unemployment benefits can be prolonged to about one year and eight months if the person becomes covered by the activation guarantee. But that is still much shorter than the current Danish four-year duration.

3. This estimate is based on a simulation where current inflow rates for 5-year age groups are maintained indefinitely in combination with a simple set of assumption about the average time a person entering disability pension has left until either being transferred to public age pension at 65 or leaving the disability pension in other ways.

4. These assessments were quoted in *Arbejdsmarkedspolitisk Agenda*, published by the Confederation of Danish Employers on 26 January and 9 February 2006.

5. This possibility will end by July 2006, except if it can be documented that the person originally went from full-time to a part-time ordinary job due to the disability or other work limitation that is the basis for flexjob eligibility.

6. The Welfare Commission suggested an even lower ceiling of DKK 154 700 (91% of the maximum unemployment benefits) which would match the benefit for those who are put on the flexjob scheme, but have not yet got a flexjob.

7. As an added advantage, this would make it politically easier to make future adjustments of the scheme get effect for the entire stock of flexjobs. It is remarkable that the political agreement from February exempts those already in the flexjob scheme from some of the most important adjustments, including the subsidy ceiling. If a person’s right to a flexjob expires every two years, the stock of old beneficiaries would automatically get transferred to a flexjob on new conditions without any potential legal discussion about expropriation.

8. Firms based in the new EU member states but delivering services in Denmark *via* stationed workers are subject to the same regulations as firms based in the “old” EU member states. Unlike most EU countries, Denmark does not have a legislated minimum wage neither for Danish nationals nor for stationed foreign workers, as this is an issue delt with in negotiations between unions and employers. What applies for each individual firm therefore depends on whether they are members of an employer association and on the agreements they enter with unions.

9. According to a recent report by the EU-Commission, the movement of workers from the new Member States to the EU-15 countries have so far been rather limited, except for in Austria and Ireland (EU Commission, 2006). There seems however to be no direct link between mobility and the specific transitional arrangements that is applied, indicating that the inflow of foreign workers in EU-15 is more likely to reflect demand and supply conditions.

10. Assessment by Øystein Olsen, Chairman of the Technical Committee for the Wage Settlements (TBU) in an interview with the newspaper *Dagens Næringsliv*, 22 February 2006.

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ANNEX 2.A1.

The government's intentions for welfare reform

The Danish government presented its intentions for welfare reforms on 4 April 2006, as a starting point for negotiations with other parties in parliament to form the majority needed for changing legislation. The package, titled *Future Prosperity and Welfare – Welfare Reforms and Investment for the Future,* brings together elements from the Welfare Commission, the Globalisation Council and the Joint Committee on Adult Training. The document therefore repeats a number of the initiatives in the government's *Strategy for Denmark in the Global Economy*, which are described in Annex 3.A1 and therefore not repeated here.

Investments for the future

- To strengthen incentives to take education or work, the special benefit rule for 18-24 year olds will be extended to cover also the 25-29 year olds. For a person below 30 without professional education, unemployment benefits will be cut to half after six months, while a person receiving social assistance will have only two thirds of the adult rate. Those with children will continue to receive the adult benefits and supplements. Benefit eligibility will be conditional on accepting education offers and on not dropping out without acceptable reason. Moreover, municipalities will not have passive benefit spending reimbursed by the state for those below 30, and there will be a state-grant bonus equal to 17% of GDP for each additional 18-year old that a municipality brings into education compared to the year before; a similar sanction applies if this number falls.

More active years on the labour market

Going through education more quickly

- Those starting tertiary education more than two years after completing the secondary education needed for entry will have the monthly study grant for living costs cut by DKK 1 000 (€ 135), but will in turn be eligible for larger loans. For all students, another DKK 1 000 of the monthly study grant will be retained and paid out as a bonus at the end of each semester provided there has been sufficient progress in studies. There will no longer be 12 months of extra study grants in excess of stipulated programme duration. In turn, the access to student loans will be extended. Furthermore, it will no longer be possible to save study grant payments for use after the stipulated programme duration. However, students will be allowed to earn more before study grants are withdrawn. These changes are scheduled to be introduced in summer 2008.

- Dissertations for the Master's/MSc degree must be handed in after half a year. Universities will have a duty to actively coach students at risk of becoming delayed and dropping out. University funding, which is already based on completed exams rather than enrolment, will only be paid for exams passed within stipulated programme duration plus one year, and part of it will be released only once the student completes the full degree. These changes are also scheduled to be introduced in summer 2008.

Withdrawing later from the labour market

- The age threshold for the public age pension will be raised by one year in 2023 and 2025 thereby going up from 65 to 67. The voluntary early retirement pension will be maintained, but the age threshold from when it is available will be raised by one year in 2017, 2019 and 2021 thereby going up from 60 to 63 and its maximum duration will be shortened from 5 to 4 years. From 2025, these age thresholds will be raised in line with life expectancy for 60 year olds, meaning that the number of years in retirement would remain constant.

- The voluntary early retirement pension will continue as a contributory scheme, but the extent of public subsidies will be reduced by requiring 30 years of contributions, up from 25 today, and requiring that contributions start before the person is 30 years old. Moreover, the annual contribution will be raised slightly by DKK 667 (€ 90), with a similar reduction in the contribution paid by members of unemployment insurance funds. Nobody should be enrolled as contributor by default, and those who no longer wish to contribute following this reform, should have the possibility to leave with all their contributions being transferred to their individual pension savings plan before 2009 with an additional bonus of 65%. The tax-free bonus rewarding those who continue working during at least two years when eligible for the voluntary early retirement pension will be raised by 50%. All of these changes will, however, only concern those below 50 today. Moreover, even when the full reform is phased in, the net-of-tax benefits received by a person using the VERP for the full four years will be three time as high as the contributions made by the person, meaning that two thirds of the costs are carried by public subsidies. For someone continuing work and then using the VERP for two of the four years, it will be half-half.

- The age threshold for when private pension savings can be paid out on tax-favoured conditions will be raised in line with that of the voluntary early retirement pension, but not for savings plans established already today. Other age thresholds in the benefit system and civil servant pensions move in tandem with those of the VERP and the public age pension. The part-time early retirement pension will be phased out (it is already very small with only 1 200 recipients compared to 256 000 VERP recipients).

- All exemptions in unemployment benefit rules and activation for people in their 50s and 60s will be phased out from January 2007. Legislation hindering age discrimination in the labour market will apply for all below 70, up from 65 currently. Collective agreements for police and defence employees which stipulate mandatory retirement at 60 will be renegotiated. Public funding will support changes in work practices that prevent workers from becoming worn out.

Strengthening efforts to reduce unemployment

- Unemployment benefits are not shortened from the current four years, but very intensive job-search and wage-subsidy activation is introduced when having received unemployment benefits for 2½ years. Meanwhile, the period of work needed to regain unemployment benefits when they expire after four years is raised from half a year to one year. Availability requirements and sanctions if working on the black market are intensified.

Better integration

Increasing employment of migrants and their descendants

- The government will invite the social partners to participate in negotiations about special terms for migrants starting a job, including wages that differ from the standard collective agreements. This will be coupled with temporary wage subsidies and counselling. Large companies will be offered partnerships. Activation of at least one month will be available every six months for social assistance recipients with other problems than unemployment. Municipalities will be sanctioned financially if not providing timely activation. The ten municipalities with most unemployed migrants will get financial support for hiring job consultants.

Getting migrants with better skills

- Residence permission will be given to anybody with a job offer paying more than 105% of the average production worker's earnings. Green cards with six months residence permission will be given to foreigners without a specific job offer, but with a good chance of finding one, including those completing a tertiary degree in Denmark.

- To get *time-unlimited* residence permission, migrants will need to pass a Danish language exam and have had regular work for at least two years, in addition to the current requirement of having been in Denmark for seven years. As a prelude to family reunification, migrants will need to pass an exam in their home country, documenting a basic knowledge of Danish society and language.

Source: Government (2006), *Fremtidens velstand og velfærd – velfærdsreformer og investeringer i fremtiden*, (Future Prosperity and Welfare – Welfare Reforms and Investment for the Future), www.fm.dk.

Chapter 3

Human capital – getting more and using it better

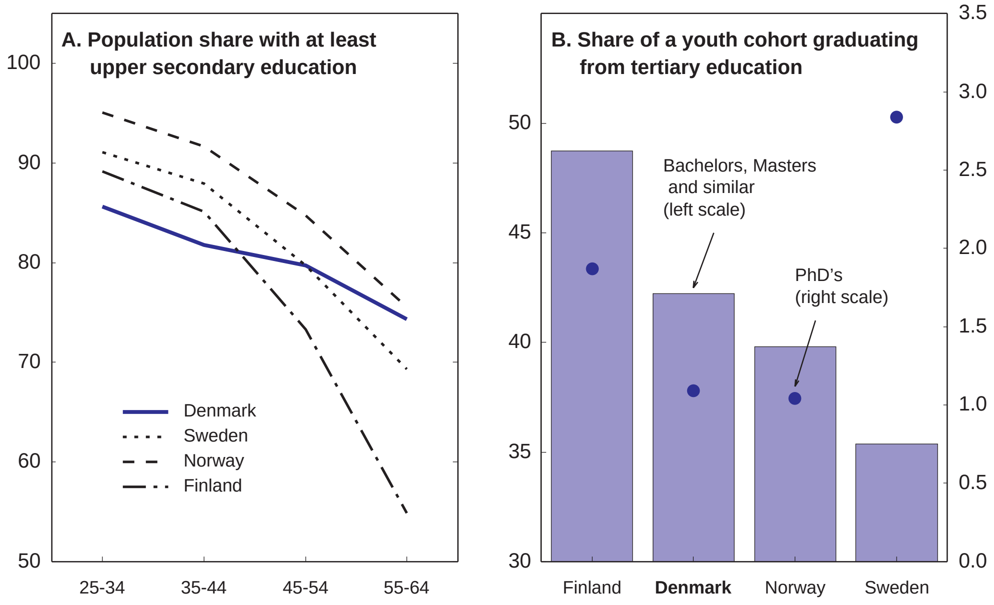
One of the key weaknesses of the Danish economy with respect to reaping the benefits of globalisation is the surprisingly slow progress in human capital formation. Among the 25-34 year olds, only 86% have at least upper secondary education, the lowest level among the Nordics. The share of a youth cohort taking tertiary education is fairly high, but with a typical age of 23 when beginning to study and with prolonged study times, there are too few years left during which the fruits of qualifications can be reaped in the labour market. This chapter reviews government initiatives to improve the quality of education and then looks more closely at how to strengthen incentives to acquire and use human capital.

3.1 Speaking in broad terms, educational attainment compares well with other OECD countries, but the picture of a country that is leading in skills is no longer true. The general educational basis is fairly good for all age groups, but Denmark is different from the other Nordics by having a "flatter" age profile in the share having attained at least upper secondary education (Figure 3.1).

3.2 Meanwhile, the earnings are less different across levels of educational attainment than in other countries. One possible explanation is that even those who have not completed a medium or high level of formal education may have received more adult training than in other countries. Another possible explanation is the larger share graduates in humanities who are typically less well paid, mirrored by a smaller share of graduates in natural sciences and technology than in for example Finland and Sweden. Moreover, the very narrow distribution of earnings across levels of education has been supported by a trend decline in the number low-skilled as those retiring have on average had less training than the young cohorts coming into the labour market. Despite a decline in relative demand for low-skilled workers, their relative pay has therefore held up well. Over the coming decade, however, those retiring will have a skill composition closer to the average of the labour force, meaning that if demand continues to decline, it will start to push down wages, unless training activities are boosted (Economic Council of the Labour Movement, 2005).

3.3 In light of these future trends, it will be vital to boost training and education out of concerns for productivity as well as for income equality. The following section reviews the policies being pursued to improve the provision of education, and the subsequent section analyses how individual incentives to acquire human capital can be better aligned with societal needs focusing at tertiary education.

Figure 3.1. **Educational attainment compared to other Nordics**
Per cent, 2003



Source: OECD Education at a Glance database.

Improving educational provision

3.4 The government's ambition is to enhance educational provision as a central element of its recent *Strategy for Denmark in the Global Economy*. The aim is that in 2015, at least 95% of each youth cohort should complete upper secondary education, and at least 50% should complete tertiary education typically at the age of 25. To support these ambitions, the strategy comprises a wealth of initiatives (Annex 3.A1).

3.5 Compulsory education has had considerable focus in recent years not least because of the PISA study revealing learning outcomes for 15-year olds being well below what would seem satisfactory, not least in light of the public resources spent. For mathematics and problem solving, results are a bit above the OECD average, but not so for reading, while for science the results are among the lowest of all OECD countries. It may be that children get other competencies in school including communication and team-working skills – that is a widespread public perception – but it should be possible to provide such competencies without sacrificing science and reading. In particular, the Copenhagen PISA study was worrying when finding that a large group of second-generation migrants seem to be lost during school, leaving with only very limited literacy skills. The PISA study initiated an OECD review of compulsory education recommending *inter alia* to enhance student assessment, strengthen the role of school management and allow more specialisation in teacher training (OECD, 2004a). These recommendations have been followed up in the 2005 *Survey* and 2006 *Going for Growth* with the perspective that more frequent systematic evaluation of student achievement would help to identify learning problems at an early stage, while allowing teachers to specialise more should help raise their professional competencies and benefit not least subjects like science (OECD, 2005a and 2006a). Recently, political agreements have been reached concerning both systematic evaluations and teacher training, and legislation is now underway in parliament (Annex 1.A1). Efforts should now continue to improve compulsory education, including by strengthening the educational content of the introductory year for six-year olds and targeting or abolishing the voluntary 10th form.

3.6 For education and skill policies to succeed in nurturing the potential of all young people, post-compulsory education with a vocational orientation will need a substantial lift. One of the basic problems is a lack of apprenticeships, and a natural approach could be to increase charging of firms not taking apprentices. The necessary administrative mechanisms are already in place with compulsory employer contributions being returned as partial wage reimbursements for firms having apprentices. Raising the contribution and reimbursement rates a bit would be a simple way of making apprentices more attractive.

3.7 Regarding tertiary education, government's globalisation strategy entails substantial institutional reorganisation and a doubling of the number of PhD students, most of which should be in natural sciences, technology, IT and health. Public research funding, which is to be raise to 1% of GDP by end of this decade, will increasingly be allocated on a competitive basis. A special OECD review last year highlighted *inter alia* that addressing quality problems could improve completion rates, and that universities could make a larger contribution to society and the economy by interacting more with business on research and providing more adult learning (OECD, 2005b; Øresund University, 2006).

3.8 In parallel with the globalisation strategy, a joint committee comprising government and the social partners has prepared a reform of adult learning. Each year, over 60% of those in the labour force take part in some form of training being either offered by their employer or publicly, and thereby participation is already high compared to other OECD countries (Ministry of Finance, 2006; OECD, 2005d). In the concluding statement from the joint committee on lifelong learning, the government and social partners agreed to a set of initiatives to facilitate a gradual expansion of adult training. The government will make more information and guidance available for individuals as well as firms, and establish a system for recognition of competencies acquired outside the formal education. It will also expand preparatory adult training and bring acquisition of basic literacy skills closer to the practical context of each workplace. Other initiatives involve language training for migrants, possibilities for unskilled adults to pursue a professional diploma and overall flexibility including training in the spare time. Meanwhile, the social partners recognise a responsibility for raising awareness and promoting adult learning in particular among those at risk of unemployment often lacking skills but also lacking the motivation to seek training. Concerning organisation and funding, the committee concluded that the current framework should be capable of meeting some increase in activity, but that further growth should be allowed beyond the limits set by public funding allocations. Several alternative funding vehicles are possible. One is the existing fund reimbursing wage to employers when staff are on certain forms of training. It is financed by legislated compulsory employer contributions. Other vehicles such as savings accounts could emerge with unions and employers settling contributions *via* collective agreements. As part of the welfare reform package being discussed currently (Chapters 1 and 2), the government has proposed to establish a one-off pool of DKK 1 billion to fund increased adult training, provided that also the social partners increase their financial contributions, as might happen with the spring 2007 negotiation round. As part of a funding reform, the committee also recommended to make the supply of training more responsive to changing demand *via* more differentiated public subsidy rates and charging of participants.

Making individual incentives more compatible with societal needs in tertiary education

3.9 Despite the narrow gross earnings distribution, the economic incentive to pursue tertiary education is not particularly small compared with other countries. The high level of income taxation and its strong progression even further reduce the private return to pursuing education, but this is counterbalanced by state grants for students' living costs being more generous than in any other OECD country. All in all, the private internal rates of return to taking tertiary education are at an intermediate level compared with other OECD countries for which data are available (Table 3.1). This matches the observation that the share of a youth cohort taking tertiary education is not low compared to other countries.

Table 3.1. **Private internal rates of return to tertiary education**
1999-2000, per cent

	A. Men								
	United Kingdom	United States	France	Netherlands[1]	Denmark	Sweden	Germany	Canada	Japan
Return based on pre-tax earnings	18.1	18.9	13.3	11.7	7.9	9.4	7.1	8.4	8.0
Impact of (percentage points)									
Taxes	-2.1	-2.3	-1.6	-2.0	-2.1	-1.5	-1.5	-0.5	-0.3
Unemployment risk	1.6	0.9	2.4	0.0	1.0	1.2	1.1	1.3	0.9
Tuition fees	-2.7	-4.7	-1.1	-0.6	-0.2	-0.7	-0.3	-2.3	-2.0
Public student support	3.6	2.1	1.3	2.9	4.8	3.0	2.7	1.8	1.3
Comprehensive rate	**18.5**	**14.9**	**14.3**	**12.1**	**11.5**	**11.4**	**9.1**	**8.7**	**7.9**
	B. Women								
	United Kingdom	France	United States	Netherlands[1]	Denmark	Sweden	Canada	Germany	Japan
Return based on pre-tax earnings	16.4	12.1	18.8	9.4	6.0	7.4	10.6	7.0	8.0
Impact of (percentage points)									
Taxes	-2.3	-1.7	-2.0	-1.0	-1.1	-0.7	-1.3	-1.6	-0.2
Unemployment risk	1.3	4.8	1.4	0.7	0.7	1.6	1.2	0.6	0.5
Tuition fees	-2.5	-1.7	-6.0	-0.7	-0.1	-0.8	-2.9	-0.6	-2.4
Public student support	3.2	1.9	2.7	4.1	5.6	3.3	2.4	3.0	1.3
Comprehensive rate	**16.1**	**15.4**	**14.7**	**12.5**	**11.1**	**10.8**	**9.9**	**8.4**	**7.2**

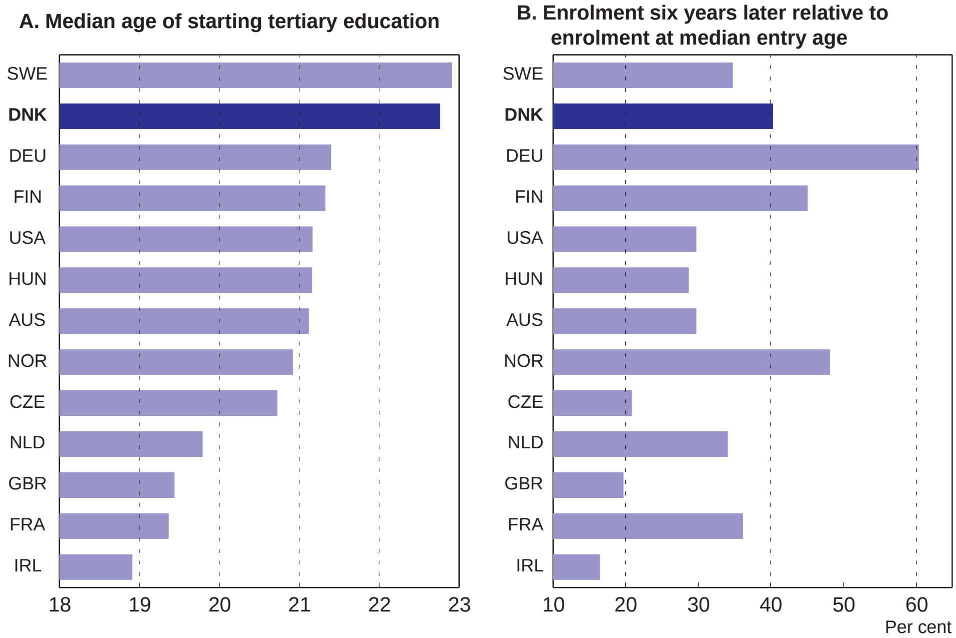
Note: The rates of return to tertiary education are calculated by comparing the benefits and costs with those of upper-secondary education. The return based on pre-tax earnings also takes length of study into account. In Sweden, the theoretical length of standard tertiary courses is used for the calculations rather than the average theoretical length of different programmes.
1. 1997

Source: Blöndal *et al.* (2002).

3.10 However, the combination of high taxes and generous grants creates adverse incentives to take extended breaks between secondary and tertiary education and to prolong studies once started. Finishing studies later of course reduces lifetime earnings as the person has fewer years to use the acquired skills on the labour market, but much of this loss is carried by public finances *via* foregone tax revenue, whereas the person gets all the intangible benefits of "student life" which for natural reasons are untaxed.[1]

3.11 The average person completing tertiary education or an upper secondary education with a professional orientation is around 4-5 years older than if she/he had taken the direct route when completing compulsory education. Most of this delay is due to long waits before beginning to study, as many young people take the voluntary 10th grade, work in a café, travel abroad or enjoy their time in other ways while considering what to do in life. For longer tertiary programmes, waits before starting are "only" 2½ years, but on average students spend 1¾ years more at university than their programme is supposed to last. In addition, time spent on studies from which the person subsequently drops out without completing the programme, amounts to ½-¾ years for the average person. Only a small part of the delays can be explained by individual characteristics, indicating that a general "delay culture" has crept in among young people (Welfare Commission, 2006).[2] Indeed, compared to other countries, the problem with students starting late is extreme in Denmark, whereas the prolonged study duration is a problem shared with other countries (Figure 3.2).[3]

Figure 3.2. **Students start their tertiary education late**
2003



Source: OECD Education at a Glance database and own calculations.

3.12 Reducing the delays before beginning to study would seem particularly important because it would also help reduce drop-out rates. Almost a third of those entering tertiary education leave without completing their bachelor degree, and starting late implies a much higher propensity to drop out from longer tertiary programmes where analytical skills like mathematics acquired in secondary education may become rusty if left unused for some years before continuing in tertiary education. For someone taking three or more "sabbatical years" between secondary and tertiary education, the likelihood of dropping out from a long tertiary programme is over 25 percentage points higher than for a person with similar characteristics but beginning studies right away. For tertiary programmes of intermediate duration (teachers, early childhood pedagogy, nurses etc.), however, there is no such pattern, possibly reflecting that more life experience compensates for any rustiness of analytical skills (Economic Council, 2003).

3.13 It is hard to say exactly how much economic incentives matter for educational choices. Surveys typically find that young Danes say they base their choice of what to study much more on personal interests than on job and earnings prospects (Globalisation Council, 2005). Such statements, however, may to some extent reflect that young people are well aware that *net* earnings do not vary that much by education, so that in their constrained optimisation, they focus on other aspects. The following analysis therefore proceeds on the assumption that economic incentives have at least some effect on human capital acquisition and that outright adverse effects should be avoided as much as possible.

Adjusting study grants covering living costs

3.14 Some of the adverse incentives from the high taxes and study grants, could be counterbalanced by targeted adjustments rewarding early entry and on-schedule completion of studies. The ideal would be that young people only postpone studies for one year, if not starting right after completing secondary education. It would make a large contribution to fiscal sustainability, as public finances improve by 40% of GDP per capita or more when an average person taking longer tertiary education starts and completes studies one year earlier.[4] The education system should remain open to those deciding to seek tertiary studies later in life, but someone who completes secondary education and wishes to study, should be clearly encouraged to do it without first taking several sabbatical years. To create such incentives, the government has proposed a set of adjustments of the public study grants as part of the welfare reform currently being discussed (Chapters 1 and 2). Those starting tertiary education more than two years after completing the secondary education needed for entry would have DKK 1 000 (€ 135) of the monthly study grant for living costs cut, but would in turn be eligible for larger student loans. For all students, DKK 1 000 of the monthly study grant would be retained and paid out as a bonus at the end of each semester provided there has been sufficient progress in studies. There would no longer be 12 months of extra study grants in excess of stipulated programme duration. In turn, the access to student loans would be extended. Furthermore, it would no longer be possible to save study grant payments for use after the stipulated programme duration. However, students would be allowed to earn more before study grants are withdrawn.

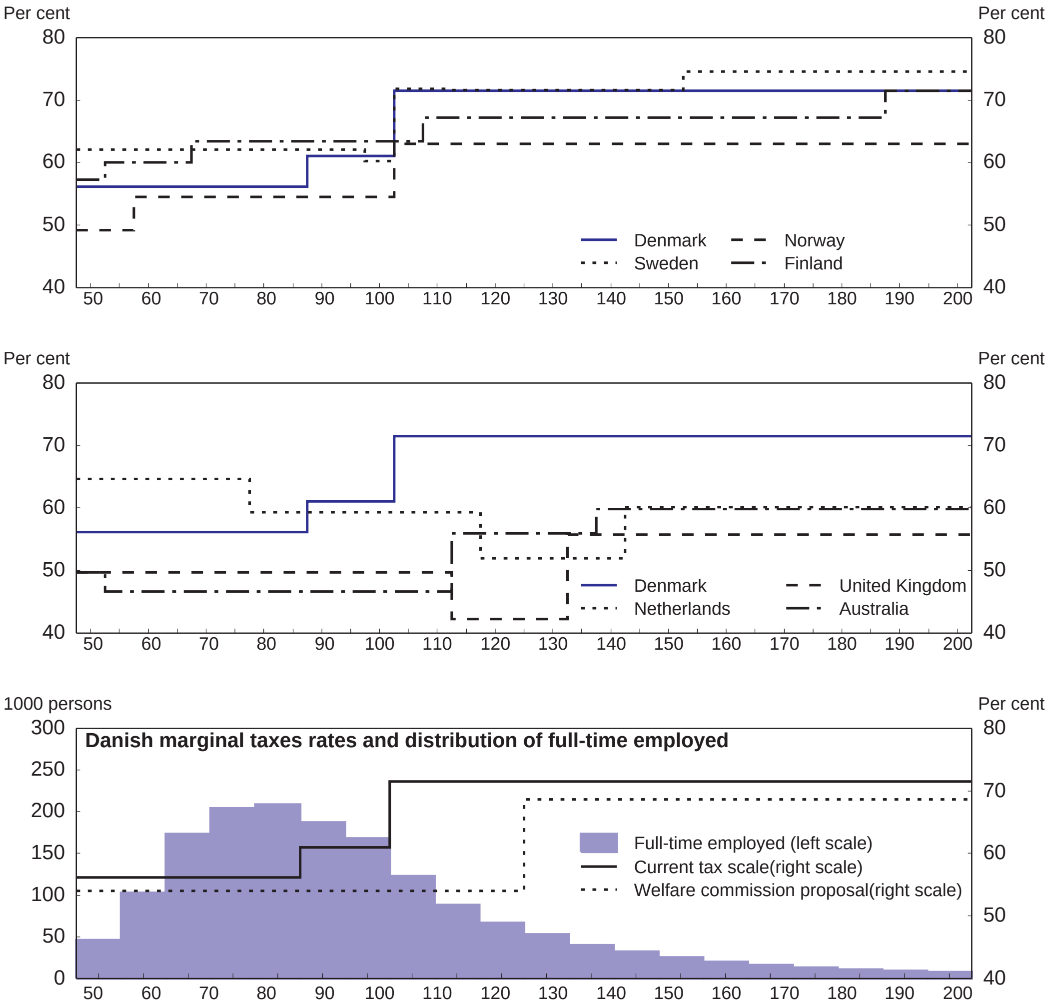
3.15 To ensure that such measures have full effect and do not disfavour students from a less advantaged family background, it is vital that it is backed up by guidance both at the time of completing secondary education and once enrolled in a tertiary programme. Under the government's proposals, universities would therefore have a duty to actively coach students at risk of becoming delayed and dropping out. Moreover, university funding, which is already based on completed exams rather than enrolment, would only be paid for exams passed within stipulated programme duration plus one year, and part of it would be released only once the student completes the full degree.

Reforming taxation for the medium term

3.16 Even within a Nordic context, Denmark has exceptionally strong progression in its tax system. The "top tax" is paid by nearly 40% of the full-time employed as it sets in already when personal income exceeds 103% of the average production worker's earnings. Above that threshold, social contributions and income taxes imply a marginal tax rate of 63%. Consumption taxes being higher than in other countries exacerbates this, with the marginal tax rate reaching 70.4% when taking the 25% value added tax into account, and 86% if buying a car where there is a 105-180% excise duty on top of the value added tax.[5] The high *level* of taxation implies that the individual only gets a limited share of the social return associated with efforts to use acquired human capital productively.[6] The strong *progression* of income taxation means that having low earnings while studying and then high earnings afterwards is taxed harder than if earnings are spread out more evenly over the lifetime, and reduces the incentive to choose subjects with good earnings prospects.

3.17 Moving towards the income tax schedules of Norway and Finland would therefore improve incentives to acquire human capital. The Welfare Commission's proposal would be a significant step in that direction by raising the threshold of the top tax to 122% of APW, and abolishing the middle tax while applying a slightly higher top tax rate (Figure 3.3).[7] Such a reform has a double effect on skill supply, as it strengthens the incentive to acquire skills, while at the same time motivating many workers with intermediate skills to work more hours. When the fiscal and macroeconomic situation allows, moving up the threshold for the top tax would therefore be the place to start tax reductions, as recommended also in previous *Surveys* and discussed in Chapter 1.

Figure 3.3. **Marginal tax rates**[1]
For persons with income at 50-200% of average earnings, 2005



1. Marginal income tax rate plus employer and employee contributions and average indirect taxes, for a single person with no children.

Source: OECD taxing wages databases; Welfare Commission.

3.18 A flatter tax structure could be achieved by a revenue-neutral reform raising the real estate tax, while lowering the middle or top income tax. In fact, increasing the real estate tax rate to 1½ per cent, as recommended in Chapter 4, would generate more extra revenue than the entire revenue from the top tax. And shifting the weight from progressive income taxes to property taxes would improve incentives while changing the income distribution only marginally. It would balance the tax treatment of housing *versus* other consumption, and improve incentives to work. From a human capital and mobility perspective, it is advantageous also by making Denmark more attractive for experts staying for a limited number of years for whom owner-occupied housing is not a natural option. Even with substantial reductions in the middle and top tax, income taxation would still be more progressive than in countries like the Netherlands and the United Kingdom (Figure 3.3).

3.19 Making work financially attractive relative to being unemployed or inactive also matters for human capital formation in a wide sense if people are short sighted and underestimate the potential for learning and earnings progression once in work. For those working with income in the range from half to full average production worker earnings, marginal effective tax rates are not particularly high compared internationally, even when taking benefit withdrawal into account.[8] However, the net income gain from being in work relative to receiving unemployment benefits is only about 10% for a person able to get two thirds of average production worker earnings. In combination with the duration of unemployment benefits being longer than in other countries, this is likely to cause an unemployment trap, as only after four years would the person transfer to social assistance where the gain from full-time employment would be somewhat larger. Although the situation is not extreme, the immediate income gain from going into work is clearly more limited than in most other countries, and it should therefore have attention with the purpose of raising employment (OECD, 2005c). Expanding the existing Earned Income Tax Credit (*beskæftigelsesfradrag*) would make the gain bigger, and has been proposed (Welfare Commission, 2006). However, it is fiscally very expensive as the narrow income distribution implies that many would get it even if phased out relatively rapidly. The effects on human capital formation would depend on the balance between the gradual learning of those coming into work versus the disincentives to up-skill resulting from the higher marginal tax rate generated if the credit is phased out as income grows.

Reforming taxation and study finance for the longer term

3.20 Looking further ahead, a wider reform of education finance should be considered combining tax reform with introduction of tuition charges. The current model can be said to rest on an implicit social contract where students pay nothing for tuition and receive generous grants for living costs, but then "pay back" *via* income taxes that are higher and more progressive than in other countries. The advantage of the current arrangement is that it removes credit constraints by smoothing income over the individual's lifetime and provides substantial insurance for those being less successful at university or afterwards in the job market. The disadvantage is that while free tuition and study grants are rights for an individual admitted for tertiary studies, the extent of "repayment" is much affected by choices made by the graduates in their working life. Indeed, the model only functions if graduates work sufficiently long and do so in Denmark. The financing model is therefore under pressure in two ways:

- Graduates seeking more spare time in the form of shorter working weeks, longer holidays, leave periods and early retirement. This is not new, but gradually changing norms and habits may exacerbate the problem.

- Because the Danish model is extreme compared to other countries, it comes at odds with international mobility. For a person having studied in Denmark, it pays to move abroad and work in a country with lower taxes for high-income earners, such as the United Kingdom or United States. The net emigration of highly skilled is rather small, as most prefer to come back after some years, but it is there. Less discussed, but equally important, is whether Denmark is attractive for highly skilled foreigners, some of whom have large tuition debt from studies at American top universities.

3.21 Finally, the current model does not give room for universities to develop training offers funded by tuition charges to any substantial degree, because participants would have difficulties recovering the costs as they would pay the high marginal income taxes of any earnings increase resulting from the acquired skills. Such a training market has therefore only developed on a very small scale with some MBA programmes where employers pay for staff to attend.

3.22 All of these concerns would point towards seeking methods whereby those taking education can be requested to repay the costs associated with their studies in a more direct way thereby making the funding model more robust. The basic idea is that a large part of the redistribution implied by taxes and income transfers is simply smoothening income over each individual's lifetime rather than redistributing between individuals having different lifetime income. Basing such income smoothening on publicly provided individual accounts or loans can enhance cost-consciousness without weakening the insurance and genuine redistribution provided the welfare state today (Barr, 2001; Economic Council, 2005 and Feldstein, 2005). One strategy is to move towards *significantly* lower and less progressive income taxes, in which case tuition would naturally be paid on top of taxes *via* income-contingent graduate contributions like in the United Kingdom (OECD, 2004b and 2005e). Reform in that direction could definitely work well, but would entail a somewhat wider income distribution than Denmark has today. Presuming there is a social preference for not going that far, the following therefore focuses on how repayment of costs associated with tertiary education received could *replace* some of today's income taxes while maintaining relatively high and progressive taxes for income in general. In practice, today's grants for students' living costs would be converted to loans with parallel loans being established for tuition costs. As a graduate, each person could have an income tax statement with two elements: one being repayment of these loans, the other being regular income taxes. By allowing the person to credit repayments against income taxes or to deduct repayments from the tax base, work incentives can be enhanced in a number of different ways (Box 3.1).

3.23 The Welfare Commission has proposed a model along the lines of the box's type 1, but limited to candidate degrees (roughly equivalent to masters). Graduates would be required to repay today's grants for living costs plus DKK 30 000 per year for tuition. Repayment would happen in 15 annual portions over the 20 years following graduation. As repayments are made, they would be credited fully against tax liable on income from work. That gives an incentive to remain in Denmark rather than moving abroad to work in a country with lower income taxes. And it gives an incentive to limit absences from the labour market (pregnancy, inactivity etc.) to five years. The model is interesting, but it could be extended in ways that would have wider benefits.

- The problems discussed above can be equally important for the bachelor and PhD level, and it would therefore be natural to extend it to *all* tertiary education. The larger amount can then be spread as equally large portions for each of the years remaining until the age threshold for the public pension. This has the additional desirable effect that early retirement becomes less attractive for those who have taken long tertiary programmes – both in case of early retirement using public schemes while staying in Denmark, and in case of moving abroad (typically to southern Europe) retiring based on labour market pensions or other savings.

- Rather than giving a *full* credit effectively reimbursing loan repayments, repayments should rather be deducted from the tax base (Model 2 in Box 3.1). That reduces average marginal taxes a bit, while making students carry part of the costs of tuition and grants, thereby encouraging more cost-conscious study habits.

- To attract highly skilled foreigners, a special credit could be made for documented tuition costs against the progressive *middle* and *top* tax liable on income from work (Model 3 in Box 3.1). A similar credit could be available for Danes having studied at top universities charging more than covered by the basic model. Thereby, Danes having grown up with their parents in the United States or Danes having moved there later to take a master and PhD at a top university will find it attractive to come home. And Danish universities get at chance to develop into top institutions funded from higher tuition charges, as ambitious domestic students might be willing to pay. Persons already in the workforce become able to finance MBA programmes and similar themselves, whereas today they mostly rely on their employer to pay. Foreigners coming to Denmark to work should also benefit, for example as follows. When arriving and contacting the tax authorities, their documented tuition charges paid as students are registered, allowing it to be credited against *middle* and *top* tax liable on income from work. As long as they have study costs to recuperate, their marginal tax would be 43%, thereby striking a middle-path between 63% for those *outside* today's expatriate specialist scheme and liable for top income tax, and 25% for those *inside* the scheme.[9]

3.24 Whether it is altogether an advantage to introduce such reforms depends *inter alia* on how international mobility evolves. In net terms, there will be more bureaucracy, because of the need to keep accounts and collect money abroad, although of course any reduction in income taxes reduces the incentive for tax avoidance and thereby the bureaucracy needed to police that income is declared. In any event, arrangements would have to be crafted in a way that takes into account obligations to treat nationals from other EU countries in the same way as Danish citizens. That should be possible, though, as Finland has introduced a tax credit for repayment of state-guaranteed loans taken up to cover living costs while studying. Those who enter tertiary education from summer 2005, and complete without excessive delay, will be able to claim a credit of 30% of debt repayment up to € 300 per month of study. For someone having completed a 5-year university programme, this arrangement means a cumulative reduction in tax payments in Finland of up to € 3 300. A similar credit is available to persons having studied in other countries, provided that they satisfy the criterion of early completion (Social Insurance Institution of Finland, 2005).[10]

Box 3.1. **Ways of combining tuition charging with a Nordic tax structure**

Model 1. A full credit against taxes liable on income from work; repayment required in fixed annual portions

Under this model, repayments are effectively refunded by the state by being credited completely in taxes liable on income from work. For persons having at least some income from work in Denmark there is no difference from today's situation. However, for persons moving abroad after graduation there is an important difference, as they would be required to pay back their loans without benefiting from the tax credit. Marginal taxes are unchanged.

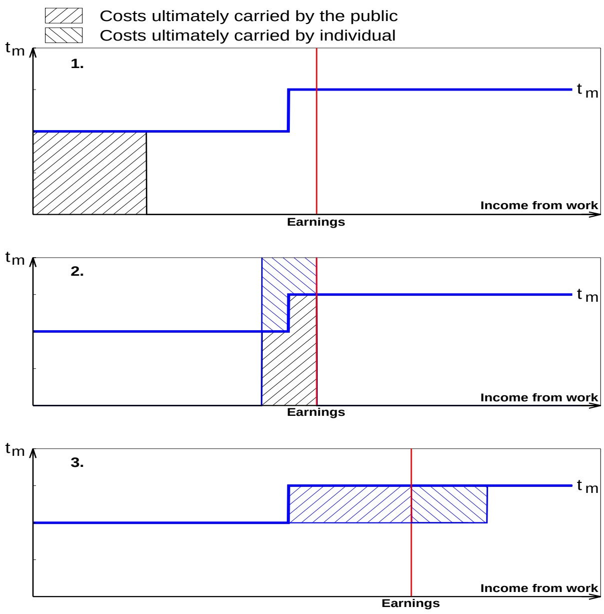
Model 2. A deduction from the income-from-work tax base

Under this model, income taxes would be liable only on the part of income that exceeds repayments associated with human capital investments. As such, it is parallel to the treatment of investment depreciation in corporate taxation. The advantage is that tax distortions are reduced, because net of the repayment deduction, some graduates move to a lower marginal tax rate, as the illustration shows. This is achieved without necessarily producing a less equal income distribution overall. If other parameters of the tax system are unchanged, successful as well as unsuccessful graduates will in fact be paying more of their lifetime income to the public, as they carry some of the costs of today's free tuition and grants. How that fiscal room is used determines the model's distributional effect. If combined with a requirement of fixed annual repayments, this model will have the same effect on migration as model 1.

This model replicates the idea of a citizen account proposed recently in a more general form (Economic Council, 2005): students have access to their future earnings *via* their individual account (loan), and redistribution *across* individuals only concerns the part of income differences that is not simply reflecting that individuals are at different stages of life. In a pure form, this model gives neutral incentives for whether to study or not with less adverse incentives to begin and complete studies late.

Model 3. A credit against the progressive elements of taxes on income from work

This model maximises the reduction of marginal taxes, as the progressive elements of income taxes are only paid when having depleted the repayment credit. This credit can be set at 100% of the repayment or set as a lower share. As discussed in the text, this model is relevant as a vehicle for financing tuition that is not available for public funding today. It implies that the public purse takes part in the costs of this tuition if the person actually works and pays taxes of a high income in Denmark. Thereby, public finances still gain even if the credit is set at 100% of the repayment.



Conclusions

3.25 A number of valuable initiatives have already been taken over the last couple of years improving the quality of education on offer – and many more initiatives are under way as part of the Globalisation Council's work. These initiatives are highly commendable, and should be implemented vigorously. However, incentives to pursue education and use skills better on the labour market are also needed – some now and others for the longer term (Box 3.2).

Box 3.2. **Summary of recommendations on human capital**

Improving educational provision

- Continue the efforts to improve compulsory education, including by strengthening the educational content of the introductory year for six-year olds and targeting or abolishing the voluntary 10th form.
- Make more apprenticeships available, possibly helped by increasing refunding for firms taking apprentices, based on higher contributions from all employers.

Enhancing incentives to pursue education and use skills on the labour market

- Adjust the study grant so that someone who completes secondary education and wishes to study, has a clear incentive to do it without first taking several sabbatical years. Adjustments should also encourage on-schedule completion of studies while continuing to make loans available for those who being delayed.
- Raise the income threshold from where the top tax is paid as soon as the macro-economic situation allows. Moreover, make income taxation flatter by lowering the middle or top income tax rate, possibly financed by raising the real estate tax.
- For the longer term, consider a combined tax and tuition charging reform where the costs of tuition and grants for living costs are treated as loans to be repaid after graduation. This repayment would replace some of today's income tax, thereby reducing the incentives to work short hours and encouraging highly qualified people to work in Denmark.

Notes

1. Typical gross earnings from work for a person with long tertiary education aged 35-60 is about DKK 420 000 (128% of APW), corresponding to DKK 229 200 net of social contribution and income taxes. If being a bit myopic, students may base their decision on how fast to complete studies on what pay they can get during the first 3-5 years after leaving university, gross earnings around DKK 350 000 (107% of APW), corresponding to DKK 203 700 net, are typical. As a student, a typical net income is DKK 75 000 combining study grants with some work. The difference is substantial, but it is much less than in other OECD countries where study grants either do not exist or are less generous. Similarly, if working between secondary and tertiary education, and earning DKK 200 000 gross (61% of APW), the person will have net earnings of DKK 123 300. A net income not far below that can in many cases be found by young people travelling abroad to work in a restaurant where they may *de facto* escape the attention of local tax authorities. When a person moves from one municipality to another inside Denmark, local public authorities would inform each other, making it difficult to escape taxation. Currently, a similar exchange of information does not take place between countries. Closer cooperation with foreign tax authorities (at least within the EU) might therefore reduce the problem, but probably only to some extent.

2. Behind these averages, there is a wide distribution. In tertiary education, only 2% complete with no delay. The median delay is 3 years, but then there is a long tail.

3. The ratio shown in the figure gives an indication of study duration, but is not a perfect measure as it doesn't take stipulated study duration into account. A low ratio could reflect dropouts, and a high ratio could reflect many PhD students.

4. At average earnings for a person with a long tertiary education (DKK 420 000 annually), social contributions and income tax receipts amount to DKK 190 800. This amount is an upper estimate of the fiscal gain, which applies if the person is travelling abroad or is economically inactive during the year considered between secondary and tertiary education. Alternatively, if the person is working in Denmark during that year, earning DKK 200 000 paying social contributions and income taxes of DKK 76 700, then the *net* fiscal gain of starting and completing studies one year earlier is reduced to DKK 114 100 (40% of GDP pc.).

5 . The excise duty coming on top of the valued added tax is 105% for the part of a car’s value that does not exceed DKK 62 700 (equal to € 8 400), and 180% for the part of the car’s value exceeding this threshold. As illustrated in a calculation example from the Ministry of Taxation, the value added tax and excise duties reach a combined 165% of the pre-tax sales price in an example of standard family car (http://www.skm.dk/tal_statistik/afgiftsberegning/2287.html). Out of DKK 100 earned, 63 are paid as social contributions and income taxes, and 23 as value added tax and excise duty. Only the remaining DKK 14 is kept by the firm selling the car.

6. Arguably, high tax rates affect the person’s net income also if not taking education. This mitigates the disincentive, because if evaluating the *relative* increase in consumption, then an increase in proportional income taxes will not reduce the incentive to study.

7. The Welfare Commission also proposed to expand the earned income tax credit, and this is why marginal taxes would become lower also for those not paying middle tax. The reduction in the marginal tax rate facing those earning more than 122% of APW reflects the abolition of the 6% middle tax, which is currently paid also by those liable for the top tax. The reduction in marginal taxes for high-income earners is, however less than 6 percentage points as the top tax rate would be raised by 2 percentage points under the Welfare Commission’s proposal.

8. For those with earnings below about 50% of APW, combined marginal tax rates are above 90% because of the rapid withdrawal of social assistance. However, once above about half of average earnings, the effect of benefit withdrawal only causes really high marginal tax rates when combining with the middle and top income tax. This can occur for withdrawal of housing benefits in particular for lone parents or one-earner couples with children. For a lone parent with two children having the standard characteristics assumed in the OECD tax-benefit models, the 2004 comprehensive marginal tax rate combining social contributions, income taxes, benefit withdrawal and indirect taxes (VAT etc.) falls from 96% to 56% at half of APW earnings, and then gradually rises to reach a peak of 84% in income interval from 103% of APW where the top tax begins to 130% of APW where housing benefit withdrawal ends. For a similar lone parent in the United Kingdom, a high combined marginal tax rate of 91% extends all up till three quarters of APW earnings and then continues at 75% until it falls to 44% above APW earnings (OECD, 2006b).

9. This special regime is available during three years for high-income earners and researchers coming to Denmark. The scheme was introduced in 1992, and by 1 January 2006, a total 1 664 persons were benefiting from this favourable treatment. If staying in Denmark after the three years, the person will transfer to the normal income tax regime.

10. When the credit is approved, the full amount that can be claimed for the complete repayment of the loan is calculated. This amount can be claimed as credit at speed of loan repayment, meaning that repayments during the first couple of years as a graduate can effectively be reimbursed by the state, where after the credit is depleted and the cost of repayment is carried fully by the person herself. As a consequence, the incentive to stay in Finland as a graduate exists only for the first couple of years after graduation.

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ANNEX 3.A1

The government's globalisation strategy

In the beginning of 2005, the government appointed a Globalisation Council chaired by the Prime Minister. Calling evidence from a large number of invited speakers, it has discussed the challenges associated with globalisation. On this basis, the government presented a draft *Strategy for Denmark in the Global Economy* on 16 March 2006. The strategy aims to strengthen competitiveness as well as social cohesion. The main elements are listed below. For some of the over 300 initiatives, political agreements with the opposition has been reached already (compulsory school initiatives, for example), while some other initiatives are only been announced in headline form without specification of how they will be implemented (research initiatives, for example).

Compulsory education

The mission statement of the public school at compulsory level (*Folkeskolen*) should stress strong abilities in the core subjects. Teaching in reading, mathematics, science and English should be guided by clearer national plans stipulating the progression to be achieved at each stage, supported by nationally standardised tests. All three-year olds should go through linguistic screening to be repeated when they enter the introductory year preceding primary school. This introductory year becomes compulsory, meaning that children should enter school the year they turn six. Schools are to establish standards to reduce noise and increase respect for teaching as a precondition for pupils to learn. In case of extensive absenteeism, municipalities can withhold child benefit payments. Teaching must have a global perspective, increasing the awareness about foreign cultures. Teachers should specialise when studying, and ultimately they should teach only the subjects in which they have specialised. Municipal boards' accountability for school quality should be made clearer in legislation. School management's position should be strengthened.

All young people should have upper secondary education

At least 85% of a youth cohort should complete upper secondary education in 2010, and at least 95% in 2015.

Municipal boards will be given responsibility for ensuring that young people start and complete upper secondary education. This should be supported by financial incentives for municipalities and obligations for municipalities to contact young people not seeking education or dropping out. Guidance for those at risk should start already three years before compulsory school ends. Youth with insufficient adult contact should be offered a mentor starting from the last compulsory school year. The voluntary 10th form should be replaced by a ½-1 year programme preparing entry to vocational secondary education. If the number of apprenticeships offered by private employers does not increase, stronger economic incentives for each firm will be introduced. The state as an employer will raise the number of apprenticeships it offers by 25% in 2007. Vocational programmes should be more practical from the beginning to reduce dropout. Schools should report publicly about progress to reduce dropout. Vocational secondary education should allow talented students to choose more challenging elements while remaining inclusive of all students.

At least half of each youth cohort should have tertiary education

At least 50% of a youth cohort should complete tertiary education in 2015. Ultimately, students should typically complete studies at age 25.

Students should specialise more during high school to prepare for tertiary studies. Technology, natural sciences, IT and health studies should be made more attractive, including *via* more contact between high schools and universities. Universities should do more to retain students about to drop out. Shorter tertiary programmes should be tailored to naturally build on from vocational secondary programmes. A national website giving information on job prospects, earnings etc. should improve guidance for future students. For studies where not all qualified applicants are admitted, those waiting more than two years after completing secondary education will have to seek admittance *via* a separate smaller quota. The grants covering students' living costs should be adjusted to motivate earlier start and less delay (no details given). Universities should adjust study programmes to make on-time completion feasible.

Education with a global perspective

English should be taught more in secondary education and English material used more in all subjects. Public go-abroad grants should be introduced to cover tuition costs up to a limit similar to the per-student public funding for a similar Danish programme. Universities should set targets for international exchanges, use of English etc. A new grade scale which is more comparable to foreign standards will be introduced. A strategy should be made for attracting highly qualified foreign students and teaching staff in priority areas. This will include some increase in the number of public grants given to students from outside the EU.

World-class quality in short and medium-length tertiary education

The institutions for medium-length tertiary education (nurses, teacher training etc.) should be merged into 6-8 so-called professional high schools each covering the full range of programmes offered in their respective region. The institutions for short tertiary education should be concentrated on fewer large so-called professional academies. These institutions should be better connected to business as well as universities. New programmes should be offered in fields like media, foods and financial services. Teachers' competences should be developed continuously.

World-class quality at universities

Basic research funding should to a larger extent be granted based on an overall assessment of quality in research, teaching and knowledge diffusion. Sector research institutes will be integrated into the universities to support teaching. The dialogue with those employing graduates should be more systematic. The number of PhD students should be doubled with most of the increase being in natural sciences, technologies, IT and health. Universities should establish elite Masters programmes. Universities should have more flexibility to attract highly skilled researchers, including *via* higher pay.

More competition and higher quality in publicly funded research

Public R&D spending and total public and private R&D spending should reach 1% and 3% of GDP respectively in 2010.

Half of all public research funding should be allocated on competitive basis in 2010. Some of the funds allocated on a competitive basis should be reserved for large research programmes anchored into the strategy of each university. Business and society's research needs should be assessed every four years as a basis for allocating strategic research grants. Research grants should also be available for participation in international projects.

Good framework conditions for business research, development and innovation

Publicly funded business incubators should face stronger quality requirements. Public funding for the Technology Service Institutes should be exposed to competition. Firms undertaking substantial research should be allowed to take part in the competition for public research grants. A programme for research in customer-driven innovation should be established.

Enhanced competition and openness to promote innovation

A leniency programme should be introduced for individuals and firms helping the competition authority to break cartels. All competition law trials should be handled by the specialised commercial court. Regulation of water supply, district heating, garbage collection, rail transport and postal services should be made more efficient and market oriented. Municipalities and regions should be obliged to submit specific function to competitive tendering, as is the case for central government today. For construction projects, the possibility of public-private partnership should be considered systematically. Green cards should be introduced giving residence permits to foreigners who are likely to find work easily in Denmark. Highly paid foreigners should have residence and work permit applications processed fast-track.

Strong interaction with other countries and cultures

The functions of Danish embassies should be re-shaped, including by creating so-called establishing incubators in countries where local presence is essential to establish business. Knowledge and awareness about foreign cultures should be enhanced both *via* establishment of research centres and better using firms and individuals with special knowledge about particular countries.

More entrepreneurship

Entrepreneurship should be strengthened in school and teacher training. Entrepreneurs should get a tax credit worth DKK 100 000 a year during the first three years where the firm has taxable income. Finance availability for innovative firms should be strengthened by partial privatisation of the Growth Fund, thereby seeking to involve more pension-fund investments. Bankruptcies should be processed more quickly.

All should participate in life-long learning

The life-long learning offer should be made more transparent and more guidance should be available. Informal competencies acquired in the work place should be recognised formally. Basic literacy training should be available for adults in an environment close to the work place, and migrants having been in Denmark for a number of years but still struggling with the language should be offered better targeted training. Training providers should have more freedom to set tuition charges in adult training.

Source: Government (2006), *Fremgang, fornyelse og tryghed - strategi for Danmark i den globale økonomi* (Progress and Renewal in a Safe Society – Strategy for Denmark in the Global Economy), www.globalisering.dk.

Chapter 4

Housing – less subsidy and more flexibility

This chapter discusses ways of replacing the costly government intervention in the Danish housing market with more market-based mechanisms thereby achieving policy objectives in a more efficient and targeted way. The chapter begins by describing the institutional features of the housing sector, followed by an assessment of overall subsidisation of housing through direct public expenditures and indirect tax subsidies. This includes a discussion of ways to free resources on public budgets for other purposes that are more central to maintaining the welfare state in an ageing society. The chapter then reviews the rent regulation framework for private and social rented housing and discusses how to provide more flexibility. The final part reviews owner-occupied housing, particularly how the zoning regulations and municipal incentives could be improved to allow for a more responsive housing supply. It also reviews innovative developments in mortgage financing.

4.1 The main objective for Danish housing policy is to ensure that citizens obtain proper housing at affordable and predictable prices, through a variety of housing segments (Ministry of Economic and Business Affairs, 2002). Reflecting a policy objective with a broader scope than merely providing housing to those who are really needy, the housing market is heavily regulated and subsidised. While experiences of poor housing in earlier times (creating public health problems) may have been at the origin of government intervention, such arguments are less convincing today. By favouring housing through indirect tax subsidies, subsidised construction, housing allowances and rent regulation, the government risks diminishing the flexibility that is needed for providing housing according to household preferences and is in fact becoming increasingly important to assure the labour mobility needed to sustain economic growth. Although there may be circumstances that still require some public intervention, such as securing an appropriate urban structure and provision of accommodation (at least temporary) for the weakest groups in society, the rationale for extensive public intervention in the housing market is likely to have declined as living standards in Denmark have been among the top handful of OECD countries for several decades and overall housing availability is high. Adopting less costly housing policies under these circumstances is therefore not likely to lead to housing shortages, but would rather contribute significantly to improving the functioning of the housing market and free resources for socially more preferred uses.

4.2 Danish housing policy gradually developed up to about 1980. Since then some reform measures have been taken in different areas (see Annex 4.A2.). However, in other countries, not least the other Nordic countries, public authorities have to a larger extent been retreating from their dominating role in the housing market (OECD, 1999; Lind, 2001; Skifter Andersen, 2002; ECB, 2003; Lujanen, 2004):

- Finland abolished rent regulation in the mid 1990s, which led to an increase in the stock of rental housing.
- Norway removed price regulation of shares in co-operatives in the early 1990s implying that this segment is put on a level playing field with owner-occupied housing.

- Sweden drastically reduced housing subsidies during the 1990s, freeing up resources on public budgets.

Denmark could benefit from a more fundamental reform of housing policies, possibly inspired by the developments in its neighbouring countries – not least because they presently constitute a major strain on public finances.

Main institutional features

4.3 The pattern of Danish housing differs a bit from the average of other Nordic and European countries, with a smaller share of owner-occupied housing and a higher share of rented housing, particularly social housing (Table 4.1). Denmark has a comparatively high number of dwellings relative to the number of households, which among other factors reflects the substantial subsidisation of housing. The housing stock can be divided into the following main segments:

- *Owner-occupied housing* consisting of single-family and multi-family houses and condominiums (owner-occupied flats) has traditionally been seen as the top end of the housing ladder. Reflecting high activity in this segment during earlier decades (Figure 4.1), the proportion of the housing stock belonging to this segment has increased gradually and currently accounts for 52% of the housing stock. In economic terms, owner-occupied housing constitutes a major share of wealth accumulation.
- *Co-operative housing* is an indirect form of ownership which was institutionalised in 1979. While accounting for 2% of the housing stock in 1980, co-operatives currently account for 7% of the stock, reflecting *inter alia* construction of new co-operative housing and legislation allowing tenants in private rented housing to buy their dwellings in case of rental property sales.
- *Private rental housing* provided by landlords operating on a for-profit basis has historically been the main alternative to owner-occupied housing. However, the transition of many private rental dwellings into condominiums and co-operative housing as well as government interventions which either disfavoured investment in this segment or gave financial advantages to other segments have meant that the proportion of the housing stock belonging to this segment has gradually fallen and currently accounts for 17%.
- *Social housing* is provided by housing associations operating on a non-profit basis (see Annex 4.A3), and was mainly established in the post war period. Reflecting the financial advantages attached to this segment, the proportion of the dwellings belonging to this segment has doubled since 1960 and currently accounts for 20% of the total housing stock.
- Other types of housing and vacancies account for 4% of the housing stock. A small part consists of employer-provided housing, while most are dwellings that are temporarily vacant due to *e.g.* moving.

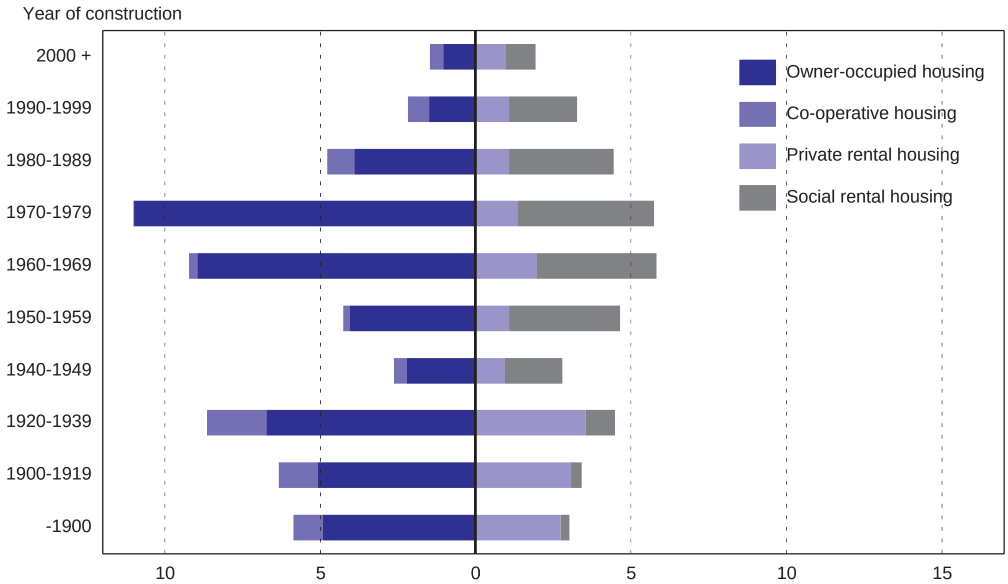
Table 4.1. **Housing segments and availability of housing**
Per cent of total housing stock

	2004					
	Owner-occupied housing	Social housing	Private rental housing	Other[1]	Dwellings per 1 000 habitants, 2003	Average square metre per dwelling, 2001
Denmark	**52**	**20**	**17**	**11**	**476**	**109**
Other Nordic countries:						
Finland	58	17	15	10	509	77[4]
Iceland[4]	81	4	10	5		
Norway	61	5	18	16	438	122
Sweden[2]	39	24	19	19	486	90[3]
Average	**60**	**13**	**16**	**13**		
Other European countries[5]						
Austria	42	20	19	20	408	85
Belgium	71	5	19	5	456[5]	88[6]
France	56	17	21	6	477[5]	88[7]
Germany	43	6	45	6	474	87[8]
Ireland	78	9	9	4	358[5]	88
Italy[2]	67	6	8	19	459[5]	90[9]
Netherlands	54	34	10	2	421	98[4]
Spain	82	2	9	7	510[5]	
Switzerland[4]	35	14	43	8	504	
United Kingdom	69	21	10	0	433[5]	85[7]
Average	**60**	**13**	**19**	**8**		
Other countries:						
Australia[5]	70	4	21	5		
United States	68	32[10]	0	0	435	

1. Co-operative housing and employer-provided housing.
2. 2003, 3. 1997, 4. 2000, 5. 2001, 6. 1994, 7. 1996, 8. 1998, 9. 1991,
10. Not possible to split rented housing in private rentals and social housing.

Source: Statistics Denmark; Statistics Norway; Statistics Sweden; Statistics Finland (2005); Karlberg and Victorin (2004); RICS (2005); Economic Council (2001); Australia Bureau of Statistics; U.S. Census; Housing statistics in the European Union 2002; OECD (2005a).

Figure 4.1. **Age structure of the housing stock**[1]
Per cent



1. Total housing stock (number of dwellings) divided into components characterised by both decade of construction and the current form of ownership. Other forms of non-rented dwellings such as employer provided housing is not included.

Source: Submission from the Ministry of Finance.

4.4 Housing is generally favoured relative to other forms of consumption in Denmark, mainly due to housing allowances, subsidised construction and indirect tax subsidies. The benefits accruing from housing policies take different forms depending on the specific set of regulations applying to the different segments (Table 4.2); Home owners benefit from paying a lower real estate tax than the rate that would be neutral *vis-à-vis* interest deductibility. Those having a share in co-operatives benefit from being exempted from the real estate tax. In addition, there is tax breaks for pension fund investments in rental housing. Those who have managed to get into the regulated parts of rental housing reap an individual insider advantage from paying rents below what other people would be willing to pay if they had the chance of acquiring a similar dwelling. Also, the social housing sector is subsidised through central government co-payment of the mortgages raised to finance construction of new dwellings. Public subsides are also provided through the urban renewal scheme, which apply mainly for private rentals and to a limited extent for co-operatives and owner-occupied housing. Finally, housing is subsidised through housing allowances, notably to tenants. The large differences in the taxation and subsidisation of the various housing segments lead to a lack of neutrality, which creates significant imbalances in the Danish housing market (Lunde, 2002, 2004).

Table 4.2. **Overview of regulation and subsidisation of housing in Denmark**

	Housing segments			
Regulatory instruments	Owner occupied	Private renting	Social housing	Co-operatives
Income tax	No	Surplus on landlord's hand is taxed at 28%[3]	Exempted	Exempted
Real estate tax[1]	Yes	Exempted	Exempted	Exempted
Land tax[2]	Yes	Yes	Yes	Yes
Rent regulation		Yes, for older dwellings	Yes	Yes
Character of housing support	Low real estate tax	Insider advantages accruing from rent regulation	Exemption of real estate tax	Exemption of real estate tax and capital gains are tax-exempted[4]
	Subsides from the urban renewal scheme (as a loan)	Subsidies from the urban renewal scheme	Insider advantages accruing from rent regulation	Price cap on shares imply low second-hand prices on shares in co-operatives
			Subsidised construction	
				Financing of new co-operatives dwellings are subject to a municipal guarantee
				Subsidies from the urban renewal scheme
Housing allowances				
- Housing allowances for low income groups *(boligsikring)*	No	Yes	Yes	No
- Housing supplement in the public pension *(boligydelse)*	Yes, as loan	Yes	Yes	Yes, 40% grant and 60% loan

1. A real estate tax is levied on residential properties amounting to 1% of the assessed property value (3% for property values over DKK 3 040 000, € 407 500). There is currently a tax freeze implying that for each home the real estate tax is set at the nominal level it had in 2002 or in 2001 +5%.
2. Municipalities levy a land tax of between 0.6 and 2.4% of the assessed land value, while counties levy a land tax of 1%.
3. For pension funds, property investments are taxed at 15%.
4. Sale of property is prohibited for 5 years after it has been acquired by a co-operative association.
Source: Submission from the Ministry of Finance; Economic Council (2001).

4.5 Property rights are mainly conferred upon home owners, implying that the dwellings can be traded freely and put up as collateral with capital gains (or losses) accruing fully to the owner. For members of co-operatives, property rights are more weakly defined insofar as share prices are regulated, restricting appropriation of potential capital gains.[1] On the other hand, members of a co-operative have limited liability in case of bankruptcy, as (in practice) only the share will be used to cover outstanding co-operative debt while the tenant is entitled to stay on as a tenant. Some steps have recently been taken to strengthen property rights in co-operatives, as shares now may be used as collateral for borrowing. Social housing does not confer property rights upon the individual tenants, even though they have extensive influence over the apartment in which they live and with respect to the general economic disposition of their housing association through representation in the managing board (see Annex 4.A3.). A policy was introduced 1 July 2004, for a trial period of 3 years, allowing tenants in social housing to buy their dwellings. As of March 2006, the Ministry of Social Affairs has approved sales in 9 housing sections, equivalent to 820 apartments. Sales have been slower than might have been anticipated, but this policy could strengthen property rights in this housing segment.

4.6 The formulation and implementation of housing policies is shared between central and local government. While central government defines the broad objectives and instruments, and in particular sets the portion of its expenditure that will be allocated to housing subsidies, local government is responsible for financing a share of the construction costs for new social housing dwellings and allocation of people to social housing as well as for subsidising housing consumption for the disadvantaged. Local government also plays an important role in the implementation of housing policies by being responsible for supervision of the housing associations. The counties are responsible for providing housing for seriously disabled elderly people.[2]

Freeing resources by reducing subsidies

4.7 Although subsidisation of housing is still substantial, there have been large changes in the past in the parameters determining the way that subsidisation take place (see Annex 4.A2). The main changes during the last decade are the lowering of the tax value of interest deductibility, the replacement of the tax on imputed rent by a real estate tax (although the subsequent tax freeze has increased the implicit subsidisation), some steps in the direction of reforming the financial system for social housing including increased degree of self-financing (since 2002 the social housing sector has been obliged to reimburse more than half of total state subsidies to new social housing), introduction of a subsidy to private investors and pension funds investing in the rental market, the reform of the urban renewal scheme and easing rent regulation slightly (see Annexes 4.A2 and 4.A4).

High public budget costs related to housing policies

4.8 In terms of policy regimes, Danish housing policies have been in a gradual transition from supporting housing supply to supporting households, meaning more use of housing allowances and less use of subsidies to construction (OECD, 1999). Despite the fact that housing allowances is the largest direct expenditure item, "bricks-and-mortar" subsidies is still substantial, notably through public co-payment of mortgages used to finance new social housing dwellings (Table 4.3). While measures implemented in 2004 to reduce direct subsidies, such as abolition of subsidies to construction of new co-operative dwellings and the noted reform of the urban renewal scheme, subsidies still affect the expenditure side of the general government budget significantly and direct housing subsidies alone amounted to 1.1% of GDP in 2005 (housing allowances amounted to 0.7% and "bricks-and-mortar" subsides 0.4%).

4.9 The spending on housing policies through indirect tax subsidies is even larger than through direct expenditures, mainly due to that owner-occupied housing is taxed more mildly that other assets. This subsidy is set to get even larger with the real estate tax frozen in nominal terms as noted above. Tax revenues foregone amounted to 1.6% of GDP in 2005 (including tax advantages given to tenants in co-operatives, but excluding the tax breaks for pension funds investing in the rental market).[3] Adding to the direct expenditures, total public spending on housing policies amounted to 2.7% of GDP in 2005. Relative to the number of persons living in each housing segment, total subsidies are largest for co-operatives and smallest for owner-occupied housing (Table 4.3).

Table 4.3. **Direct and indirect public subsidies for housing**

	1995	1999	2005	2005			
				Housing subsidies per habitant [4] DKK			
	Percentage of total housing subsidies			Owner-occupied housing	Private rental housing	Social housing	Co-operatives
Expenditures	**37.2**	**40.0**	**40.5**				
Individual housing support	22.1	24.0	25.4		6 200	6 400	
Social and co-operative housing	11.5	12.0	10.2		100	4 000	1 700
Urban renewal [1]	3.6	4.0	4.9		1 900		2 000
Revenue foregone	**62.8**	**60.0**	**59.5**				
Low imputed rent [2]	58.3	60.0					
Special tax rates for pensioners, etc.	4.5						
Low real estate tax [2]			48.8	6 200			
Tax exemption for co-operatives [3]			10.7				14 800
	DKK bill.						
Total	**35.7**	**35.0**	**41.0**	**6 200**	**8 200**	**10 400**	**18 500**
	% of GDP						
Total	**3.5**	**2.9**	**2.7**				
Expenditures	1.3	1.2	1.1				
Revenues foregone	2.2	1.7	1.6				

1. Urban renewal is generally characterised by a substantial time lag from a grant is given and to the public disbursements derived from it take place. Thus, the numbers contains also urban renewal activities initiated some years ago.
2. Calculated as the difference in taxes accruing from respectively a financial investment and an identical investment in owner-occupied housing, thus taxing nominal capital incomes in full. For 2005, the details of this calculation are as follows: The current effective real estate tax rate is estimated as 0.55% whereas the neutral rate would be slightly more than 1½ per cent (see Table 4.4).
3. Calculated as the number of co-operative dwellings (174 745 as of 1 January 2005) multiplied by the neutral real estate tax rate multiplied by an estimated average price of a co-operative dwelling in 2005 (DKK 1 527 716).
4. The number of habitants is taken from Statistics Denmark, *Boligopgørelsen 1. January 2005*.

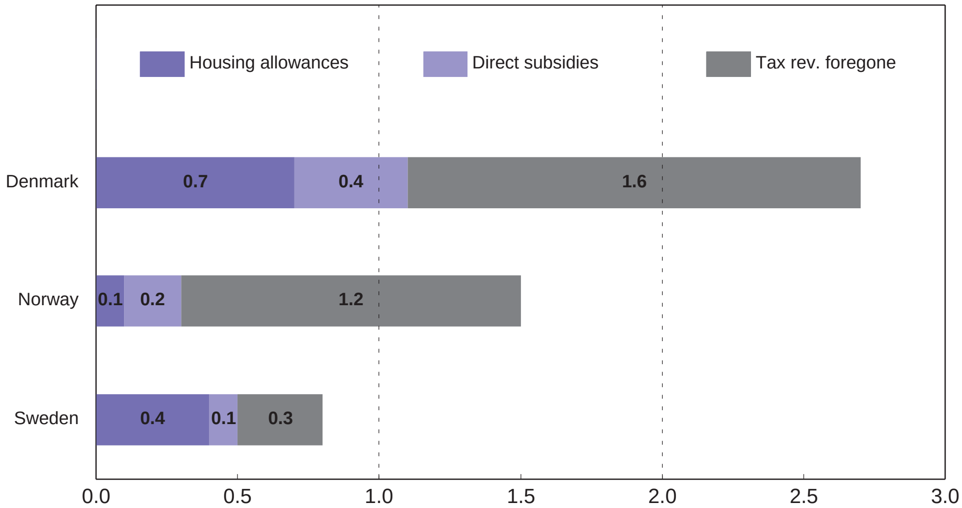
Source: Submission from the Ministry of Social Affairs; OECD (1999); Economic Council (2001, 2005); OECD calculations.

4.10 Total direct and indirect housing subsidies are thereby much larger than in neighbouring Sweden and Norway (Figure 4.2). Wider international comparisons are difficult due to different methodological approaches, but available studies indicate that Danish housing subsidies are large also compared to other OECD-countries (ECB, 2003). Reducing the extensive subsidisation of housing would free resources on public budgets for other socially preferred uses. This would also create room for tax cuts as discussed in Chapter 1 and 3.

Owner-occupied housing and co-operatives benefit from substantial indirect tax subsidies

4.11 People living in owner-occupied houses and flats enjoy a substantial indirect tax subsidy. The real estate tax (*ejendomsværdiskat*) has a statutory rate of 1% (and 3% above at a certain threshold), but the average effective rate paid in 2006 is merely 0.55% of the assessment value, reflecting special reductions for houses and flats bought before July 1998 and for pensioners, as well as the tax freeze (see Annex 4.A5).[4] The latter prevents the nominal real estate tax paid by any individual home owner from increasing above the level it had in 2002, which *de facto* has reduced housing taxation as the tax base is not reflecting the increase in house prices in recent years. However, the local land tax (*grundskyld*) paid at between 1.6% and 3.4% of the land value for all types of housing is still based on up-to-date valuations and the real estate tax freeze is to some extent being capitalised into land prices. The joint revenue from the real estate tax and the land tax has not fallen despite the introduction of the tax freeze in 2002 and corresponded to 1.86% of GDP in 2005 compared to 1.89% in 2002 and 1.7% in 2000 (Ministry of Taxation, 2006).

Figure 4.2. **Total housing subsidies in Nordic countries**
Per cent of GDP, 2005



Source: Submission from the Ministry of Social Affairs (Denmark); St.meld. nr. 1 (2005-2006) Nasjonalbudsjettet and St.prp. nr. 1 (2005-2006) Kommunal- og regionaldepartementet (Norway); Prop. 2005/06:1 Budgetpropositionen for 2006 (Sweden); and OECD calculations.

4.12 The real estate tax should be considerably higher than its present level to be neutral *vis-à-vis* other parts of capital taxation. The exact level of a neutral real estate tax depends on what *type* of financial investment the person would make as an alternative to buying a home, as capital tax rates vary considerably across assets. It also depends on the interest rate prevailing in financial markets. With a benchmark of a 5% nominal interest rate and 2% inflation, the real estate tax rate should be a bit above 1½ per cent to achieve neutrality *vis-à-vis* interest deductibility (Table 4.4). However, with the interest rate and inflation that prevailed in the late 1990s, it should have been close to 2%, as opposed to a bit below 1½ per cent if based on the low interest rate environment of 2003-04. Although home owners enjoy an indirect tax subsidy, its order has diminished during the last decades as a consequence of lower interest rates and reduced tax value of interest deductibility. In 1980, the indirect tax subsidy for owner-occupied houses amounted to almost 10% of the average house value, coming down to 2.2% in 1995 and below 1% in 2005 (Ministry of Taxation, 2006).

4.13 At first glance, the low real estate tax is a subsidy for housing *investment*, but in fact it is a subsidy for housing *consumption*, as the only way people can benefit from it is by consuming more owner-occupied housing. Such a subsidy favouring housing over other consumption is not warranted, and should be removed. The government should therefore consider increasing the real estate tax rate, possibly to 1½ per cent, although exactly what rate is appropriate depends on any changes that might be carried out to capital taxation in general as discussed in Chapter 1. Such proposals are never popular, and in the past a typical argument made for reducing housing taxation has been that "you cannot eat bricks and mortar". For example, for pensioners owning a house that is highly valued a liquidity problem can be created if they are required to pay additional taxes on a continuous basis because the market values of their house have gone up. With mortgage market liberalisation, however, this should be less of a problem as arrangements could be made so that the real estate tax (and the land tax for that matter) could even be paid automatically by the mortgage credit institution based on mortgage equity withdrawal when house prices increase. Regulation may need to be adjusted to allow mortgage institutions to offer taking over the administrative task of automatically paying the home owner's real estate and land tax bill. The Welfare Commission, which recommends an increase in the real estate tax to be phased in over 20 years, has estimated that it would result in a house price reduction of about 10% on average (Welfare Commission, 2006). That is merely about half the average price increase seen during just 2005.

Table 4.4. **Real estate tax rate that would imply neutrality *vis-à-vis* financial investment**
Per cent

		Interest rate and inflation as 1995-1999 average		Benchmark		Interest rate and inflation as 2003-2004 average	
		Nominal interest rate	5.94	Nominal interest rate	5.00	Nominal interest rate	4.12
		Inflation	2.15	Inflation	2.00	Inflation	1.63
		Real interest rate	3.71	Real interest rate	2.94	Real interest rate	2.45
Alternative investment	Nominal tax rate, 2006	Real tax rate	Neutral real estate tax rate	Real tax rate	Neutral real estate tax rate	Real tax rate	Neutral real estate tax rate
Bonds - if paying top tax	59.7	94	3.55	100	2.99	99	2.46
Bonds - if paying bottom-	38.8	61	2.30	65	1.94	64	1.60
Repaying debt	33.3	52	**1.98**	56	**1.67**	55	**1.37**
Shares - high rate	43.0	67	2.55	72	2.15	71	1.77
Shares - low rate	28.0	44	1.66	47	1.40	46	1.15
Pension savings	15.0	24	0.89	25	0.75	25	0.62

Note: For income from shares, the low tax rate is paid for annual share income up to DKK 43 300 in 2005, and the high rate is paid for share income above this threshold. The average interest rates are based on a 10-year 5% mortgage bond for the 1995-99 period and a 10-year 4% mortgage bond for the 2003-04 period.

Source: OECD calculations based on Economic Council (2005); Welfare Commission (2006); Ministry of Taxation (2006); Statistics Denmark (www.statbank.dk/MPK22).

4.14 Other measures to reduce the subsidisation of owner-occupied housing could include combining increased real estate taxation with a capital gains tax, as proposed by the Economic Council (Economic Council, 2005). Introducing a capital gains tax is estimated to generate significant tax revenues (under the presumption that house prices continue to increase by 1-2% per year in real terms as they have in the last 50 years), which could be used to reduce other distorting taxes. To avoid lock-in effects and to prevent home owners from becoming liquidity squeezed, a specific method (*saldometoden*) is prescribed whereby capital gains are taxed only when they are consumed, or in the case of housing equity withdrawal. While this method could improve housing taxation, since it would be based on actual market values rather than rough estimates (as in the tax assessment) and also solve some of the potential lock-in effects associated with capital gains taxes, it might be costly administratively. In addition, a capital gains tax may contribute to increasing house price volatility (Fuest *et al.*, 2004), even if the proposed method is likely to eliminate some of this risk.[5]

4.15 Co-operative housing is another segment which is subject to substantial subsidisation. While the ending in 2004 of subsidies to construction of new co-operative dwellings is welcome, the share owners in co-operatives still receive large benefits by being exempted from the real estate tax. Although the co-operative associations in principle could deduct interest payments, in practise there is no offsetting income to take advantage of this facility. The net result is nevertheless subsidisation as the tenants have interest deductibility without being liable for real estate tax on their share. Furthermore, old co-operative associations that have dissolved themselves so as to reap capital gains have been tax exempted. To limit this loophole, there was introduced legislation in June 2005 saying that sale to another co-operative is prohibited for a period of 5 years after a property has been acquired by a co-operative association.[6] As the preferential tax treatment of co-operatives is difficult to justify, share owners in co-operatives should be liable for the real estate tax, at least for the part of the flat's value that is not matched by borrowing within the co-operative.

Housing allowances constitute a major share of the direct expenditures

4.16 Housing allowances amounted to 0.7% of GDP in 2005, which is high compared to other OECD-countries (Figure 4.2 and OECD, 2004b). This reflects that housing allowances have a broad coverage being granted to more than 530 000 households in social housing and private rental housing, equivalent to more than one fifth of all Danish households. About 58% and 36% of the tenants in these two segments, respectively, receive housing allowances which on average cover 47% and 38% of the actual rents paid.[7]

4.17 There are two main housing allowance schemes in Denmark; the scheme for low-income households and persons receiving disability pension (*boligsikring*) and the scheme for old age pensioners (*boligydelse*). The amount of housing allowances granted under these two schemes is in general calculated as a certain share of housing expenditures subtracted an own payment depending on income. Within the former scheme, central government refunds 60% of individual housing expenditures subtracted 18% of income in excess of a basic amount, which increases proportionally with the number of children (the parameters in the latter scheme is 75% and 22.5%, respectively).[8]

4.18 As the granted housing allowances depend on actual rents paid, households may, within the schemes' limits of a maximum rent and a maximum subsidy, raise the magnitude of the allowance by moving to higher quality housing. Although the system as such promotes housing policy objectives by providing good quality housing, it increases the incentives to move to more expensive flats. This raises the issue of the proper level of the ceilings. But if instead of depending on the actual rent, the housing allowance were a lump sum determined by the average rent in a region, households' income and size, the household would make less distorted choices concerning the quality and price of accommodation. For example, households could choose between paying more than the allowance and living in more expensive accommodation or living in less expensive housing and spending the difference on more urgently needed items. Hence, the housing allowance scheme would under these circumstances imply that tenants have a neutral choice of accommodation, and it could also contribute to reduce the level of subsidisation of housing. Under standard assumptions in-kind subsidies are more costly than cash transfers. A reform along these lines was undertaken in a pilot programme in the United Kingdom in 2004.[9] Housing allowances for low-income households could also be better targeted. More than 50% of the current housing allowance cases are related to households without children (measured as a share of persons receiving *boligsikring*), while the social concern underlying housing allowances is as much to ensure proper housing for families with children. As an illustration, housing allowances could be targeted at households with special needs, in particular those having children, the minimum rent that has to be paid by the households themselves could be increased, the basic amount in the income dependent phase-out could be increased or the own payment rate could be increased (Welfare Commission, 2006).

4.19 While housing allowances can form an important source of revenue for low-income households, their income dependent phase-out imply, together with other features of the tax-benefit system, high marginal effective tax rates (METR). This may create unemployment and poverty traps as individuals have little incentive to move from unemployment to full-time work or to increase their hours worked as the increase in net income is relatively small due to the combined effect of increased tax payments and the withdrawal of income-tested social benefits such as housing allowances. The combined effect of the income dependent reduction in unemployment benefits and housing allowances contribute to a METR for some household types of more than 100% (OECD, 2004b). Therefore, the income dependent phase-out in the housing allowance scheme should be better co-ordinated with other income transfer schemes so as to reduce the high METR implied by their withdrawal. A proposal along this line was recently proposed by the Welfare Commission regarding aligning of housing allowances for pensioners with more general pension related transfers (Welfare Commission, 2006).

The social housing sector is also heavily subsidised

4.20 Direct subsidies to the social housing sector are substantial, and amounted to 0.3% of GDP in 2005. Responsibility for social housing was decentralised to the municipalities in the 1990s, which decide on construction of all social housing and allocation of at least 25% of social housing dwellings. However, the main financial responsibility rests with central government which has to finance a major share of the construction costs for new dwellings. Currently, the municipalities are obliged to pay 7% (14% from 2007) of these costs up-front (this share has to be paid out of actual revenue and can not be financed by borrowing) while the tenants pay a notional deposit of 2%. The remaining 91% of the construction costs is financed by a mortgage. The rents paid by the tenants are currently set at 3.4% of the total costs, and are adjusted annually by ¾ of the inflation rate (or the wage inflation rate, whatever is lowest). Subsequently, the excess of mortgage servicing over rents is covered by transfers from the central government.

4.21 While building up the social housing sector in the post war period, the housing associations received large subsidies from the state and municipalities. However, a longstanding objective has been to make the housing associations self-financing as reflected in legislation from the 1930s stating that cash-surpluses should be reinvested in the sector.[10] In 1999, a new financing regime for social housing was implemented reflecting this objective, implying that tenants' rental payments should be independent of the mortgage payments, including after amortisation. Hence, when the mortgage is paid back, rents go into different cooperative funds (see Annex 4.A3). The resulting wealth accumulation that is projected to take place in these funds during the next decades is supposed to replace the central government subsidies to the social housing sector.[11] However, due to the different pace of amortisation of mortgages, there are large differences between current and future revenues in the housing associations at the same time as there is no clear relationship between revenues and investment needed to renovate the buildings.

4.22 The arrangement to make social housing self-financing implies that current tenants are contributing to financing construction to the benefit of future tenants. While decisions on construction of social housing are taken by the local authorities, the costs that are not carried by the future tenants' loan repayments will to an increasing extent be carried by the national housing construction fund under current policies.[12] However, by using off-budget funds to finance new construction, there is a risk that the social housing sector becomes exempted from normal state budgeting scrutiny. Unless strict public influence is maintained, spending on social housing may under these circumstances be based on perceived needs within the sector rather on cost-benefit analysis comparing spending on social housing with other socially preferred uses. From an overall fiscal perspective the national housing construction fund should therefore be integrated with the state budget, thereby keeping funding of construction, ghetto alleviation and similar measures subject to normal public budgeting scrutiny.

4.23 Furthermore, as the social housing sector is now well established, the general subsidies for the housing associations should be replaced with targeted support for those who are referred by municipal social authorities or in other ways are in need of public housing support. Attention should in this respect be paid to the effect on effective marginal tax rates, as discussed above. Allocation of dwellings through municipalities should also be increased.

4.24 Reflecting problems in the past with building too costly social housing dwellings, the government introduced a cap on construction costs in 2004.[13] According to the Ministry of Social Affairs, evidence indicates that introduction of these caps has improved cost consciousness in the sector and that construction of too expensive social housing dwellings has been avoided. While this measure could improve performance, introducing a cap on construction costs introduces the risk that the maximum limit over time becomes the minimum level, leading to an overall increase in construction costs. To improve cost consciousness further, measures should be taken so as to ensure that the price cap reflects the costs of the best performing constructors.

The urban renewal scheme has recently been reformed

4.25 The urban renewal programme, introduced in the 1980s to restore buildings which were poorly maintained or were lacking in amenities, increased strongly in scope during the 1990s. Consequently, public spending for urban renewal soared, partly reflecting insufficient cost control (OECD, 1999), although overall public expenditures on urban renewal was controlled by a cap on annual investments. In 2004, the urban renewal scheme was reformed implying less public regulation, smaller public subsidies and a higher marginal financing from landlords. Currently, the scheme applies for building renewals (*bygningsfornyelse*) and for area renewals (*områdefornyelse*).[14] The municipalities are responsible for covering expenditures on planning and re-housing, of which they are reimbursed 50% by the central government. In addition, expenditures related to rebuilding and demolition is financed by subsidies from central and local government, by the tenants and the landlords. However, construction of new buildings is not eligible for subsidies under the present urban renewal scheme. As the standard of dwellings typically gets improved due to renewals, rents are normally increased. The municipalities are obliged, in a transitional period of 10 years, to cover initially two thirds of such rent hikes above a certain threshold (DKK 155 or € 20 per square metre in 2004). On the basis of an assessment of the new rent level, the municipalities may furthermore on a voluntarily basis decide to cover also up to two thirds of the rent hikes below the threshold. The municipalities are reimbursed 50% of their expenses from the central government.

4.26 The recent reform of the urban renewal scheme introduces measures to improve cost control and raise transparency as well as simplifying administrative procedures. Total public expenditures on urban renewal are, under the present scheme, controlled by an annual governmental expenditure limitation (reflected by a grant in the state budget). Urban renewal is generally characterised by a substantial time lag from a grant is given and to the public disbursements derived from it take place. Thus, Table 4.3 contains also urban renewal activities initiated in the past, and the budgetary savings from the recent urban renewal reform are therefore not fully reflected in this table. When the effects of the recent reform can be fully evaluated, it should be considered if further tightening is needed, as there is evidence that urban renewal subsidies are not always given to the weakest groups (Welfare Commission, 2006), although it should be acknowledged that public subsidies for area renewals may contribute to break “vicious circles” in socially and physically deprived urban areas.

Pension funds are admitted tax breaks when investing in private rentals

4.27 Pension funds pay a proportional tax of 15% on the return of their investments (Annex 4.A5). However, for investments in properties acquired before 12 March 1986 and for specific property investments undertaken under the quota system in the 1980s and 1990s, the returns are tax-exempt. In addition, in 2003 there was introduced a system allowing pension funds and private companies to deduct the costs of building new rental dwellings from their taxable income, within an overall limit on investments (subsequently to be replaced in 2004 by a system based on grants). While such measures may help to increase the stock of private rented housing so as to improve the overall functioning of the housing market, the same could be achieved by other measures such as making the rental market less regulated. As the pension funds already benefit from generous tax advantages, it is unwarranted to introduce further tax relief.[15] The government should therefore end the subsidies for pension funds’ investments in newly constructed private rental housing, as well as the tax exemption for return on property bought before March 1986 and for the tax-exempted investments undertaken in the quota system during the 1980s and 1990s.

Making the rental market more open and flexible

4.28 A well-functioning rental market is important because it allows people to make non-distorted choices both concerning housing and asset structure. Hence, it improves overall mobility by making it easier to find housing according to changing needs. The Danish rental market is however not playing these roles well as both social and a large share of private rented housing are subject to rent regulation (see Annex 4.A4). Making the market for rented housing sufficiently flexible should therefore be regarded as an important element of structural policies improving the potential for future growth.

The distributional impact of rent regulation is not well targeted

4.29 Rent regulation can be seen as a way to obtain distributional objectives as it implies a transfer of resources from landlords to tenants. This may therefore be viewed in the short term as an alternative way of redistribution through taxation of rental income and subsidisation of rent payers out of the proceeds. In addition, rent regulation may be seen as a protection against a landlord monopolist. Regulation can help mitigate such hold-up problems by controlling the extent to which rent can be increased. While most countries have adopted legislation limiting rent increases for sitting tenants, the practice differs more when it comes to regulation of rent for new tenants (Table 4.5). In the present rent regulation framework, Danish tenants are protected by the stipulation of open-ended leases as the standard contract, only to be interrupted at the landlords' discretion in a few prescribed cases. The tenants are also given the right to sub-let as well as having the right to barter tenancies. As a consequence, Danish tenants have been allowed to capture an increased economic value of their tenancy arising from generally rising property values (OECD, 1999).[16] Although this effect concerns mainly those rental buildings where rent regulation is cost-based and the flats are built before 1973, more than 80% of the private rental housing stock in Denmark is still under rent regulation.

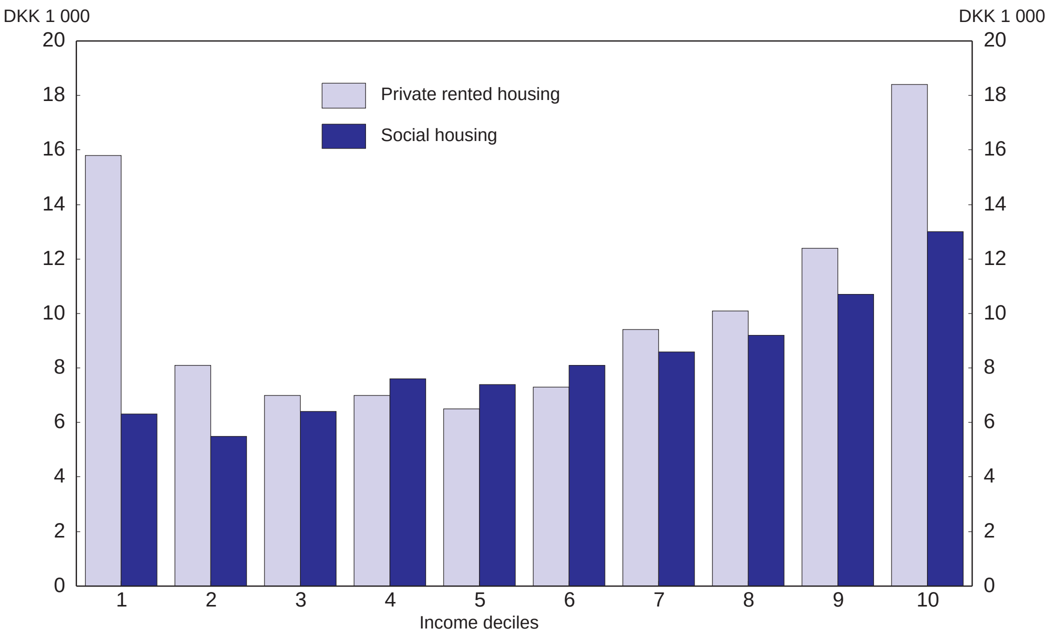
4.30 The insider advantages accruing from rent regulation should be received by households in the lower end of the income distribution if this were to be an efficient transfer mechanism with respect to redistribution. However, the actual distributional impact of rent regulation appears not to be well targeted as tenants with high income receive the largest insider advantages (Figure 4.3).[17] This is further underlined by the fact that many of the tenants in the lower end of the income distribution are students, who have higher than average future incomes.[18] Furthermore, the absolute average insider advantage tend to increase with the level of income, the level of wealth, age and the level of education and is lower for pensioners on early retirement and for the long term unemployed (Table 4.6 and Jespersen and Munch, 2001a). Although such empirical evidence needs to be interpreted with caution, the finding that advantages accruing from rent regulation are poorly targeted is considered fairly robust across different countries (Ellingsen and Englund, 2003).[19] This implies that rent regulation in general appears to have no consistent redistributive effect. Also, the theoretical justification for rent regulation is regarded to be relatively weak and equity and efficiency objectives are generally considered to be more efficiently achieved through cheaper ways of intervention.[20]

Table 4.5. **Rent regulation in different countries**

	Rent regulation	Rent adjustment once moved in	Security of tenure
Denmark	New rent contracts are free for dwellings constructed after 1991. Regulation is in place for older rental buildings, especially for buildings constructed before 1973. For these buildings it is however possible to increase rent closer to market clearing levels if the landlord undertakes major improvements of the rental dwelling.	Either based on an agreement about stepwise increases (amount) or according to a general price index (per cent).	For contracts for *unlimited tim*e the landlord can only serve notice on the contract on special, specific grounds (*i.e*. the owner personally makes use of the property, the building is to be demolished or renovated, it is a company dwelling and employment has ceased or the tenant has considerably misbehaved). For contracts for a *fixed term*, it is normally nullified without notice being served.
Sweden	In principle there is no rent regulation when tenants are taking occupancy. But it is not allowed to charge a higher rent than 5% above the level that applies in similar apartments owned by a municipal housing company where the rent is set according to negotiations with the local tenants' union. The starting point for these negotiations is often the housing companies total costs and the negotiations primarily concerns how these total costs should be distributed between different apartments.	No distinction is made between new tenancies and rent adjustments for sitting tenants.	
Norway	New rent contracts are free.	An agreed rent can only be adjusted according to the general price index during the first three years of the contract. During the third year both the landlord and the tenant can demand an adjustment to reflect market conditions.	For contracts for unlimited time the landlord can only serve notice on the contract on special, specific grounds (see above). For contracts for a fixed term, it is nullified without notice being served.
Finland	Rents are typically free from public control.	Depending on the contract, rent may either follow some index or the contract may say that the landlord could increase the rent, but not by an "excessive" amount (in a legal sense).	For contracts for *unlimited tim*e the landlord can terminate the contract with 3 months notice if the tenant has lived there for less than 1 year and 6 months notice otherwise. For contracts for a *fixed term*, the contract can only be nullified on specific grounds.
Germany	New rent contracts are free.	Rent cannot increase by more than 20% in a 3-year period for sitting tenants. Rent escalation clauses and rent contracts are linked to a price index permitted.	
France	New rent contracts are free.	Rent adjustments are linked to an index.	

Source: Turner and Malpezzi (2003); Lind (2003); Karlberg and Victorin (2004).

Figure 4.3. **Distribution of insider advantages in rented housing**
Per tenant, 1999



Note: The insider advantage is calculated as the difference between the uncontrolled rent predicted for the flat and the actual rent paid. The predicted uncontrolled rent is derived from the Danish Tax Authorities 1999 model for owner occupied housing.

Source: Economic Council (2001).

4.31 There are potentially significant obstacles to housing and labour market mobility arising out of the rent regulation framework. While the queuing system is likely to contribute to uneconomical mobility for households who strive to get a foothold on the housing ladder, the opposite effect is the case for households at the top of the ladder who have obtained good quality dwellings at rents well below market-clearing levels. At first glance, mobility in private rentals appears to be higher than in other segments, but around half of the movements are internal (moves within the same housing segment), reflecting the mechanism of climbing the housing ladder. In addition, the high mobility is mainly due to the greater use of short term leases among the apartments with the smallest insider advantages, indicating a relationship between the degree of regulation and the length of the tenancy (Economic Council, 2001). When taking into account other factors as well, tenants receiving the largest insider advantages have higher income and a lower probability of moving than other tenants (Munch and Svarer, 2002). For tenants in the most severely regulated apartments, expected tenancy duration is nearly 6 years longer than in the least regulated dwellings (Table 4.7), which indicates that rent regulation distorts household mobility and is reducing efficiency in the housing market and the economy.[21]

Table 4.6. **Determinants of the insider advantages in rented housing**
DKK

	Social housing	Private rentals
Age 18-34 year	0	0
Age 35-44 year	3 659	1 971
Age 45-54 year	5 230	4 430
Age 55-64 year	7 574	5 409
Age above 65 years	5 176	-1 104
Single man	-2 382	1 799
Single woman	0	1 744
3 or more adults in the household	0	3 548
Number of children below 18 years	368	1 526
Non-OECD citizenship	-4 575	4 039
Student	0	1 003
Unskilled	-2 074	0
Short term higher education	2 997	3 908
Medium term higher education	0	2 234
Long term higher education	3 765	11 288
Early retirement pensioners	-3 005	-7 523
Long term unemployed	-3 719	0
Household income, DKK 100 000	4 037	1 218
Household income, squared	186	265
Household wealth, DKK 100 000	256	196
Copenhagen	-2 293	9 170
Large provincial city	8 554	6 624
Rural municipality	-5 451	-8 965
Constant term	3 317	6 740

Note: Insider advantage is calculated per household on the basis of 1999-data. (See endnote 19 for a description of the method used to calculate insider advantages). Personal characteristics are for the main person in the household, which in households with more than 1 adult is chosen randomly. The reference household has two adult persons and is situated in a medium sized provincial city. The main person is in the age group 25-34 years and is skilled. Definition of income is household total disposable income. A value different from 0 indicate that the factors is significant on the 5% level.

Source: Economic Council (2001).

Table 4.7. **Expected tenancy durations for private rented housing**
Years

Insider advantage degree deciles	Standard household (SH)	SH, single male without kids
1	12.8	7.1
2	13.6	7.7
3	14.4	8.5
4	15.2	9.2
5	16.0	10.3
6	16.7	10.8
7	17.4	11.6
8	18.1	12.4
9	18.8	13.2
10	19.5	14.0
Average	16.3	10.5

Note: The household consists of a couple with children. They have a yearly disposable income of DKK 200 000 and wealth equal to DKK 40 000. They live in a large provincial town, and occupy 60 square metres per person. The household head is between 35-44 years old and is educated as a skilled worker. The deciles refer to the ranking of insider advantages defined as the insider advantage divided by estimated uncontrolled rent.

Source: Munch and Svarer (2002).

4.32 A serious consequence of housing market inefficiency is the potential spill-over to the labour market. Since rent regulation increases the costs of moving and creates a lock-in effect, unemployed workers reaping insider advantages are less likely to search for jobs outside their local market and are more likely to accept a job offer from employers in the local labour market. Analysis on Danish micro data show that the probability of finding a job locally increases with the degree of rent regulation (measured as the relative size of the insider advantage), whereas the probability of finding a job outside the local labour market decreases (Svarer *et al.*, 2005). Hence, rent regulation might make workers less inclined to be geographically mobile, making it more difficult for firms to find the right person for the job and implying a potential matching inefficiency. A high share of home ownership may also contribute to reducing mobility although the empirical evidence in the case of Denmark is mixed.[22]

4.33 Rent regulation provides weak incentives for landlords to maintain and improve buildings, insofar as they receive a return on their initial investment below that of alternative capital uses when rent is below market-clearing levels. The result of this is deterioration of the building stock, the long-term effect being a run-down of the housing stock or efforts to convert it to other uses or other segments in the housing market. Danish rent legislation allows a landlord to raise the rent after an improvement of a dwelling, and to include a return of the investment in the permitted rent increase. In case of undertaking major improvements (so-called paragraph 5.2 conversions) rents can be set according to "value of the rented dwelling" (*det lejedes værdi*). Moreover, rent legislation requires that a certain share of the rent is allocated to maintenance of the building, and the amount allocated is being considered as generally sufficient. Nevertheless, the public urban renewal programmes undertaken in the larger cities in the 1980s and 1990s could be seen as an indication that these incentives are weaker than under market determined rents.

4.34 Allowing a closer correspondence between rents and quality would contribute to creating a more flexible housing market, increase mobility and make investments in improvement of private rental buildings more profitable. Rents in private rental housing should therefore be set freely on market terms and the current rent regulation should be progressively scaled-back. The measure by the Danish authorities to let rent be set according to the "value of the rented dwelling" which corresponds to a level closer to market conditions in the case of undertaking major improvements has to some extent helped to speed up this process. The "value of the rented dwelling" is however a legal concept that often implies a rent below what would equilibrate supply and demand. Lowering the threshold for how much landlords must spend on renovating apartments in order to transfer to this type of less strict rent regulation could advance a more gentle transition. The government should also use the regulatory policy process more rigorously to perform ex-ante and ex-post analysis to ensure that the social objectives are achieved in the most cost-effective way (OECD, 2000b). In recent years, prices of private rental buildings have increased considerably.[23] Although this could indicate that rent regulation has become less strict on average, price increases are probably also to a large extent reflecting the reduction in interest rates as well as expectations and growing preferences for living in the city centre, factors that also drive up prices for comparable owner-occupied flats. Tax relief for pension funds may also play a role.

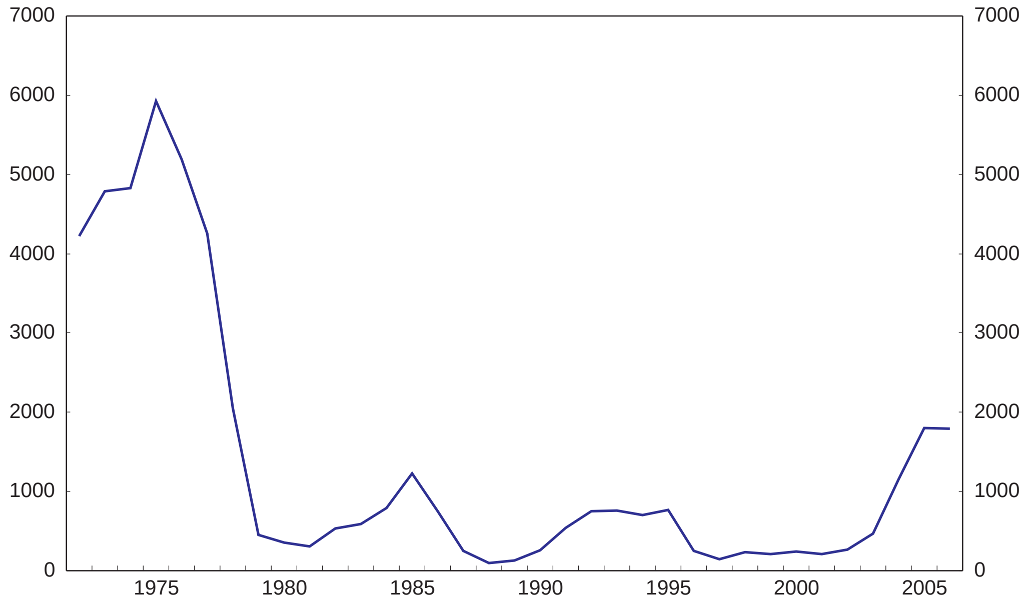
The functioning of the social housing sector needs to be improved

4.35 Denmark is among a handful of OECD-countries having a relatively high share of rented housing provided by non-profit housing associations (Table 4.1). Although the creation of a large public rental sector could have some beneficial effects such as increasing the scope for avoiding segregation by having a broad composition of tenants, it also entails the risks of creating lock-in effects reducing overall mobility and providing subsidised housing to households that would otherwise obtain adequate housing in other segments.

4.36 The distributional impact of social housing illuminates these risks as there appear to be a mismatch between the policy objective and outcomes. According to an analysis carried out by the Economic Council in 2001, the absolute insider advantages tend to increase with the level of income (Figure 4.3), and tenants reaping the largest insider advantages typically enjoy favourable socio-economic conditions (Table 4.6). Furthermore, tenants from non-OECD countries, the unskilled, tenants on early retirement or long-term unemployed achieve only small insider advantages (although these groups to a larger extent receive housing allowances). As household composition in social housing is somewhat skewed in the first place (tenants typically have low income and socially weak groups are highly represented), the empirical evidence indicate a kind of sorting within the housing associations as these tenants tend to get the least attractive dwellings (Economic Council, 2001).

4.37 The rent regulation in force for social housing based on cost-based principles implies that rents may deviate from market-clearing level in both directions, depending on the attractiveness of the locality, quality and other factors. However, since rents include contributions that may lead to redistribution between different housing sections, there will be limits on the span of rents that can occur in relation to new social housing dwellings. On average, the rent level in the housing associations is estimated to be below the market-clearing level (Jespersen and Munch, 2001b),[24] one effect being waiting lists for attractive apartments. There are also some apartments vacant, and the number of vacancies has recently increased sharply to its current level of 1 800 (still less than 0.5% of the total stock), notably due to a high number of vacancies in Jutland (Figure 4.4).

Figure 4.4. **Vacancies in social housing**
Number of dwellings at the beginning of the year

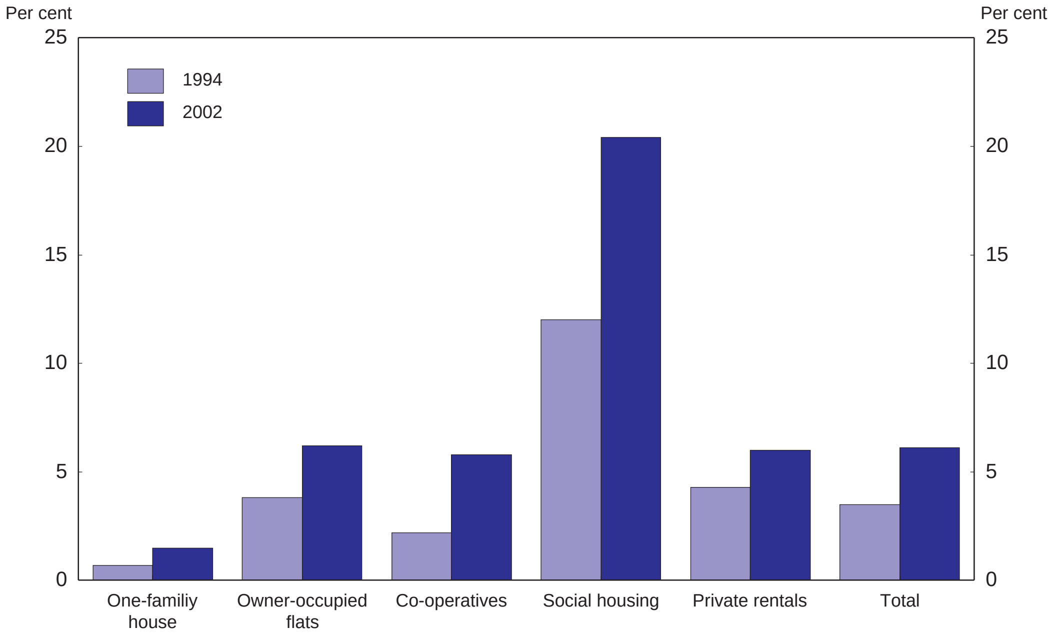


Source: Submission from *Boligselskabernes Landsforening* (The Confederation of Housing Associations) and Ministry of Social Affairs.

4.38 Lack of competitiveness *vis-à-vis* other housing segments is considered to be an important factor behind this development (Boligselskabernes Landsforening, 2004). Due to innovations in the mortgage market, monthly financing costs of owner-occupied housing are in some areas below the rents in recently constructed social housing dwellings. To improve competitiveness, proposals have been made to give housing associations increased access to flexible financing, possibly allowing a reduction in rents. However, introducing more flexible financing could induce more variability in the rental payments insofar as these types of mortgages are linked more closely to short-term interest rates and therefore are more volatile.[25] This should be regarded as an undesirable feature as predictable housing expenses is a main policy objective.

4.39 Segregation and ghetto problems are other concerns in the social housing sector. To some extent this is reflecting housing policies from the 1960s to the 1980s which aimed at relieving the physical housing shortage through the construction of low-cost high-rise buildings (OECD, 1999). Many of these buildings were constructed in what have now become deprived urban areas. As these buildings typically were placed in the outskirts of the large cities, often with weak infrastructure and poor conditions for local business life, the outcome was in many cases urban and social problems. Segregation has in recent years become pronounced within all the larger cities in Denmark, the problem being exacerbated by municipalities being forced to allocate refugees to social housing that already contained a high share of weak social groups (OECD, 2003a). From 1994 to 2002, the share of ethnic minorities in the social housing sector increased from 12% to slightly more than 20% (Figure 4.5), reflecting high immigration in these years (Skifter Andersen, 2005). Meanwhile, internal segregation of ethnic minority groups within the social housing sector has fallen from 1998 to 2003, as the share of ethnic minorities' has increased primarily in those sections where it was low in 1998. Internal segregation is least pronounced in Copenhagen and most pronounced in smaller provincial cities (Danish Building Research Institute, 2005).

Figure 4.5. **Share of tenants with ethnic minority background**[1]



1. First and second generation immigrants from countries outside Western Europe and North America.

Source: Danish Building Research Institute (2005); Skifter Andersen (2005).

4.40 Segregation may also to some extent be caused by the financing scheme for the social housing sector. The cost-based rent determination in the housing associations implies that newly constructed dwellings may have very high rents and therefore are likely to be filled with people receiving housing allowances – hence contributing to ghettoisation – whereas older dwellings (which also may be placed in more attractive places) have low rents and therefore little outward mobility. However, in several deprived urban areas the buildings were constructed in the period from the mid 1960s to the end 1970s and financed by mortgages with high interest rates, leading to relatively high rents. Repairing of damages caused by faulty building constructions has also contributed to high rents.

4.41 Reflecting to some extent the municipalities' right to fill 25% of the vacancies in the housing associations, allocation of ethnic minority groups in the different housing sections varies significantly. Some municipalities have member sections with only ethnic Danes while other municipalities have sections that are occupied by more than 50% of non-ethnic Danes (Table 4.8), many with a weak integration into Danish society (Programbestyrelsen, 2005), which has contributed to further segregation in the schools. Many of these sections are situated in deprived urban areas where a high share of the tenants is outside the labour market and dependent on income transfers. As the internal segregation in the housing associations is relatively high, an equalisation of the share of ethnic minorities among the housing sections would require that a third of the tenants be re-allocated (Danish Building Research Institute, 2005).

Table 4.8. **Tenant composition in social housing in deprived urban areas, 2004**

Municipality	Area	Number of tenants	Share of tenants outside labour market[1]	Share of immigrants	Share of children below 15 years	Average income	Share of new tenants[2]	Share of new tenants outside labour market[3]
Copenhagen	Mjølnerparken	2 193	62.3	91.3	46.8	117 239	7.9	39.4
Odense	Vollsmose	9 717	57.9	64.4	34.0	124 752	19.9	55.9
Horsens	Sundparken	1 584	59.5	60.1	34.1	128 448	17.8	52.3
Århus	Gellerupparken mv.	7 777	59.5	82.8	37.8	116 121	21.1	50.4
Svendborg	Byparken/Skovparken	1 615	55.5	52.4	26.3	126 353	22.9	53.3
Copenhagen	Aldersrogade	2 622	54.7	78.6	39.2	130 832	10.8	37.7
Randers	Gl. Jennumpark	1 373	56.7	37.7	34.1	135 715	19.6	53.9
Esbjerg	Stengårdsvej-kvarteret	1 918	54.7	61.1	30.9	132 907	19.9	53.9
Copenhagen	Akacieparken	1 324	52.6	72.3	40.7	139 155	12.7	52.4
Sønderborg	Kærhaven/Nørager	1 337	53.1	58.1	31.9	139 679	16.6	42.1
Århus	Bispehaven	2 455	55.3	72.4	31.6	125 271	22.4	47.6
Slagelse	Ringparken	2 188	50.6	54.3	30.7	139 829	16.0	40.5
Holbæk	Agervang mv.	1 448	49.4	43.9	26.9	139 963	19.6	50.3
Esbjerg	Kvaglund	2 543	48.6	26.4	23.1	141 473	25.7	43.5
Korsør	Motalavej	1 991	47.0	31.4	27.3	144 935	24.3	47.6
Kolding	Skovparken/Skovvejen	2 350	46.2	41.8	24.6	135 600	23.4	42.4
Åbenrå	Høje Kolstrup	1 777	44.0	27.7	22.1	148 192	22.3	40.9
Haderslev	Varbergparken	1 077	49.0	56.8	28.2	130 333	20.1	50.4
Århus	Århus Vest	3 712	43.0	40.4	26.9	140 594	25.4	34.0

1. Share of persons above 17 years on social support, early retirement or unemployed.
2. Number of new tenants as a share of number of tenants.
3. Number of new tenants above 17 years outside labour market in per cent of total new tenants above 17 years.

Source: Programbestyrelsen (2005).

4.42 Concerns about the concentration of immigrants were raised already 10-15 years ago, leading to establishment of a committee on Metropolitan Affairs in 1993 to find ways to discourage ethnic enclaves. This group proposed a number of measures to combat social problems in deprived urban areas. In 1996, the committee changed track and focused on a new strategy, through an urban regeneration programme (*kvarterløft*), aimed at making such areas more attractive without trying to directly influence the social composition of tenants (OECD, 2003a). In 2003, a more permanent reform strategy was introduced (*områdebaseret byfornyelse*), aiming at the regeneration of problemfraught urban areas, which was integrated in the Urban Renewal Act. More recently the current government has recognized that the composition of tenants may have an important impact as well, and has therefore launched new measures to improve integration of immigrants and reduce ghetto problems (Box 4.1).

Box 4.1. **Government initiatives to improve integration and reduce ghetto problems**

The government has recently launched several measures to cope with integration and ghetto problems (Regeringen, 2004, 2005):

– Improving the physical conditions by renovating and modernising buildings in the social housing sector. According to a political agreement from 2002 (subsequently extended in 2005), renovation of the buildings that can not be financed by the tenants or the housing associations' member section may be financed through a subsidy from a cooperative fund (the *Landsbyggefonden*, see Annex 4.A3).

– Earmarking of DKK 600 millions of the cooperative fund, *Landsbyggefonden,* in 2006 for social and preventive initiatives, *e.g.* initiatives for employment creation, promotion of integration and crime prevention. The initiatives must be part of a universal plan encompassing a financing programme to secure local coordination of initiatives. DKK 200 millions of the total amount may be used as a subsidy to allow for rent reductions.

– Improving the property rights and strengthening the possibilities to change the composition of tenants, for example by allowing tenants and outsiders to buy dwellings. Municipalities and the housing associations may decide which criteria should be used regarding sales in order to ensure a positive long-term effect on the composition of occupants. The cooperative fund, *Landsbyggefonden*, may approve that revenue from such sales be earmarked for activities and initiatives as part of a universal plan within the member sections. A sale requires that the housing association, the municipal authority and the member section reach an agreement. The law on sale of dwellings in deprived urban areas has only been in place since 1 January 2006 and so far no sales have taken place.

– Introduction of a new legislation for combined renting with the aim of creating a more varied composition of tenants in deprived urban areas. By changing the rules for the municipalities' right to fill vacant apartments, the housing associations may refuse applicants on waiting lists if for a period of 6 consecutive months they have received public income transfers. Instead, applicants will be offered housing in less-distressed areas, based on the municipalities' right to fill 25% of vacancies in the housing associations. This new arrangement also makes it possible to establish a right for request of vacancies in private rentals, as municipalities will receive a higher rate of reimbursement from the government if they make such arrangements with private landlords. Although the reimbursement rate has been increased several times to its present level of DKK 30 000 (€ 4 020) per dwelling, very few agreements with landlords have so far been made.

– Establishing the "*Programbestyrelsen"*, which is a publicly appointed body set to monitor the development in deprived urban areas and give policy advices. The unit consists of representatives from the housing associations, municipalities and the business sector. In their first report published in November 2005, they recommended that tenants in deprived urban areas with a stable labour market connection should be rewarded either by having a reduced rent or an earned income tax credit (*Programbestyrelsen*, 2005). The "*Programbestyrelsen"* has also addressed the need for dealing with social problems and problems related to the schools. Furthermore, it was proposed to improve upon the physical conditions of the housing stock and take measures to change the composition of tenures in the most deprived urban neighbourhoods, as well as improving safety and neighbourhood relations.

– As part of the 2004-Spring package, DKK 100 million was spent on urban renewal in deprived urban areas and a further DKK 27 million as part of the *Satspuljeaftalen* was targeted at initiatives promoting employment and integration of immigrant children.

4.43 The government initiatives to cope with segregation and ghetto problems, such as improvements of the physical structure and measures to change the composition of tenants, should be applauded. However, extra care should be taken to ensure that performance enhancing measures are implemented in a cost-effective way. Possible measures may include a clear guidance from central government or allocation of means according to objective criteria. If properly implemented, the initiatives may contribute to avoiding the self-enforcing mechanisms that typically characterise deprived urban areas (Skifter Andersen, 2005). In addition, addressing social problems and problems related to schooling as proposed by the "*Programbestyrelsen*" could also have a positive impact on the probability to turn developments in distressed areas, to the benefit of those growing up in such areas.

4.44 Recent developments in the social housing sector nevertheless point to the risks associated with having a large public rental sector. The distributional outcome is unfocused, utilisation of the housing stock is falling (although vacancies still constitute a small share of the total stock and they are mostly found in some regions in Jutland) and ghettoisation has become a major concern in several areas. Despite the recent efforts to cope with segregation and ghetto problems, which may induce some positive dynamics in the sector, Denmark would benefit from a more fundamental reform. To resolve the paradox of vacancies in some geographic regions and waiting lists in others (particularly in the Copenhagen area), the tenants in the housing associations should be required to pay a rent that better reflect differences in quality, location and demand. This would imply that tenants who have managed to get into the flats with the largest insider advantages (for example, reflecting that attractive land plots were acquired at an earlier time when land prices were low) should pay a higher rent than those who live in areas with less insider advantages. Hence, this could be seen as equivalent to a tax on the insider advantages accruing to the tenants.

Flexibility is also hampered by the price regulation of shares in co-operatives

4.45 Anecdotal evidence indicates problems with illegal subletting and side payments in the co-operatives resulting from unclear property rights and a growing gap between the general price of accommodation and the regulated prices of co-operatives.[26] These problems are likely to be most pronounced in cities like Copenhagen and Aarhus where the co-operatives account for about one third of the housing stock. Making property rights clearer would probably reduce such informal arrangements. The government should consider removing price regulation for shares in housing co-operatives as in Norway. Co-operatives would then be put on a more level playing field competing with owner-occupied housing. Those having shares in a co-operative today would in most cases have substantial capital gains. The part of these capital gains that reflect identifiable public construction subsidies or urban renewal subsidies that the co-operative has received might be returned to the state and municipality.

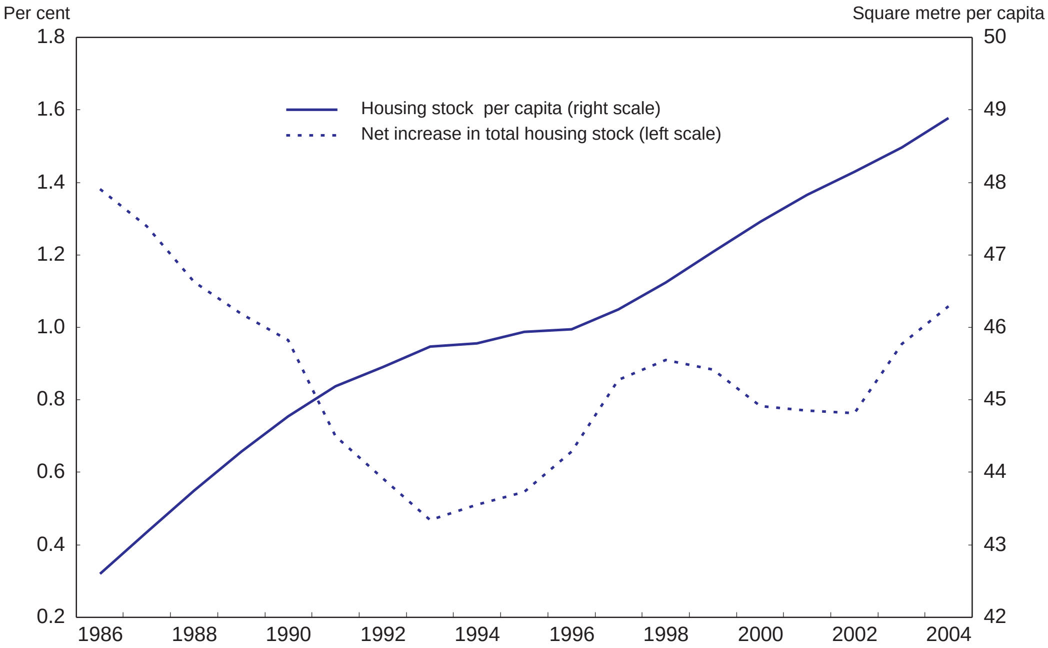
Supply responsiveness and mortgage developments in owner-occupied housing

4.46 Accounting for 52% of the housing stock, the owner-occupied segment is of great important for the functioning of the housing market and for labour mobility as well as for overall macroeconomic performance through the spill-over effects from house prices to consumption and residential investments. The system for housing finance is evidently of great importance in this respect, where Denmark in fact has developed one of the most sophisticated mortgage markets in the world. Nevertheless, the supply response of residential investments to changes in demand appears not to be particularly high in international comparison, which is a cause for concern.

Housing supply needs to be more responsive

4.47 Danish housing investment has in overall gradually picked up since 1993 to the present level of close to 1% of total housing stock, albeit partly reflecting public subsidies to construction of social housing (Figure 4.6). Reflecting that high income growth typically generates more demand for space, the average square metres of housing per capita has increased by 15% during the last two decades.

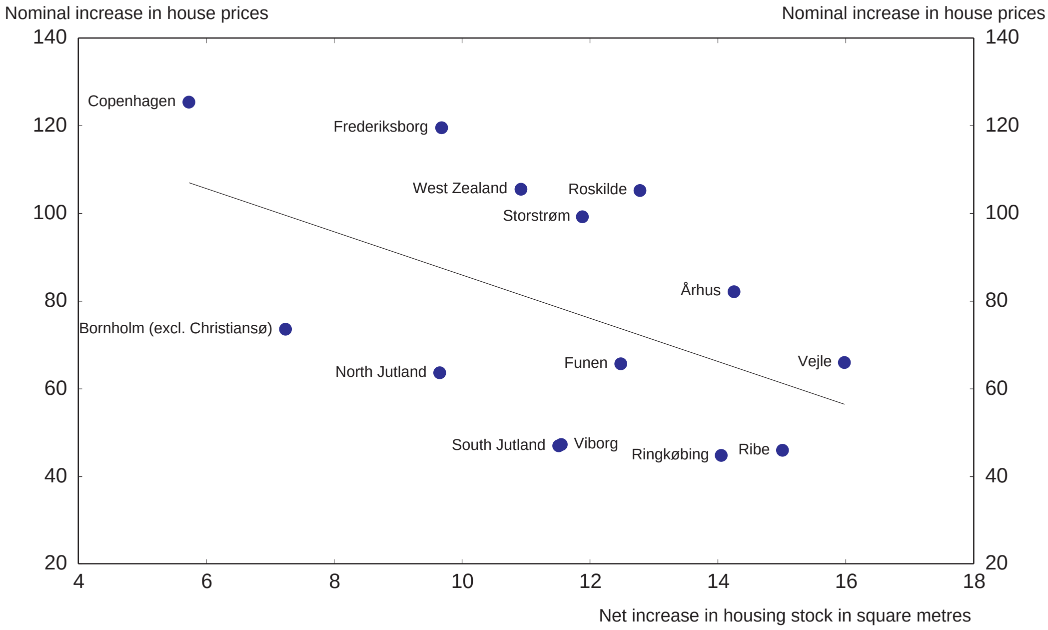
Figure 4.6. **Housing investment and stock**



Source: Statistics Denmark

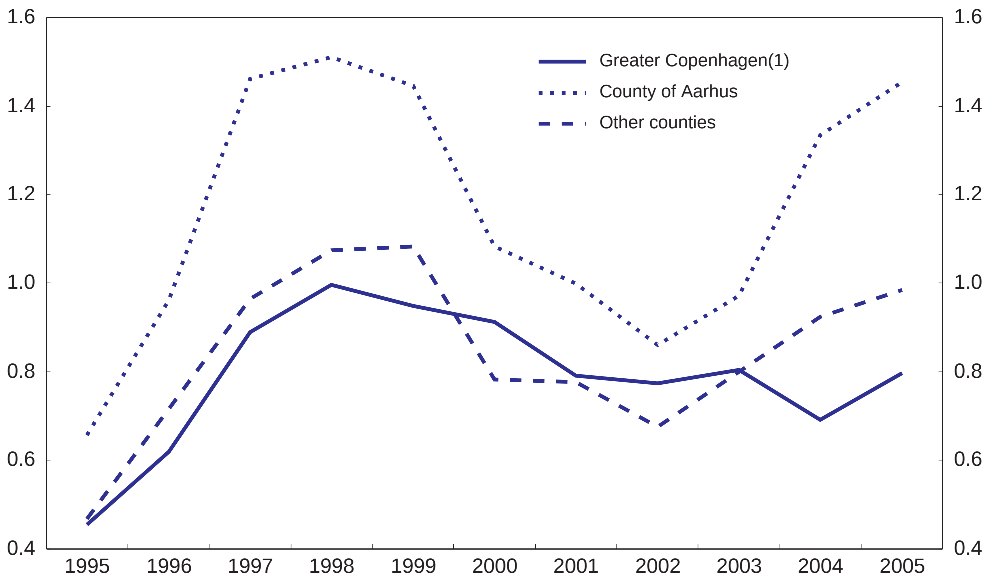
4.48 However, empirical evidence indicates that the supply response in the Danish housing market is not particularly strong. Over the recent decade, the response of housing investment to the higher Q-ratio (ratio of house prices to construction costs) has had strength not far from the average of OECD countries (OECD, 2005d), but other evidence shows that the number of new building permits reacts only moderately to changes in house prices (Swank *et al*., 2002)[27]. Thereby, inelasticity of housing supply has contributed to making the house price increase over the recent decade more pronounced (Annex 4.A6). Indeed, house price developments during the last decade show strong regional divergence, which partly reflects differences in the investment response to price increases (Figure 4.7). In the Greater Copenhagen Area where house prices have risen by far the most, housing investments have at the same time remained more or less constant (Figure 4.8).

Figure 4.7. **Regional development in house prices and housing investment – one-family houses**
Per cent increase from 1995 to 2004



Source: Statistics Denmark (EJEN9-series for house prices and BYGB3-series for housing stock measured in square metres).

Figure 4.8. **Investments in one-family houses**
Net increase in total stock



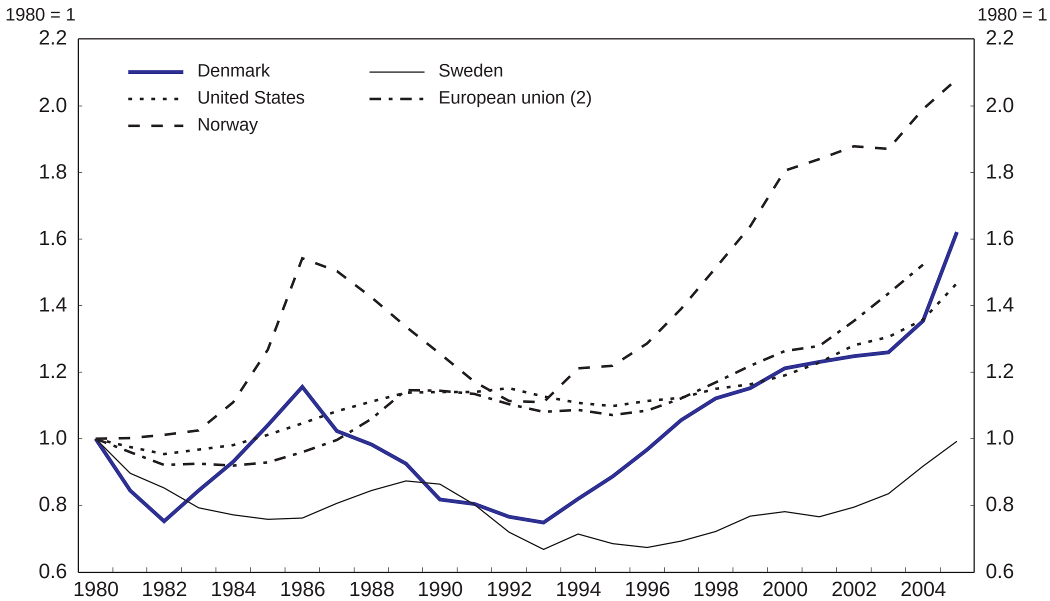
1. Greater Copenhagen includes the counties of Copenhagen, Fredriksborg and Roskilde.

Source: Statistics Denmark (BYGV1-series for investments measured in square metres and BYGB3-series for housing stock).

4.49 House prices are currently high relative to construction costs, although not particularly high compared to other countries (Figure 4.9). It is therefore profitable to build new houses as construction costs are low compared to what new houses could be sold for. While an efficient market for new construction should ensure that this Tobin's Q-ratio would be equal to one in the outskirts of urban areas where land is available, deviations may occur due to the cost of acquiring land or obtaining regulatory approval (Glaeser *et al.*, 2005).

4.50 Tough zoning regulations and cumbersome or slow administrative procedures for allowing building permits are factors which may account for sluggish responsiveness of housing supply. Weak local incentives to develop new land areas are also important in this respect. Finally, housing supply may have been hampered by capacity constraints in the construction sector as discussed in Chapter 1 and pointed out by the Ministry of Finance (2005), and by the low productivity in this sector (OECD, 2005b).

Figure 4.9. **House prices relative to construction costs**[1]



1. Nominal house price index divided by the deflator of gross fixed residential investment.
2. Average index of Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Spain, Sweden, United Kingdom.
Source: OECD Analytical database.

4.51 The land planning system forms an important part of the overall supply conditions. Planning responsibility in Denmark is to a large extent decentralized to regional and local government (see Annex 4.A7).[28] At the national level, the central government lays out specific guidelines or provisions that are the basis for planning at lower levels. Municipal councils and county councils are within these guidelines responsible for regional, municipal and local planning, including permits for construction and for zoning regulations. Despite the fact that the municipalities have significant influence on the size and composition of housing construction through local planning, the Minister for the Environment may veto local planning decisions to uphold national interests. Local planning proposals may also be appealed by affected parties, such as neighbours, non-governmental organizations, public authorities and people living in the area.

4.52 Development of new land areas that require a change in zoning status (*e.g.* from an agricultural to an urban zone) needs to be approved by a regional authority. In several parts of the country where house prices have been increasing, construction has been growing rapidly (Figure 4.8). But this is happening to a lesser extent in the Copenhagen region. Quite some open farmland can be found within a 30-kilometre perimeter from the city centre. The evidence indicating that housing supply is sluggish, could therefore reflect that higher levels of government have been reluctant to grant such approvals. Furthermore, the arrangement of appeals in the planning process and the typically strong resistance among incumbents to building proposals may also have been contributing to slow the supply response. Finally, the fragmented municipal structure in the capital region might be a hindrance, and mergers of some of these municipalities might encourage a wider perspective on zoning.

4.53 Housing supply may also be increased through better utilisation of the existing areas and the housing stock by higher density and constructing higher buildings. While conversion of former industrial areas to residential areas could help to improve utilisation, few conversions have so far taken place, not least in Copenhagen (except for in the harbour area where land is being developed for new business properties and in the up coming *Ørestad* area). This is perceived to reflect that mainly property owners are responsible for cleaning up polluted soil before erecting new buildings, which in many cases is considered unprofitable due to the risk of high clean-up costs and the taxes levied on the deposition of the polluted soil. A lack of tradition for high-rise buildings is another factor that is seen as hampering supply. The government has recently taken some steps at reducing and simplifying administrative planning rules which may induce more supply by making it easier to increase utilisation of the existing housing stock (Ministry of Finance, 2004b).[29]

4.54 Development of new land areas requires often investments in technical infrastructure (roads, water and sewage system) and social infrastructure (schools, child care facilities). Within the current financing system for local government, a municipality will have net *expenses* in the short run in the case of immigration of a family and this requires investments in social infrastructure (Table 4.9).[30] Except for technical infrastructure which can be financed by cost-covering user charges, restrictions apply on local government borrowing for investments in social infrastructure.[31] Although such a restriction may be warranted for reasons of fiscal discipline, it also reduces local flexibility and may weaken the incentives to develop new areas as investments have to be financed out of current revenues. Previously, the municipalities received a conversion fee (*frigørelsesafgift*) when a rural area was converted into an urban zone. While this fee induced a positive incentive to develop new areas, the abolishment of this fee from 2004 has reversed this effect. To strengthen incentives to develop new land plots it should be considered to give at least some room for expanding municipalities to borrow to finance social infrastructure like schools and similar facilities.[32]

4.55 In the Copenhagen area, the weak supply responses might also be due to too low infrastructure capacity (reflected in daily highway congestion), as this determines the speed at which it makes sense to develop new areas. Increasing the infrastructure capacity would enhance possibilities for developing new areas outside the capital (where land is less scarce) rather than inside the city (where land is scarcer and where stricter zoning rules apply). However, in recent years the capacity constraint on the highways towards Copenhagen seems to have become an increasing problem. This is likely to reflect the fact that the highways in the capital area function as regional roads (people commuting to work). However, administratively all highways are under state jurisdiction where allocations are based on servicing national (and international) traffic. Recent initiatives to increase subway capacity inside Copenhagen city and at the same time expanding capacity on one of the highways might help to mitigate some of the congestion problems. Introducing more market mechanisms, such as road pricing, could contribute to ensure that infrastructure investments are more closely linked to where the demand is.

Table 4.9. **Impact on municipal finances in the case of immigration of a family**
First year effect in DKK

	Social housing	Co-operatives	Owner-occupation
Financing costs	4 800	0	0
Kindergarten excl. user charge	92 300	92 300	92 300
Housing benefits	0	0	0
Total expenses	***97 100***	***92 300***	***92 300***
Municipal income tax	75 400	71 400	60 500
Block grant and equalisation	11 800	13 600	9 900
Property tax	0	0	7 200
Total income	***87 200***	***85 000***	***77 600***
Net expenses	***9 900***	***7 300***	***14 700***

Note: The calculations are based on equal assumptions about housing size (92 square metre), construction costs of DKK 1 077 800 (DKK 11 715 per square metre), a couple with two children (2 and 5 years) and household income (wage earnings) of DKK 494 000 in a municipality outside Copenhagen. The calculations are based on the fiscal equalisation scheme being in place since 1996.

Source: KommuneInformation (2003).

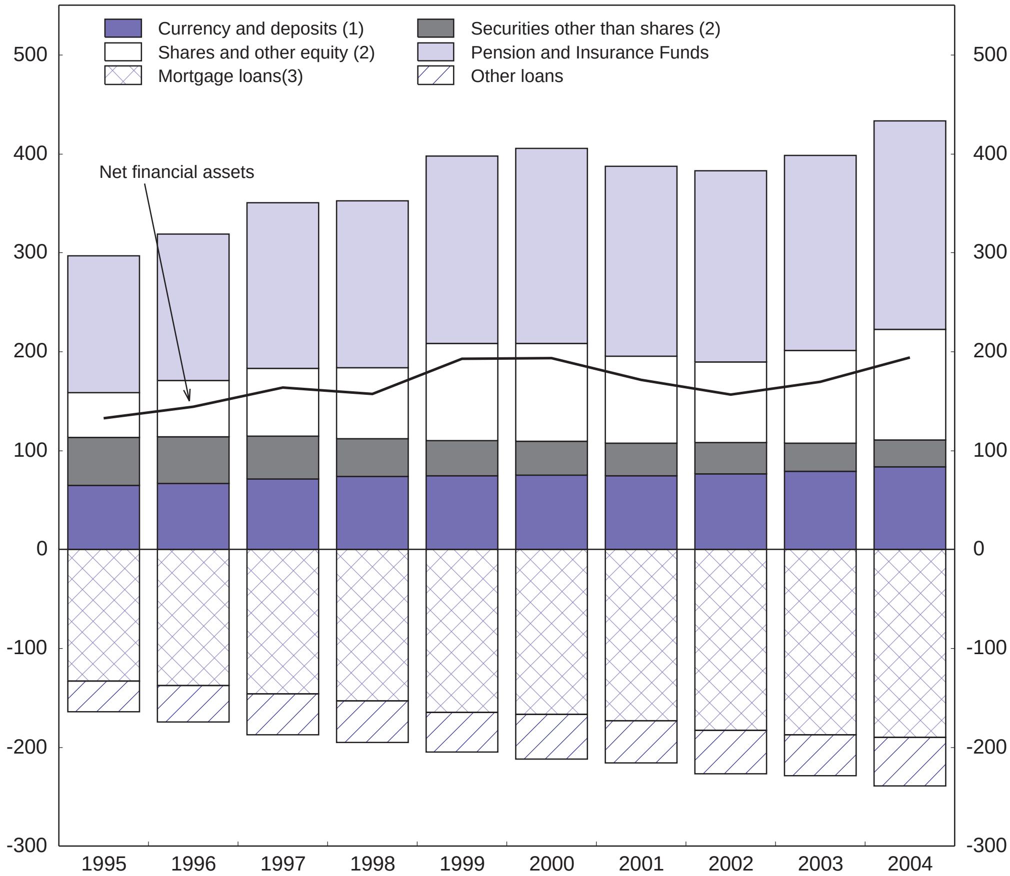
Monitoring developments in the mortgage market

4.56 The mortgage market is highly developed with a large volume of household and business credit. Including *all* types of mortgages, outstanding debt equals 104% of GDP (by end of 2004), much higher than in most other OECD countries. Residential mortgage debt equals 80% of GDP (owner-occupied housing 60%, private rentals 8%, and housing associations etc. 12% of GDP) the rest being mortgages for agriculture and other business purposes equalling 12% of GDP each.

4.57 The large market size reflects wide financial inclusion with mortgage credit being easily available also for homeowners with low income. One reason is that mortgage institutions have easy and quick access to the collateral. They have no obligation to provide alternative housing for the persons concerned, a task that is left to social authorities. Interestingly, these features benefit low-income families in particular as income and personal finances play only a limited role in mortgage credit assessment. Using the house as collateral, households with a gross income below 82% of one average production worker manage to borrow three times their annual gross income whereas the average mortgage-debt-to-income ratio for middle and high income groups is only about two (Nationalbanken, 2005).[33] Moreover, as mortgage loans mirror the underlying bonds, borrowers pay the same interest rates regardless of income, giving low-income families cheaper finance for owner-occupied housing than they would have in most OECD countries.

4.58 Danish households have taken up much more mortgage debt than a decade ago, but their net financial position (excluding housing wealth) has improved. The total stock of household loans, of which roughly 80% are mortgage loans, increased from 160% of disposable income in 1995 to 240% in 2004. During the same period, mortgage equity withdrawal has become more prevalent and is estimated to have been around 2-5% of disposable income per year throughout the past decade (except in 2000). At the same time, however, their pension assets and non-pension security holdings have increased even more (Figure 4.10), reflecting higher savings and pension contributions, but also rising share prices (about half of the increase reflects valuation changes).

Figure 4.10. **Households' financial position**
Per cent of disposable income

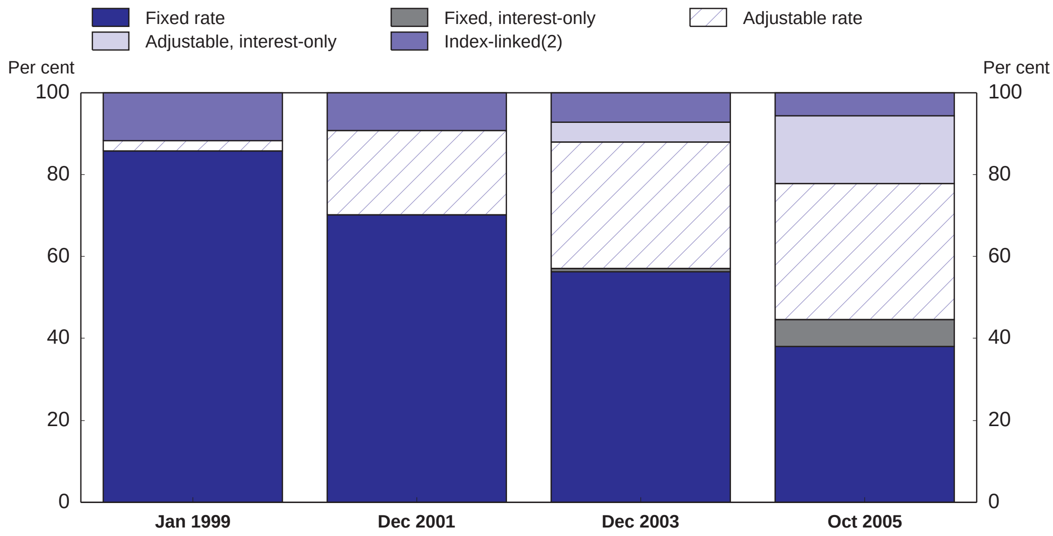


1. Including net other accounts.
2. Outside pension schemes.
3. Sum of mortgage loans for owner-occupied housing, agriculture, housing associations and half of mortgage loans for private rentals.

Source: Statistics Denmark.

4.59 Over the recent decade, a number of innovations have appeared expanding the possibilities for households to adapt the risk and repayment profile to their specific situation. These innovations have made the Danish mortgage market more complete than most other European housing finance systems, apart from the Netherlands and the United Kingdom (see Annex 4.A8; Frankel *et al*., 2004). As a consequence, the structure of debt has changed significantly. As late as 1999, virtually all mortgages were fixed-rate loans, but now these account for only about 40% of total outstanding mortgage debt. By contrast, the share of adjustable-rate loans has grown substantially, half of them having deferred amortisation (Figure 4.11). The new mortgage instruments have increased the financing opportunities for households also by allowing them to use their property as collateral for loans that are not necessarily related to housing investments. That may explain part of the ongoing mortgage equity withdrawal.

Figure 4.11. **Mortgage debt by loan type**
Distribution of outstanding mortgage debt[1]



1. Interest-only loans were only introduced in 2003. Based on the total mortgage market including lending to homeowners as well as rental housing, farmers and businesses.
2. Index-linked mortgage loans are reserved for housing associations and a few others borrowers, but are not accessible for households.

Source: Statistics Denmark.

4.60 Along with the benefits of a more complete mortgage market, households have become increasingly exposed to interest rate volatility. Danish short-term interest rates have remained below long-term interest rates since 1994, with an average differential of 2 percentage points. On the surface, adjustable-rate mortgages therefore look very cheap, and they have become a popular way for households to reduce their interest burden. However, short rates are more volatile than long rates and, going back in time, short rates have gone significantly above long rates during times of tensions in the fixed exchange rate regime, such as 1992-93. Coming from exceptionally low interest rates during 2005, increasing mortgage interest payments could have a significant impact for many households, not least young and less consolidated home owners. Some might have to reduce consumption considerably, meaning that interest rate movements will feed through to aggregate economic activity more forcefully than before (see Chapter 1). However, while macroeconomic risks from household indebtedness have increased, they still appear limited. Simulations by the central bank suggest that the interest expense of home owners on *average* increases by 1% of gross income if short-term interest rates rise by 1 percentage point (Nationalbanken, 2005).[34] How strong the impact of rising short-term interest rates would be depends also on how well home owners manage to move into fixed-rate mortgages. Recent developments are encouraging, as the share of new loans taken up at fixed rates has increased in response to the rise in interest rates since mid 2005. And interestingly, mortgage credit institutes now offer adjustable-rate loans with a cap on the interest rate. These “capped floaters”, introduced in end-2004, somewhat blur the line between fixed and adjustable-rate loans, as the loan is effectively turned into a fixed rate loan when interest rates rise above a certain threshold. These types of loans have become increasingly popular and anecdotal evidence from the two largest mortgage banks suggests that around one half of the outstanding adjustable-rate loans now have some form of interest rate cap.

4.61 It is still too early to fully assess these welcome mortgage innovations, as interest-only and adjustable-rate loans have not yet had the test of sudden interest rate increases, falling house prices or a general economic downturn. The way households use the new mortgage instruments would seem to indicate that most understand what they are doing.[35] It is encouraging that low-income households are the ones choosing the highest share of fixed-rate loans, indicating that they are well aware of the larger financial risk they face because of their higher debt-to-income ratio. On the other hand, the fact that deferred amortisation is used most frequently by homeowners with a high loan-to-value ratio could indicate that some first-time buyers take excessively stretched and risky positions to get into the housing market, while possibly hoping to gain from continued price increases. Deferred amortisation (interest-only loans) can help households cope with changes in life where liquidity shortages arise temporarily such as periods of unemployment or illness. However, if predominantly used for such purposes, it should not be expected that households with high loan-to-value ratios would be those most frequently deferring amortisation as they can less afford to do so. The theoretical case is clear for allowing households more flexibility on their repayment profile and options for tapping into low short-term interest rates. But the evidence on how well these efficiency gains are being reaped in practice is still fragmented.

4.62 How consumers use the new mortgage instruments and how well they understand the larger financial risks involved should be monitored better in the coming years. In this respect, the most interesting information concerns household debt patterns that cannot be assessed on the basis of the aggregate numbers currently published by the Association of Danish Mortgage Banks. The 2005 *Financial Stability Report* was able to get a glance into the individual patterns of mortgage borrowing on the basis of one mortgage credit institution (Nationalbanken, 2005). Adding individual data on earnings history and other factors covered by Statistics Denmark's registers and other information on individual asset holding and pension savings might enable much more elaborate analysis. Such linking would be feasible as financial institutions already identify their customers using each individual's Central Personal Register number. It could therefore be considered to give authority to the central bank, the financial supervisory authority or a similar agency to collect detailed individual information from mortgage credit institutions, and to analyse developments in the innovating mortgage market from a financial stability as well as a market efficiency perspective. It would not reveal any sensitive personal information, but could serve as a basis for possibly warning the public in situations where market developments seem to run astray. Establishment of such a dataset could also advance research in financial markets and thereby give a better-informed basis for a future reform of capital taxation (see Chapter 1).

Conclusion

4.63 While Denmark has fairly flexible labour and product markets in most respects, the housing market stands out with large direct and indirect subsidies for all types of housing and a highly regulated rental market hindering mobility, and probably resulting in a mismatch between housing needs and use. In the current housing policy framework there is quite a contrast between the well-functioning market for transactions of owner-occupied housing (supported by the highly liberalised mortgage market) and the highly regulated rental housing market. Although current housing policies are often cherished by the insiders (both renters and home owners currently seeing large price increases), life for outsiders (those who need to move to get a job or young families entering the housing market for the first time) is made more complicated than necessary by informal arrangements and sometimes even illegal side payments. In addition, housing policies seems to achieve little in the way of income distribution. Denmark would benefit from a fundamental re-shaping of its housing policies.

Box 4.2. **Recommendations for housing policy**

Direct and indirect subsidisation

- Increase the real estate tax for owner-occupied housing to make it neutral *vis-à-vis* the tax value of interest deductibility. With interest deductible at 33%, a neutral real estate tax rate would be about 1½ per cent of the property value. Ensure that regulation allows mortgage institutions to offer products whereby the real estate tax and the land tax are paid automatically based on mortgage equity withdrawal. In addition, make those having a share in a co-operative liable for the real estate tax, at least for the part of the flat's value that is not matched by borrowing within the co-operative.

- End the subsidies for pension funds' investments in newly constructed private rental housing, as well as the tax exemption for pension funds' return on property bought before March 1986 and for return on property investments undertaken during the quota system in the 1980s and 1990s that still are tax exempted.

- Replace the general subsidies for the housing associations with targeted support for those who are referred by municipal social authorities or in other ways are in clear need of public housing support. Increase the allocation of dwellings through the municipalities. From an overall fiscal perspective, the national housing construction fund should be integrated with the state budget, thereby keeping funding of construction, ghetto alleviation and similar measures subject to normal public budgeting scrutiny. In addition, the cap on construction costs in social housing should reflect the best performing constructors.

- Reconsider the size and targeting of personal housing allowances to reduce the high marginal effective tax rates implied by their withdrawal. Reform the scheme by linking it to appropriate rents in a region instead of actually paid rents.

Openness and flexibility in rental housing

- Let rents in private rental housing be set freely on market terms by progressively scaling back current rent regulation. Lowering the threshold for how much landlords must spend on renovating apartments in order to transfer to less strict rent regulation could advance a gentle transition.

- Let tenants in social housing pay rents that better reflect differences in quality, location and demand.

- Remove price regulation for shares in housing co-operatives. Such a liberalisation would generate capital gains, and the part that reflects identifiable public construction subsidies or urban renewal subsidies might be returned to the state and municipality.

Supply responsiveness and mortgage developments in owner-occupied housing

- Consider giving municipalities that are expanding more room for borrowing to finance social infrastructure when new land plots are issued. Consider mechanisms like road pricing, to ensure that infrastructure investment is more closely linked to where the demand is. Mergers in the fragmented municipal structure around Copenhagen might also help balance local and wider perspectives on zoning.

- Consider giving authority to the central bank, the financial supervisory authority or a similar agency to collect detailed individual information from mortgage credit institutions and link them with income and other individual data from Statistics Denmark for analytical purposes. This would facilitate more elaborate assessment of financial stability as well as efficiency of the innovative mortgage market.

Notes

1. Share prices in co-operatives are regulated on the basis of the co-operative associations' wealth. The regulations allow for three different methods to estimate this wealth, although the rent regulation framework nevertheless implies that wealth will be lower than on a free market.

2. In 2007, after implementation of the local government reform, the responsibility for providing housing for seriously disabled elderly people will be transferred to the municipalities. Most of the counties' responsibility for physical land planning will also be transferred to the municipalities, although the new regions will be responsible for planning of land zones. Municipalities within the new municipal structure may decide to transfer the task of building and managing social housing for seriously disabled elderly people to the new regions. (See Ministry of the Interior and Health, 2005 for further details about changes in responsibilities for non-housing tasks).

3. Tax revenues foregone within the previous system based on a tax on imputed rent amounted to 1.7% of GDP in 1999. If the real estate tax (introduced in 2000) had been in force in 1999, this indirect tax subsidy would have been reduced by ½ percentage point, to 1.2% of GDP (Economic Council, 2001). A temporary regulation, which was introduced in 2000 together with the real estate tax, implies reduced taxation for houses bought before 1 July 1998 and for pensioners. Phasing out of these transition rules would reduce the tax revenues foregone further by 0.2-0.3% of GDP. Hence, the indirect tax subsidy was reduced in 2000 by introduction of the real estate tax. A fall in the average bond rate from about 6% in 1997 to 3-4% in 2005 have contributed to reducing the indirect subsidisation of owner-occupied housing, even though this has to some extent been counteracted by the tax freeze introduced in 2001.

4. See Ministry of Taxation (2006).

5. The argument goes as follows: if house prices are above their equilibrium value, a capital gains tax with full loss offset reduces the capital loss of the home owner who has bought a house at the high price if he sells the house later on at a lower price. Accordingly, the home owner who has bought a house at a price below the equilibrium price will sell at some later date and earn a capital gain. The home owner's valuation of the house declines if capital gain taxes are introduced. As a result, capital gains taxes increase the price of a house when the price is high and reduce it if when the price is already low, *i.e.* prices become more volatile.

6. As of September 2005 there were introduced sanctions (*e.g.* jail) for those who sell a share in a private co-operative in conflict with the price cap regulation. Consensus is that this has reduced the magnitude of side payments.

7. Estimates by the Ministry of Social Affairs.

8. For households without children (and disability pensioners, *i.e.* normal *boligsikring*), the granted housing allowances covers at maximum 15% of the housing expenditures. Furthermore, housing allowances will cover a maximum size of 45 + 20 (*number of persons) square metres. This implies that for larger flats, the housing allowance will be reduced proportionally. There is – apart from special cases – an upper limit on housing expenditures in the formula for calculation of housing allowances. Depending on the number of children, the maximum limit varies from DKK 65 400 (€ 8 770) to DKK 78 480 (€ 10 520) per year. The granted housing allowance may at maximum amount to DKK 34 536 (€ 4 630) per year for households without children and a maximum of DKK 43 170 (€ 5 790) for households with four children or more. As a minimum, the households that receives *boligsikring* are obliged to cover DKK 19 700 (€ 2 640) of the annual housing expenditures. All numbers are in 2005-prices.

9. See www.dwp.gov.uk/housingbenefit/lha/.

10. Although stated in legislation in 1933, this principle was incorporated in the laws of governance of the housing associations already in 1918.

11. Due to a political agreement of 4 November 2005, 50% of the mortgage servicing in excess of rents paid by the central government in 2005 and 2006 will be reimbursed by transfers from *Landsbyggefonden*. According to the political agreement, there will also be carried out an analysis of the possibilities for having a more self financed social housing sector, which is due to be completed by 1 July 2006.

12. Local authorities grant public subsidies to new social housing projects on behalf of itself as well as on behalf of the central government. Thus, the municipality decides on the number of social dwellings that are going to be built and which housing association that should construct them. The preferred housing association is chosen after a compulsory tender, in which all housing associations are entitled to participate. In connection with granting subsidies the municipality possesses relatively wide possibilities for setting conditions concerning the implementation of a certain housing project. Generally, construction of new dwellings presupposes that a local plan for the site in case is implemented by which the municipality can regulate the use of the land.

13. The cap on construction costs is set at DKK 17 000 (€ 2 280) and DKK 14 500 (€ 1 940) per square metre for dwellings in the Copenhagen area and provincial areas, respectively (2004-figures). For social housing youth dwellings and social housing elderly buildings the cap is DKK 3 000 (€ 400) higher than these limits.

14. The urban renewal scheme will be subject to an evaluation in 2006.

15. An unwarranted feature of this tax relief is that it may have contributed to limiting flexibility in the rental market and shut off parts of this segment for outsiders, as the pension funds have tended to reserve apartments for their own members.

16. The government is currently undertaking work to simplify the rent regulation laws, although changing the rules for rent determination is not part of this work.

17. The insider advantage is calculated as the difference between the uncontrolled rent predicted for the specific flat and the actual rent paid. The predicted uncontrolled rent is derived from the Danish Tax Authorities (DTA) 1999 model for owner-occupied housing. The DTA model is a hedonic price function for prices on the free market for owner occupied dwellings, and it is based on actual sales in the years 1996-99 and a long list of housing traits for each unit. The DTA model is applied to all rented housing dwellings to obtain the estimated uncontrolled price. The uncontrolled rent is them derived by multiplying with an estimate of user costs in Denmark (see further details in Munch and Svarer, 2002).

18. The approach of estimating *absolute* insider advantages has been debated among Danish economists (see Sørensen, 2004; Kærgård and Andersen, 2004). Sørensen shows that if insider advantages are calculated as a percentage of disposable income the insider advantages due to rent regulation is falling as income increases.

19. According to Ellingsen and Englund (2003) the insider advantages of a rent controlled dwelling are much smaller than (often less than half of what) a simple comparison of controlled rent and estimated market rents would indicate, when behavioural responses are taken into effect.

20. Efficiency arguments have been put forward defending regulation of the private rental market, one example being the need to protect tenants from landlords' stronger bargaining position when setting the rent (reflecting imperfect competition). A more recent view (termed "the revisionist view of rent control") argues along the same lines, based on the assumption that housing markets are heterogeneous search markets characterised by imperfect information. In such markets rational landlords may use their market power to charge a rent above marginal costs, inducing new entry. As the likely effect of this is an equilibrium with higher vacancies than optimal, a case could be made which justifies some forms of rent control (Arnott, 1995).

21. Internal movements are not only frequent in private rentals but also in other housing segments as well. In a recent study by the Ministry of Social Affairs it was found that internal movements in 2003 were more frequent in the owner-occupied segment than in the private rental segment. Thus, households seem to prefer sector-internal adjustments of their housing consumption, both in the case of climbing the housing ladder and in the case of adjusting to changes in needs.

22. According to Oswald (1996), unemployment rates and the share of home owners are positively correlated for a number of countries and regions, reflecting the mechanism that home owners are much less mobile than tenants in rented housing due to the large costs associated with buying and selling a house. Hence, home owners are relatively inflexible in the labour market, meaning that a high share of home ownership result in an immobile work force which therefore is likely to result in a higher level of structural unemployment. According to Oswald's estimates, countries (or regions) with a 10 percentage point higher share of home owners tend to have two percentage point higher unemployment rate. Munch *et al.* (2005) finds some support for this mechanism based on aggregate Danish data, but their findings nevertheless contradicts the Oswald-hypothesis. This relates to the fact that the hampering effect of home ownership on the propensity to move for job reasons is more than counteracted by the effect that it improves the chances of finding local jobs.

23. According to Statistics Denmark (EJEN6-serie in "*Statistikbanken*"), prices of private rental buildings have increased by 27% to 105%, depending on the number of rental dwellings per building, over the years 2000-04.

24. Estimates indicate that rents in social housing on average is 34% (based on 1999-data) below market rent (Jespersen and Munch, 2001b).

25. Given that the initial rent paid by tenants (currently 3.4%) is adjusted accordingly.

26. In a survey where people where asked whether they had used side payments as part of buying a share in a co-operative, about 2% answered "yes" (Erhvervs- og Byggestyrelsen, 2006).

27. The underlying theoretical assumption behind this result is a small structural model of price-taking construction firms aiming at maximising profits. The estimations of this model are based on quarterly data covering the period 1980:2-1999:4, where housing permits issued is regressed on residential house prices, wage costs, capital costs and producer confidence (Swank *et al.*, 2002).

28. Although Denmark is considered to have more centralised control over urban development planning than other Nordic countries (Blucher, 2004).

29. Measures include making it easier for landlords and co-operatives to establish roof-top apartments and to expand existing buildings by allowing for extra floors, as well as improving the possibilities for conversions into residential properties. Other measures include improved possibilities for municipalities to change the use of elderly and disabled family dwellings into social housing dwellings for the elderly and simplification and easing of specific regulations applying to the

construction sector. The government has also proposed to digitalise the process of municipal treatment of building applications, so as to provide building permits more rapidly and make the decisions more transparent. In addition, a web-site will be established which will provide relevant property data as well as information about building regulations.

30. If a single adult with two children or a student moves into the municipality, the municipality will have a net surplus in the short run (KommuneInformation, 2003).

31. This is likely to reflect the system for financing of Danish municipalities where central government negotiates with local government organisations about their overall budget, within a framework where local government can set local tax rates (subject, currently, to the tax freeze).

32. A second best proposal could be to allow for co-payment from the new citizens when development of new land areas requires investments in social infrastructure.

33. These differences in borrowing are fully reflected in housing making up a larger share of consumption, as the loan-to-value ratio is even slightly lower for low-income than for high-income groups in owner-occupied housing.

34. This average holds for low-income as well as high-income homeowners, because while the first are more indebted, the latter have a higher share of adjustable-rate loans.

35. The indications described in this paragraph are based on Nationalbanken (2005) where they were collected in the context of financial stability analysis.

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ANNEX 4.A1

Progress in housing policy reform

Housing policies were last analysed in-depth by the 1998/1999 *Survey*. The table below lists the recommendation made then along with additions made subsequently, and reviews action taken since 1998. New recommendations made with this *Survey* are listed in Box 4.2.

Past recommendations	Actions taken and current assessment
Dismantle rent controls and extend property rights to improve mobility and maintenance	
Rent controls in the private rental market should be removed, allowing rents to reflect underlying differences in quality and preferences so as to stimulate maintenance and standard improvements.	The rent of new rooftop apartments can be freely set irrespective of rent regulation in the remaining apartments. To stimulate construction of new private rental housing aimed at average income groups, pension funds and private investors can be granted an investment subsidy on a competitive basis. The rent setting in these apartments will be free of regulations.
2002 Survey: Tax away any induced economic rent to landlords resulting from higher property prices.	No action.
2002 Survey: Introduce a property tax on rental housing.	No action.
Rent regulation in social housing should be modified, to eliminate unwarranted rent differentials within and across vintages of buildings.	A new financing regime introduced in 1999 imply that whenever the tenants rental payments exceed the payments on the mortgage, the surplus will be channelled into a fund with the purpose of replacing state subsidies to construction of social housing. In the long term, this may dampen the effect on the rent differentials. Possible modifications of the rent regulation system will be examined as part of a broader analysis of the social housing sector that will be carried out during 2006.
The introduction of extended property rights in social and co-operative housing by making stakes freely tradable would allow these segments to compete on equal terms with the owner-occupied segment for residents across all income brackets.	No action regarding the regulations of the cap on share prices. As of 1 February 2005, it is possible to use the share as collateral for borrowing.
2002 Survey: Allow tenants in social housing to buy their apartments.	For a trial period of 3 years from 1 July 2004, municipalities and social housing organisations can apply for the right of their tenants to buy their apartments. Tenants in deprived urban areas are from 1 January 2006 admitted this as a permanent arrangement.
1999/2000 Survey: Clarify governance structures in the social housing sector. A strategy to deal with the expected wealth accumulation in the sector should be developed in order to avoid lock in effects of capital and over investment in housing.	Funds accumulated in the social housing sector are made available for renovation and improvement of existing dwellings and they will now also cover some parts of the social housing sector's funding that was previously provided by the central government. The funds have been used in financing of several government initiatives within the social housing sector, such as renovation, construction and measures to cope with ghettos. A broader analysis of the possibilities for a more self financed social housing sector will be carried out during 2006.

Progress in housing policy reform (*cont)*

Past recommendations	Actions taken and current assessment
Continue reform of tax and transfer systems to improve resource allocation and improve equity	
Taxes and implicit subsidies for owner-occupied housing should be rebalanced to ensure a neutral tax treatment of such investments compared with financial investment.	No action.
The tax treatment of owner-occupied property and social and co-operative housing should be equalised, implying an extension of the property tax to the latter segments, with an adjustment of direct subsidies to re-establish earlier parities if that is desired.	No action.
''Object'' subsidies would no longer appear warranted and should be phased out. Remaining support should be concentrated upon assistance to individuals.	No action.
The housing benefit should be re-evaluated, in order to increase resistance to rent increases in the private rental market, improve its redistributive effect and reduce labour market and savings disincentives. *2002 Survey:* Benefits to pensioners should be aligned with those for other groups.	A major reform of the housing benefit scheme was implemented from 2000 to 2003. A minor change concerning benefits for children of age 17 to 23 years living at home has been implemented recently.
Cost control processes in urban renewal projects need to be improved*, inter alia* by requiring higher marginal financing from landlords and tenants.	In 2004 a reform of the urban renewal scheme was put into place, implying less public regulation, less public subsidies and a higher marginal financing from private landlords and funds.
2005 Survey: The preferential tax treatment and other subsidies to co-operative housing should be removed.	No action.
2003 Survey: Amend the tax freeze to allow tax assessment values to increase in line with house price developments.	The tax freeze implies that a nominal ceiling is imposed on residential property value tax so that an increase in the value of property will not lead to higher tax payment for the home owner. A fall in the property value will reduce the tax payment accordingly, but subsequent rises cannot lead to tax payments exceeding the level corresponding to the value of the property on 1 January 2001 plus 5%, or the value on 1 January 2002, whichever is lower. The tax freeze does not impose a nominal ceiling on the land tax levied by the municipalities and counties, although the average land value tax rate cannot exceed its 2002-level.
Modify the tax system to reduce the contribution of the housing market to macroeconomic stability	
Placing the taxation of housing income on a par with income from financial investment, on an accrued and nominal basis, would make government take part in both capital gains and losses, thus reducing variations in household wealth.	Income taxes were cut in 2004, reducing marginal taxes for middle-income earners.
2005 Survey: Tax capital gains from dissolving housing co-operatives, and adjust acquisition prices to those applying to new co-operative and owner occupied housing.	The possibilities for dissolving housing co-operatives by selling the building of the co-operative to an outside investor (thus reaping capital gains) has been curbed by new legislation in June 2005, stating that it is prohibited to sell a co-operative property that has been acquired recently within a period of 5 years.
Continue the decentralisation process	
Consideration should be given to a complete decentralisation of housing thereby requiring municipalities to assess housing expenditure against other public priorities.	From 2007, the share of the construction costs of new social housing that municipalities has to pay up-front is supposed to be increased from the current level of 7% to 14%. The municipalities will therefore be more exposed to having to assess housing expenditures against other municipal expenditures.

ANNEX 4.A2

Danish housing policies in a historical perspective

The instrumental structure of housing policy arrived at its present formulation in the early 1980s. However, the actual thrust of housing policy has oscillated over time, depending on the balance between macroeconomic, fiscal and welfare state considerations (OECD, 1999).

1966-74: an unsuccessful market orientation

- The 1966 housing policy package aimed at removing rent controls in the two rented segments by gradually increasing rent to market levels, by government transfers to cover in full interest payments in social housing above a certain rate, by individual housing benefits, by a doubling of the rate of return assumed for the imputed rent and by the possibility of converting private rented property to condominiums (*i.e.* owner-occupied flats).

1975-82: struggling with high inflation and high interest rates

- The acceleration of inflation and increase in interest rates made the introduction of market-based rents (as aimed for with the 1966 housing policy package) politically unfeasible, so in 1975 a policy package introduced the concept of cost-based rents which was to underlie rent formation both in the private and social rented segments. Tenants' barter rights were also introduced.

- The subsidy to social housing was modified to a four-year period with full elimination of interest rates above 6½ per cent to be followed by a gradual phasing out of the subsidy.

- In addition, there was a lowering of the value of imputed rent with a further fall effected in 1978.

- The possibility of conversion to condominiums was restricted in 1976 to rentals above a certain standard, and the possibility to convert private rental housing into co-operative housing was introduced.

- Construction of social housing fell in the wake of the phasing-out scheme introduced in 1975, and the rule capping the annual increase in the rent in this segment to three-quarters of the annual inflation rate was introduced in 1979. It was followed by individual housing allowances for pensioners in the same year. Indexed bonds were introduced in 1982 to finance construction in all housing segments as well as business investments in structures. Subsidy schemes for social and co-operative housing were modified accordingly.

1985-89: cooling down an overheated housing market

- The imputed rent was further modified in 1985, with a rate of 2.5% (and 7.5% above a certain threshold.) In addition, the 1987 tax reform brought the marginal tax rate for capital expenses down to about 52%, implying as much as a doubling of after-tax interest rates for those previously facing marginal rates above 70%. Central elements in the tightening of economic policy in 1987 (*kartoffelkuren*) were a tax surcharge of 20% on consumer borrowing and extensive use of regulations of the mortgage market.

1990-94: reviving the housing market

- For private rental properties taken in use after 1991 rents can be set freely.

- As a consequence of the prolonged depression in the housing market, the annual commitment quota of the urban renewal programme doubled from the late 1980s, to more than DKK 3 billion in 1993. This was supplemented by a four-year (1991-94) programme of substantial government refunds for maintenance and standard improvements.

- In 1994, the regulations for rent control were modified with an increase in the maintenance charge to offset the accumulated backlog of repairs on old rental property.

- In 1994 the former system of central government responsibility for decisions regarding construction of social housing was replaced by the right for municipalities to decide upon the appropriate level of social housing.

- The 1994-98 tax reform continued to lower marginal tax rates for capital income, reducing the tax value of deductible interest payments to about 46%. The value of imputed rent was accordingly lowered to 2% (and 6% above a certain threshold) to offset the lower tax value of deductible interest payments and capitalisation effects on house prices.

1995-2005: small steps towards less intervention

- Since 1997 landlords in municipalities applying the Housing Regulation Law has been allowed to charge a rent according to the "value of the rented dwelling" (*det lejedes værdi*) in the case of undertaking major improvements. This brings rents closer to market-clearing levels.

- The 1998-2002 tax reform (*Pinsepakken*) reduced the tax value of deductible interest payments further, from a maximum of about 46% in 1998 to 33% in 2002, the aim being to reduce marginal tax rates so as to increase private savings. The highly unpopular imputed rent taxation was abolished from 2000, but was subsequently replaced by a real estate tax. However, in 2002 the government introduced a tax freeze, implying that a nominal ceiling is imposed on the real estate tax so that an increase in the value of property will not lead to higher tax payment for the home owner.

- Since 2002, pension funds and insurance companies have been taxed by 15% of the surplus accruing from investments in private rentals compared to the normal corporate tax rate of 30%, the aim being to strengthen incentives to invest in rented housing.

- In 2004, a reform of the urban renewal scheme was put into place, implying less public regulation, less public subsidies and a higher marginal financing from private landlords and funds.

- Since 2004 landlords have been allowed to charge market rent on new roof-top apartments in rented housing buildings that otherwise are subject to rent control.

- For a trial period of 3 years from June 2004, tenants in social housing have been allowed to buy their dwellings, thereby strengthening property rights in this housing segment.

- As of June 2005 it became possible to use the share in a co-operative as collateral for borrowing.

ANNEX 4.A3

The housing associations

Main organisational features

Denmark has about 760 housing associations (*almene boligorganisationer*) responsible for provision of social housing, under municipal supervision. The actual provision of housing services takes place in the associations' member sections.[1] In total, there is about 7 400 member sections with a total of 492 000 dwellings (mostly family apartments). The dwellings are owned by the member sections.

Decisions regarding the member sections' provision of housing services are mainly taken in the housing association. The *governing assembly* decides upon acquisitions, sales and changes in the physical structures, and also carries into effect construction of new dwellings (on the basis of an agreement with the municipality). The *management board* is responsible for the daily operations, including management of the member sections. The latter responsibility includes budgeting and accounting matters as well as deciding on rent determination. The residents in the member sections constitute a majority in both the governing assembly and the management board of the housing association. In addition, each member section has a board of directors which is appointed by the tenants. As the municipalities have a supervisory function, they approve all important decisions in the housing associations.

The housing associations operate on a non-profit basis and the member sections are, in principle, economically independent of each other with respect to ownership and rent determination. Hence, revenues are supposed to match expenditures, implying that a bankruptcy of one section will not affect the housing association or the other sections within it. The rent determination in the member sections is based on a *balance principle* implying that rent is set equal to the section's costs. This is regarded as an important feature of the tenants' influence as they alone decide on investments and operations and personally assume the financial consequences of their decisions. Although the balance principle is set to ensure independency, some redistribution takes place between member sections (internal redistribution) and between housing associations (external redistribution) (Karlberg and Victorin, 2004).[2]

The arrangement of the cooperative funds

In 1999, a new financing regime for social housing was implemented implying that tenants' rental payments should be independent of the mortgage payments, including after amortisation. Hence, when the mortgage is paid back, rents go into different cooperative funds. Cash-surpluses due to amortisation of mortgages are part of each housing association's *Dispositionsfond*, which may be used for improvements, conversions, rebuilding etc. The new financing regime implemented, imply that 50% of these cash-surpluses should be transferred to the *Landsbyggefonden.* For dwellings built after

1998, two thirds of the cash-surpluses should be transferred to the *Landsbyggefonden* of which 50% should be transferred to the *Nybyggerifonden* with the aim of financing construction of new social housing dwellings.

In addition, member sections built before 1970 pay contributions to the Landsbyggefonden. The housing associations have a drawing right on 60% of the contributions to the *Landsbyggefonden*, which may be used for improvement of the buildings in the member sections.

In 2005, total revenues in *Landsbyggefonden* amounted to about DKK 500 million, exclusive of the drawing rights, where revenues as a result of amortisation amounted to DKK 130 million. The expenditures in 2005 amounted to about DKK 800 million, where DKK 200 million was used as contributions to housing associations having financial problems, DKK 300 million was used on different arrangement to support tenants rental payments and DKK 300 million was used to finance improvements and maintenance of the buildings. While the arrangement with supporting rental payments will be phased out, support to housing associations having financial problems is supposed to be continued. Revenues as a result of amortisation are estimated to increase to DKK 1.5 billion in 2010, and further to DKK 3 billion in 2020 (2006-prices).

Reflecting the expected increase in revenues in the years ahead, a political agreement of 4 November 2005 states that the *Landsbyggefonden* should be used to refund 50% of government support to financing of new social housing dwellings in 2005 and 2006, so as to reduce the burden on the state budget (Ministry of Social Affairs, 2005).[3] While the municipal share in the financing of new social housing buildings was supposed to increase to 14% in 2006 (as it was prior to 2001), the agreement states that the share should be hold at the present rate of 7% in 2006. Furthermore, the agreement states that the investment limits in the *Landsbyggefonden* should be increased by 40%, to DKK 2.1 billion in 2006, to improve the physical conditions of social housing buildings to attract new tenants, particularly in member sections having deteriorated buildings. To cope with segregation, leading to high concentration of socially weak groups, the political agreement proposes several initiatives: use of *Landsbyggefonden* for preventive activities, targeted reduction in the rent in distressed sections, sale of dwellings to achieve a better mix of tenants and financial support to cover moving expenses; enhancing the right for municipalities to request vacant dwellings so as to change the composition of tenants; extending the right to abolish buildings to improve the general environment; improving possibilities for renting to local business companies; and establishing an Internet site for social housing associations to increase availability and transparency to attract new tenants. The political agreement states that an analysis should be conducted of the future governance of social housing associations and use of the funds with the aim of increasing the degree of self financing of the sector. The analysis will be conducted by an inter-ministerial working group, and is due to be completed by 1 July 2006.

ANNEX 4.A4

The development of the Danish rent regulation framework

The current rent regulation framework for rented housing has its origin in a re-orientation of housing policy in the mid-1960s, intended to bring rents in private and social rented housing up to market-clearing levels over the period 1967-74. However, the plan did not foresee the strong increase in inflation in the early 1970s and was not adjusted to take this into account. The ensuing rent level in 1974 – in real terms more or less the same as in 1967 – was therefore still far from market-clearing levels and efforts to prolong the adjustment period were not pursued (OECD, 1999).

The basic rent regulation settled in the Tenants Law (*Lejeloven*) is formulated on the basis of market-clearing rents. Rent determination under this law is based on "value of the rented dwelling" (*det lejedes værdi*), implying that rent adjustments is based on comparing similar tenancies with respect to localisation, type, size, quality and standard.[4] This law was supplemented in 1975 by the Housing Regulation Law (*Boligreguleringsloven*) relying on cost-based rents (all costs, property taxes included, and a prescribed charge to cover maintenance costs). The introduction of this supplement led to an increase in rents of somewhat below 30% in real terms in the year immediately after its inception. Currently, about 87% of the housing stock is to be found in municipalities applying the Housing Regulation Law (Table 4.A4.1).

Table 4.A4.1. **Number of private rentals under different regulation regimes**
Stock in beginning of 2003

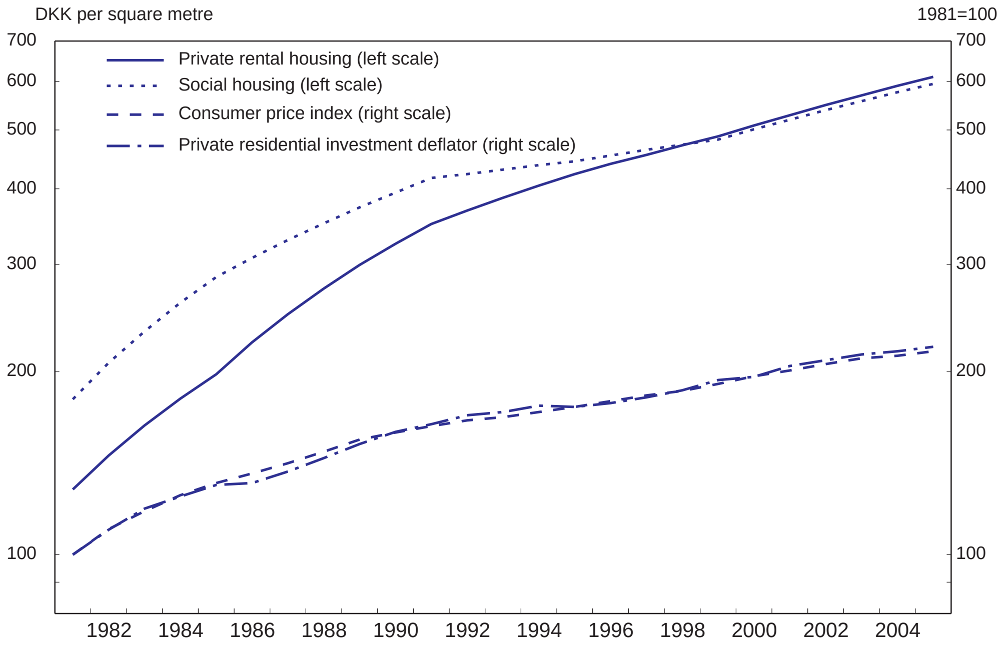
	Housing Regulation Law (*Boligreguleringsloven*)	Tenants Law (*Lejeloven*)
Cost-based rent		
- large properties built before 1964	142 700	
- large properties built 1964-91	48 700	
Value of the rented dwelling[1]		
- small properties with 7 flats or less[2]	142 000	
- properties taken in use pre 1992		52 700
- para. 5.2 conversions	12 500	
- 80% properties	3 500	
Market rent		
- properties taken in use after 1991	17 400	2 500
- dwellings arranged as commercials by 31 December 1991	2 000	
Total	368 800	55 200

1. Value of the rented dwelling is based on the average rent paid in the area taking into account localisation, type, size, quality, equipment and maintenance status.
2. Rent is set on the basis of value of the rented dwelling, but comparison is only made with apartments in large buildings in municipalities applying the Housing Regulation Law, implying that the basis for comparison in practise is cost-based rents.

Source: Submission from the Ministry of Social Affairs.

Landlords under the Housing Regulation Law are allowed to pass on all operating costs as well as a prescribed capital charge to cover maintenance costs and improvements.[5] The capital charge was restricted to 7% of the unadjusted nominal value of the property following from the 1973 tax assessment for buildings constructed before 1964. For buildings constructed from 1974 to 1991 the capital charge is 14% of the construction value, which in practice offsets the effect of the regulation regime. Thus rents in these apartments appear to be at the same level as rents determined on the basis of demand and supply, in line with that applying to property dating from 1992 and later (OECD, 1999). The capital charge in buildings constructed in the period 1964-73 varies from 8 to 12% of the construction value. Insofar as other elements have been included in the cost basis for rents (*inter alia*, an increase close to 50% in prescribed charges for future maintenance), rents in the private rented segment have increased substantially in real terms over the past two decades, and also relative to rents in social housing, particularly in the 1980s (Figure 4.A4.1). The capital charge for improvements is currently about 8% in the case that the apartment can not pass the paragraph 5.2 regulations.

Figure 4.A4.1. **The development of housing rents**



Source: Submission from Ministry of Social Affairs; OECD database.

While the rent regulation framework applies for properties constructed before 1991, about 95% of the stock of private rentals is still subject to below market-based rent determination. There have been some efforts to adjust the rent level up to market-clearing levels by gradual and indirect measures, such as tax credits admitted to pension funds and private companies when investing in the market for private rental housing and allowing for market determined rent in roof-top dwellings and dwellings in new constructed roof-floors. However, the share of dwellings being subject to market based rents is still relatively low (5%).

In municipalities applying the Housing Regulation Law, landlords are – in the case of undertaking major improvements (paragraph 5.2 conversions) determined by improvement costs above a threshold of DKK 1 834 per square metre or total costs above DKK 209 728 for the single apartment – allowed to charge a rent according to the "value of the rented dwelling" (*det lejedes værdi*) when renting to a new tenant. This rent is supposed to be closer to market-clearing levels. Close to 3% of the stock of private rentals is under this type of rent determination. As this option means increased profits for landlords, the number of dwellings with regulated rents is likely to fall, although gradually.[6]

ANNEX 4.A5

Housing taxation

The real estate tax

Until the tax year 1999 inclusive, taxation of owner-occupied housing was based on imposition of a tax on imputed rent, based on 2% return of the tax-assessed value (and 6% above DKK 2 150 000, € 288 200). From 2000 onwards, owner-occupied housing is subject to a real estate tax equal to 1% of the yearly tax-assessed value and 3% for values above DKK 3 040 000 (€ 407 500). As the tax rate is lower for properties acquired before 1 July 1998 and for pensioners, the effective property value tax rate is estimated to be merely 0.55% based on end-of-2005 public value assessments (Ministry of Taxation, 2006). The revenues are split between municipalities (2/3) and counties (1/3), and the tax is paid together with tax on ordinary income. From 2007, when the new municipal structure will be in place, all revenues from the real estate tax will accrue to the municipalities.

The tax freeze implemented in 2001 implies that a nominal ceiling is imposed on the real estate tax so that increases in house prices will not lead to higher tax payments for the home owners. On the other hand, a fall in the property value would reduce the tax payment accordingly, but subsequent rises cannot lead to tax payments exceeding the level corresponding to the value of the property on 1 January 2001 plus 5%, or the value on 1 January 2002, whichever is lower. Reflecting this arrangement, revenues from the real estate tax have been more or less unchanged in nominal terms since 2002. In 2005, the revenues amounted to DKK 10.8 billion (about 0.7% of GDP). Revenues are expected to increase slightly in 2006 due to construction of new dwellings and as the share of properties acquired before 1 July 1998 gradually is reduced (Ministry of Tax Affairs, 2005). If the tax freeze had been removed in 2005, rough estimates indicate that tax revenues would have been increased by DKK 4 billion, or almost 0.3% of GDP (Economic Council, 2005).

The land tax

The municipalities levy a land tax on almost all types of property amounting to between 0.6% and 2.4% of the assessed land value. The county council land tax is fixed at 1% for all county councils (and this will accrue to the municipalities following the local government reorganisation). In 2004 the total municipal and county council land tax was on average just less than 2.4% of the land value of the properties, and total revenues amounted to DKK 17.1 billion (1.2% of GDP). The municipalities are obliged to support pensioners and persons on early retirement by providing a loan to pay the land tax.

The tax freeze implies that the average local government land tax rate should be held constant, implying that revenues from the land tax may increase due to higher land valuations. From

2003 onwards there is introduced a ceiling on the assessed land value determined by the previous years' assessment adjusted by a certain factor. This adjustment factor is equal to the increase in the total municipal tax base that is considered appropriate plus a further 3%, but the factor should not exceed 7%. The regulation factor is determined by the Ministry of Finance with approval from the Parliament. For 2006, the regulation factor is set at 5.5%.

Tax breaks for pension funds

A special taxation regime applies to pension funds which pay a proportional tax of 15% on the return of those assets which are held as property for rented housing. There is however some exemptions to this taxation rule:

- Returns from investment in properties acquired before 12 March 1986 are tax-exempt.

- Returns from investment in certain types of properties (investments in new business buildings or new buildings in urban renewal areas as well as improvements of buildings in urban renewal areas) that were acquired in the period 1986-98 were originally tax-exempt within a yearly quota. However, with the aim of increasing activity in the building sector a provision was passed that suspended the limitations in the quota system for tax-exempt property investments, given that the construction of a building had started in 1993-94 and was completed at the latest in 1997. The suspension of the limitations in the quota system meant that pension funds in this period could also undertake tax-exempt investments in rented housing outside urban renewal areas. As of 2 June 1998, the quota system was formally abolished as part of a comprehensive tax reform where the aim was to limit activity in the building sector. At the same time a transitional provision was passed, after which all return from investment in properties acquired before 2 June 1998 would still be tax-exempt for pension funds, if the investment had been tax exempt according to the rules under the quota system. In addition, the tax-exemptions on property investments undertaken before 1986 and in the period 1993-94 were sustained.

To increase the level of construction of new private rented housing a provision was adopted in 2003 that made it possible for private companies and pension funds to deduct the costs of constructing new rental properties on their taxable revenues. The deduction right was subject to an overall limit on investments of DKK 1 billion per year in the period 2003-07. To be able to get a share of the deduction within this total amount the pension fund or the private company had to apply to the Ministry of Economics and Commerce, which in accordance with some objective criteria allocated the deduction rights.

In 2003 two allocation rounds took place, and in both rounds exceeded the number of applications by far the total investment limit. The system has also been exposed to massive criticism because only applications for building projects in the provinces were granted the deductions. In 2004 the tax-deduction system was replaced with a system based on grants, to achieve better targeting with respect to those areas that were in most need of rental housing.

ANNEX 4.A6

Determinants of real house prices

Following Meen (2002), real house prices (G) are assumed to be positively related to real household disposable income (RY) and negatively related to the real stock of dwellings (H) and the real interest rate (RR).[7] Estimating this relationship as an error correction model, all explanatory variables have the expected signs and are statistically significant. The long-run elasticity of real house prices with respect to real disposable income in Denmark (3.02) is higher than those obtained by Meen (*ibid.*) for the United Kingdom (2.51) and the United States (2.71), and those obtained by OECD (2003b, 2004a) for Luxembourg (2.55) and the Netherlands (1.94).[8] As household disposable income grew slower in the Denmark during the estimations period than in other countries, high growth in real house prices is probably not only attributable to demand forces but also to relatively weak supply responses. The long-run elasticity of real house prices with respect to the housing stock (-9.52) is high compared with those for the United Kingdom (-1.91), Netherlands (-0.52) and Luxembourg (-1.1) and also higher for that found for the United States (-7.64). This implies that an increase in the housing stock would have contributed significantly to dampen the recent increase in Danish house prices. This supports the descriptive evidence of regional house price differences being related to local supply conditions (see Figure 4.7)

Table 4.A6.1. **An error correction model of real house prices**

Constant	18.303	(2.5)
ln $(G)_{-1}$	-0.308	(-2.5)
ln $(RY)_{-1}$	0.93	(4.6)
d ln $(RY)_{-1}$	-0.754	(-3.2)
RR_{-1}	-0.037	(-2.2)
Δ RR	-0.041	(-3.8)
ln $(H)_{-1}$	-2.933	(-4.9)
R^2	0.843	
Standard error of regression	0.033	
DW	1.71	

Note: The dependent variable is Δ ln (G). t-values are given in brackets. The estimation period is 1983-2002 (annual data).

Source: OECD.

ANNEX 4.A7

Land planning and zoning regulations

Land planning responsibility is to a large extent decentralised to the local government, but plans on a regional or local level should be consistent with planning decisions made at higher levels. This implies that if higher-level decisions are changed the planning at lower levels has to be adapted accordingly. The Planning Act is intended to ensure that the overall planning unifies the interests of society with respect to land use. This contributes to protecting the country's nature and environment, so that the sustainable development of society with respect for people's living conditions and for the conservation of wildlife and vegetation is secured (Ministry of the Environment, 2002).

National planning is expressed through reports, binding instructions, guidelines and intervention in local planning for themes and projects of national interest, reflecting national political objectives. The regional planning authorities and municipalities are required to consider this framework in the regional and municipal planning. The Minister of the Environment may veto a regional plan proposal on behalf of all government ministers if the proposal contradicts national interests, and state authorities may veto local plan proposals that are based on the special responsibilities carried out by these authorities. The Planning Act requires that the regional planning authorities veto municipal and local plan proposals if they contradict regional planning or national planning guidelines.

Regional planning concretizes the national objectives for regional development and rural development. The regional plan establishes the overall objectives for development in a regional planning unit, mostly counties, for a period of 12 years. During each 4-year election period, the regional planning authorities typically revise the regional plan. The main function of the regional plan is to plan all infrastructures and the division of land into urbanized areas, areas for summer cottages, agricultural areas and other open space. The regional planning guidelines establish a framework for municipal planning and a basis for the regulation of land use in the countryside. *The finger plan* for Greater Copenhagen adopted in 1947, introduced a principle that still applies saying that urban development should be concentrated in the fingers created by the railway network and that the green wedges between the fingers should remain undeveloped.

The municipalities are responsible for both the *municipal* and the *local plans*. The *municipal plan* comprises the necessary link between the regional plan and the provisions of local plans on land use and settlement in individual districts, and set out the basic features for land-use in the municipality including new areas for development and changes in zoning status. The municipal council is obliged to adopt the plan, and at least once in each electoral period the councils should meet to consider whether the plan needs to be changed. The *local plan* concretizes the political strategy and objectives of the municipal plan. Matters regulated by local plans is zoning status, design and use of land and buildings, size and extent of properties, roads and paths, location of buildings, building density, landscape factors etc. A local plan may ensure that the many diverse interests are weighed and discussed, by regulating factors related to use, size and location of buildings, roads and paths and the architectural features of an area. Local plans are legally binding for the property owners, but give the right to develop and use property in accordance with the provisions of the local plan, even if the regulation does not generally entitle property owners to compensation for any perceived loss of property rights. Property owners are not allowed to build new buildings, change land use or otherwise act in contradiction with a local plan.

Citizens are encouraged to be involved in the planning processes. The Planning Act states that those affected by the plans should be informed, including neighbours, non-governmental organizations, public authorities and people living in an area. Legislation requires newspaper notices and a public exhibition of the proposed detailed plan prior to its adoption. The exhibition must last eight weeks, which is somewhat longer than in other Nordic countries. Many counties and municipalities use the Internet to publish plan proposals and adopted plans. Large development projects that are likely to have significant effects on the environment are subject to environmental impact assessment and a public hearing before being initiated. The rules on environmental impact assessment in the Planning Act comprise Denmark’s implementation of a European Union directive. The regional planning authority has usually conducted the assessment and preparation of the supplement to the regional plan with an accompanying environmental impact statement.

The Planning Act divides Denmark into urban zones, summer cottage areas and rural zones, with special rules for development in rural zones. Agriculture is the priority economic activity in rural zones, implying that buildings needed for agricultural purposes could be constructed while new dwellings, urban businesses and institutions requires a rural zone permit, The aim have been to protect recreational and valuable landscapes and ensure that agriculture retains good production opportunities. A rural zone permit from the municipal council is generally required to parcel out land, construct buildings or change the use of existing buildings and undeveloped land. The permit may be granted when the local conditions have been specifically assessed and the municipality concludes that the development applied for is in accordance with the considerations of the provisions on rural zones. Rural zone permits must be publicized, typically in local newspapers. Rural zone permits may be appealed to the Nature Protection Board of Appeal, which considers the municipality’s decision.

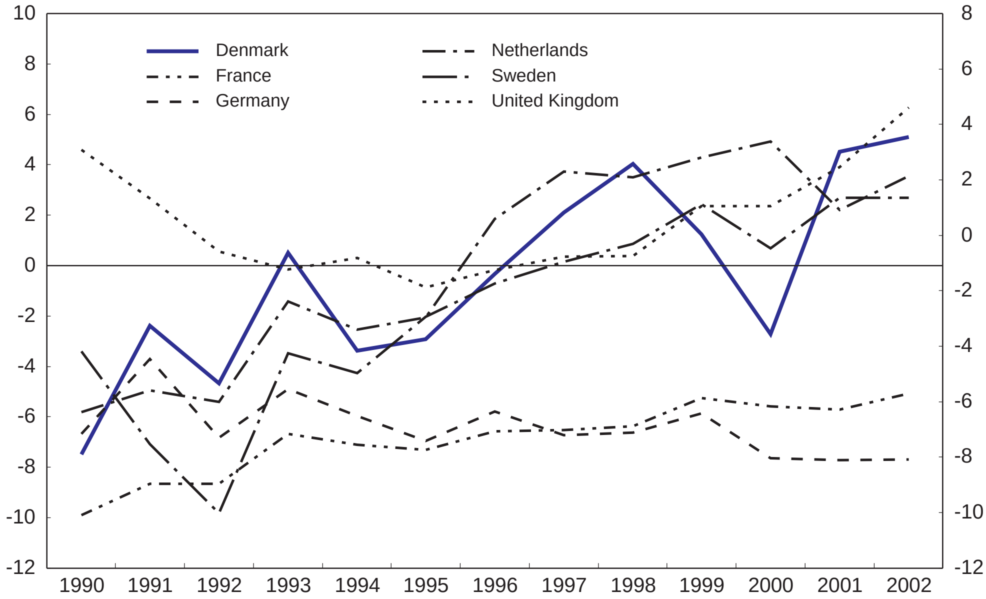
ANNEX 4.A8

The mortgage market

Originally, the mortgage market in Denmark was established as a highly regulated cooperative system with limited competition and only few product choices.[9] In the early 1990s, however, deregulation and consolidation led to a wider range of loan types offered to borrowers as low margins induced mortgage credit institutions to compete mainly by product innovation. In the Danish system, borrowers take up loans against collateral in real property from mortgage credit institutions, which in turn sell bonds in financial markets. The institutes do not bear interest rate or prepayment risk since the payments that they receive from borrowers match the cash flows they pay out to bond holders. The typical mortgage loan in Denmark has a maturity of 30 years and borrowers have the choice between a variety of interest payments besides the traditional fixed rate loan. With adjustable-rate mortgages, for example, interest payments are adjusted to prevailing market interest rates at certain fixed intervals (product variations include interest rate caps for a certain period). Since the introduction of adjustable-rate mortgages in the mid-1990s, the share of these products has increased substantially from 6% of total outstanding loans in 1999 to close to 50% in 2005, supported by the low and decreasing level of short term interest rates. A more recent product innovation introduced in 2003 is interest-only loans, where amortisation of the principal is delayed for up to 10 years, *i.e.* the borrower does not pay down the principal for a certain period but pays interest only. In 2005, nearly a quarter of the outstanding volume of loans included such a deferred amortization mechanism. The majority of these loans (about 75%) have adjustable interest rate payments. Index-linked bonds, which were formerly mainly used for the financing of social housing, only constitute a small and decreasing share of outstanding mortgage bonds (6% in 2005).[10]

Unlike in many other European mortgage markets, early pre-payment and refinancing of loans is easily possible. As the loans and the underlying bonds are closely linked, Danish borrowers have the option (in addition to penalty-fee pre-payment) to purchase the bonds in the market in order to redeem the loan.[11] Consumers can therefore manage their debt actively and conversion (re-mortgaging) of loans frequently occurs when interest rates changes. Danish borrowers can, like bond traders in financial markets, take advantage of fluctuations in interest rates by converting their loan types according to changes in the yield curve, as seen in the spring of 2005 when demand for fixed rate loans increased with increased expectation of rising short term interest rates. Also in contrast to other systems, Danish mortgages do not have to be repaid in the event of a house sale (the new owner can take over the outstanding mortgage loan). Moreover, with the enhanced opportunities to raise supplementary mortgage credit since 1992, supplementary mortgage credit borrowing is more frequently used in Denmark than in the larger euro area countries such as France and Germany (Figure 4.A8.1). With regard to the average price of mortgage loans, cross-country analysis show that while Danish loans have a wider product variety, their price is also among the cheapest in Europe when adjusted for fees and the cost of pre-payment options (Mercer Oliver Wyman, 2003). Danish mortgage bonds issued by mortgage credit institutions usually trade at a narrow interest rate spread against government bonds due to their low default risk and favourable credit ratings (Moody’s, 2002). The security of these bonds is considered to be high, not least because of the strong legal position of mortgages (in case of the borrower's default the time for repossession of the collateral is 6 months and mortgage lenders have a privileged position among creditors) and the requirement that mortgage loans have an upper limit for the loan-to-value ratio of 80% (with lower limits for weekend homes and industrial premises).

Figure 4.A8.1. **Mortgage equity withdrawal**
Per cent of disposable income



Source: OECD calculations.

Notes

1. Social housing apartments for the elderly may also be operated by municipalities, counties or self-owned institutions.

2. Regarding operating revenues, *internal redistribution* within a housing association may take place through changing the distribution among the member sections of the share of the rent that reflects contribution to cover administrative costs within the housing association. There is however more restrictions on to what extent a member section may change the internal distribution of savings. The scope for this is larger regarding redistribution between different member sections, which may take place through borrowing, use of the *dispositionsfond* or by re-allocation of a surplus generated in the housing association. *External redistribution* may take place through the *Landsbyggefonden*.

3. This political agreement is an extension of the 2002 political agreement about the *Landsbyggefonden* stating that the fund could give contributions to renovation and improvements of deteriorated buildings within a yearly investment limit of DKK 1.5 billion in the period 2003-05.

4. Hence, the "value of the rented dwelling" is an adjustment factor which is not comparable to market rent. In practise one may observe that an agreed rent in a tenancy is reduced even though it is

considered to be below the market rent. In some rural areas where the Tenants Law is applied and where demand for rented housing has been falling, it is presumed that market rent is lower than “the value of the rented dwelling”. Since rent regulation then is not effective, the actual rent paid has in practise been replaced by market rent.

5. According to a survey from 2002, the statutory cover for maintenance costs amounted to DKK 131 per square metre (DKK 115 for maintenance of the total building and DKK 16 for maintenance of the single apartment). The average amount for payment of improvement costs was DKK 111 per square metre.

6. Rough estimates indicate that about 2 000 dwellings per year will be subject to major improvements. The Ministry of Social Affairs is planning to carry out a new survey of the use of these so-called paragraph 5.2 conversions during spring 2006.

7. Nominal variables other than the housing stock were deflated by the private consumption deflator to obtain real variables. The housing stock is from Statistics Denmark, and is measured in fixed 2000-prices based on chain linking (NAT08-serie). The interest rate series is for mortgage rates.

8. Meen’s estimation periods are 1969(3) to 1996(1) for the United Kingdom and 1981(3) to 1998(2) for the United States. OECD’s estimation periods are 1970-2002 (annual data).

9. The Danish mortgage system is one of the oldest in the world and was established in 1797 to provide finance to homeowners after the Great Fire in Copenhagen.

10. In an index-linked bond, the principal is written up by the rate of inflation, while the interest paid is the real interest rate. These instruments are used to hedge against inflation.

11. This holds for traditional fixed rate mortgage loans. Adjustable rate mortgage loans can be redeemed at par at the time of interest rate adjustment (Kjeldsen, 2004).