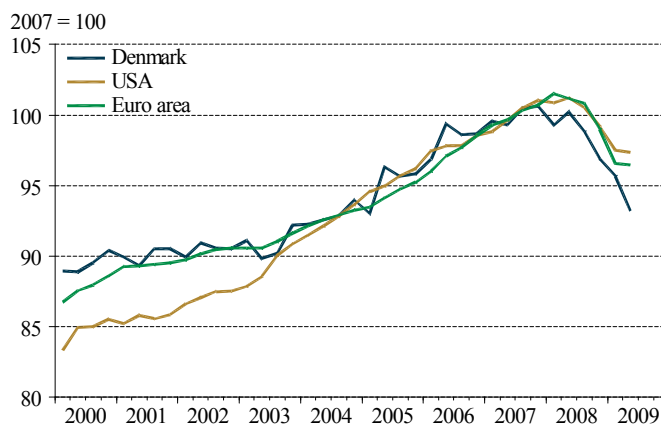


Chapter 1: The Danish Economy

Like the rest of the world, in 2008 Denmark was hit by the most severe economic downturn since the Second World War. As the decline in Danish GDP was already underway at the beginning of 2008, the downturn started earlier in Denmark than in most other countries, see figure A. The fall in GDP has also been greater in Denmark than in many other countries. Part of the explanation for the greater fall is that capacity pressures were considerable in the Danish economy in 2007 and 2008, therefore the prospect for future growth rates were already low, even before the crisis began.

Figure A GDP in Denmark, USA and the Euro area



Source: Statistics Denmark, National Accounts and EcoWin

GDP fell sharply in the second half of 2008, and the fall continued more strongly in the first half of 2009. This has resulted in the second quarter GDP being 7 percent lower than one year ago. In spite of the large decreases in production, there are indications that the bottom will soon be reached. Industrial production has stopped falling, and the

decline in private consumption has slowed. Also business and consumer expectations for the future have improved, and the more optimistic mood is reflected in the stock prices, which have increased by 50 percent since March. The signs of recovery are even more pronounced abroad, and some countries (including Germany) actually experienced positive growth rates in the second quarter of 2009.

Therefore, there are also prospects for a recovery in the Danish economy, but from a very low starting point. Despite the more optimistic outlook, there are several reasons to expect that the recovery will be slow, and that it will take years before Danish production again reaches the pre-crisis level.

An important reason to expect a relatively weak recovery in Denmark is that households have suffered considerable wealth losses, due, in particular, to lower house prices. The lower wealth and the prospect of increasing unemployment will tend to keep private consumption at a low level, in spite of the prospective increases in disposable income, as detailed later in the Summary.

Another reason to expect a weak recovery is that public finances have deteriorated in both Denmark and abroad, and therefore, there will be a need for fiscal consolidation. Hence, it is expected that public finances abroad will be tightened in line with the improving economic conditions, and this will contribute to lower growth in Danish export markets in the coming years.

A third reason for expecting a weak recovery is that even though the conditions in the financial sector have been partly normalised, there is still a considerable need for consolidation in response to the large losses the sector has suffered during the crisis. This will restrain the growth in lending and, thereby, the increase in economic activity. The dampening of the growth in lending will probably be complemented by tighter regulation of the financial sector, e.g. through more restrictive international capital requirements for banks. Finally, it is expected that monetary policy will return to more normal conditions as the state of economies

improves. This will, within a few years, imply higher interest rates and more restrictive opportunities for banks to acquire liquid funds from the central banks.

As mentioned earlier, GDP in Denmark fell by 7 percent from the second quarter 2008 to the second quarter 2009. Based on the expectation of a weak, but positive, growth rate in the second half of 2009, GDP is expected to fall by around $4\frac{3}{4}$ percent from 2008 to 2009, see table 1. The downturn is reflected in all of the private demand components. Private consumption is expected to fall by 5 percent, exports by more (10 percent) and investments by even more (15 percent).

Private consumption is expected to fall in spite of a considerable increase in disposable income, which is mainly due to tax cuts and the release of the Special Pension Savings, which was a compulsory pension payment that all employees paid during the period 1997 to 2004. Tax cuts will continue to contribute to increases in disposable income in 2010, thus tending to stimulate private consumption. However, it is expected that the ratio of private consumption to income will fall because of higher unemployment and lower house prices. Based on this, private consumption is only expected to increase by around $1\frac{3}{4}$ percent in 2010.

The Danish housing market is characterised by falling prices, increasing selling periods and a marked fall in construction activity. Housing prices were at an unsustainably high level under the preceding boom, and housing prices have already fallen by almost 20 percent, compared to the peak in 2007. In light of the forecast for continued increases in unemployment, further housing price falls of approximately 5 percent are expected from 2009 to 2010. Housing prices are expected to start rising again in 2011.

Fixed business investments have already fallen markedly due to lower demand, and further falls are also expected in 2010. A large fall in inventory investment in the first half of 2009 will contribute to a decrease in GDP of 1 percent, while a pick up in investments in inventories is expected to contribute to an increase in GDP of $\frac{3}{4}$ of a percent in 2010.

Table 1 Short-term outlook for the Danish economy

	Current	Per cent	Percentage change, volume				
	prices	of GDP					
	DKK bn.						
	2008	2008	2008	2009	2010	2011	2012
Private consumption	851.2	49.1	-0.2	-5.0	1.8	1.2	3.4
Public consumption	463.0	26.7	1.5	2.0	0.7	1.0	1.0
Gross fixed capital formation	366.3	21.1	-5.0	-13.3	-0.7	3.4	3.5
consisting of:							
Residential investments	107.7	6.2	-9.8	-17.4	0.0	2.4	4.7
Business fixed investments	227.7	11.5	-3.8	-14.6	-4.3	4.4	7.1
Public investments	30.9	1.8	4.5	14.8	15.3	1.9	-15.0
Stockbuilding ^{a)}	13.1	0.8	0.2	-1.0	0.7	0.0	0.0
Total domestic demand	1,693.6	97.7	-0.7	-5.8	1.7	1.5	2.7
Exports of goods and services	950.9	54.9	2.2	-10.4	0.3	2.0	4.0
Imports of goods and services	911.1	52.6	3.4	-12.5	1.7	2.4	4.9
GDP	1,733.5	100.0	-1.2	-4.8	1.1	1.4	2.3
Key indicators							
Consumer prices, percentage change ^{b)}			3.1	1.5	2.0	2.0	1.9
Unemployment, per cent ^{c)}			1.8	3.4	5.4	5.9	5.4
Current account, DKK bn.			37.8	30.8	28.5	29.6	26.1
Current account, per cent of GDP			2.2	1.8	1.6	1.6	1.4
General government financial balance, DKK bn.			59.5	-39.6	-88.9	-70.4	-46.1
General government fin. balance, per cent of GDP			3.4	-2.4	-5.1	-3.9	-2.5
Hourly wage costs, percentage change			4.2	3.2	2.7	2.2	2.2
Terms of trade, percentage change			1.3	-1.4	1.5	0.4	0.3

a) The percentage changes are calculated as real change in stock building relative to GDP in the previous year.

b) Implicit private consumption deflator.

c) Percentage of the total labour force. National definition.

Note: The DKK/USD exchange rate is assumed to be 5.41 in 2009 and 5.22 in 2010-12.

Source: Statistics Denmark, National Accounts and own estimates.

Both imports and exports have fallen heavily in response to the economic crisis in Denmark and abroad. Imports are expected to fall by around 12 percent in 2009, and exports by around 10 percent. The resulting increase in net exports reduces the fall in GDP. One of the explanations for the large fall in imports is that the import quota had increased extraordinarily during the preceding boom, due to the considerable capacity constraints in the Danish economy. Following the decline in the first half of 2009, exports are expected to show an increase in the second half of 2009. Several international institutions have revised upward their forecasts for global economic growth, and it is estimated that growth in the countries that buy Danish exports will go from -4 percent in 2009 to around 1¼ percent in 2010, and increase to around 3½ percent in 2012.

The noticeable fall in production has not yet been reflected in a corresponding decrease in employment, because productivity has continued to fall. The hourly productivity in the private urban sector is estimated to have fallen by more than 5 percent since 2006, and the productivity level is assessed to be around 7½ percent below the trend level. The large productivity gap implies a potential for large increases in productivity in the coming years. However, this also implies that the employment numbers are expected to fall toward 2011, in spite of the increase in production. It is expected that the total fall in employment from 2008 to 2011 will be about 160,000.

The fall in employment is not expected to be fully reflected in the number of registered unemployed due to a cyclical fall in the total workforce. It is estimated that unemployment will increase to around 170,000 in 2011, which is 125,000 higher than the historically low level in the summer of 2008.

The higher unemployment has also lowered the rate of wage increases, and it is expected that, in the coming years, wage increases will be stable at around 2½ percent per annum. Even though these wage increases are low by historical

standards, they will still represent a further deterioration of Danish wage competitiveness.

The state of the economy has contributed to a marked deterioration in public finances. It is expected that a surplus of DKK 60 billion in 2008 will be turned into a deficit of around DKK 90 billion in 2010. This is primarily due to a cyclical fall in tax revenues and an increase in transfers to the unemployed, and to an active discretionary easing of fiscal policy in the form of tax cuts and increased expenditure of around DKK 45 billion.

Policy recommendations

In 2009 the Government's fiscal policy will help stimulate the economy and reduce the effect of the economic crisis through increased government spending and investment and through tax cuts. Fiscal stimulus of about DKK 20 billion is already planned for 2010, and this is expected to increase growth by $\frac{1}{2}$ a percentage point. The planned measures are mainly in the form of tax cuts, (which are part of a tax reform that is underfunded in the short run, but which is estimated will have a neutral impact on the general government budget balance when it's fully implemented). In addition an extraordinary rise in public investment will also contribute to the fiscal easing in 2010.

The current economic downturn is expected to be deep and long lasting. Therefore, the Chairmanship recommends that, fiscal measures be used to stimulate GDP-growth by at least 1 percentage point in 2010. This will require a further fiscal easing to stimulate growth by at least $\frac{1}{2}$ a percentage point. This can be achieved by a further increase in public investments of about DKK 10 billion, but the recommended effect can also be achieved through other policy measures. Risk scenario calculations show that the recommended extra fiscal measures would not bring unemployment below its estimated natural rate, even if economic growth becomes somewhat stronger than forecasted. If, on the other hand, growth becomes somewhat weaker than forecasted, there is

a risk that high unemployment will lead to hysteresis effects and an increase in the natural rate of unemployment.

It is important that expansive fiscal policy during downturns is countered by contractive fiscal policy during upturns, and it is therefore important that new expansive policies do not lead to a permanent increase in public spending. Starting an already planned investment project is, by definition, a temporary measure, as the fiscal tightening begins when the project is finished and spending stops. Thus public investment is a preferred measure in the current situation.

Fiscal policy is usually a trade off between short run growth stabilization and long run fiscal sustainability. A larger fiscal expansion increases public debt and increases the need for future fiscal tightening or growth enhancing economic reforms to secure fiscal sustainability. The Chairmanship recommends that traditional fiscal policy stimulus measures be implemented to achieve short run stabilization, while economic reforms should be implemented to achieve long run fiscal sustainability. Thus, the long run sustainability challenge should not be prioritized in favour of the short run stabilization problem. It is possible to obtain both a short run fiscal expansion and long run fiscal sustainability through the right mix of policy measures.

The general government EMU debt is forecast to reach DKK 700 billion by the end of 2010. This is about DKK 200 billion more than estimated in the central government's latest Convergence Programme¹ prepared in accordance with the rules in the EU's Stability and Growth Pact.² The increase in debt is primarily due to weak growth and a high degree of automatic fiscal stabilization, which weakens the general government budget balance. However, the Government's discretionary fiscal measures are also boosting debt. Any too hasty attempts to reduce the debt to the pre-

- 1) The Convergence Programme is also an update of the central government's 2015-plan for fiscal sustainability.
- 2) These figures do not include the increase in government debt due to the state funded capital injections into banks and mortgage institutions.

Convergence Programme level would result in an inexpedient contractive fiscal policy in the years to come. Before the emergence of the financial crisis there was a need for economic reform to ensure long run fiscal sustainability – the unexpected increase in debt considerably aggravates the need for economic reform.

The changed outlook makes it clear that Denmark is in need of a new plan to ensure long run fiscal sustainability. The sustainability challenge needs to be reassessed to take account of the latest economic conditions as well as the increasing level of health expenditure, cf. later in this publication. A new sustainability plan should include concrete measures for labour market reform and measures to postpone the retirement age. A new plan should abolish the tax freeze on property and other nominal fixed, non-inflation-adjusted, taxes. Such measures will improve fiscal sustainability. Measures to fulfil the government's objectives regarding education and GHG emissions should also be included in the new plan. The necessary economic reforms should be passed by parliament as soon as possible, though the reforms can be implemented later, and over several years, when economic growth has recovered.

A new plan for fiscal sustainability should also include a public investment plan. Public investments are an important part of both the short run stabilization policy and longer run structural policy as, e.g., investments in infrastructure can increase productivity. The central government already has individual investment plans in a number of areas, but a systematic prioritizing of public investments across sectors has not been conducted. A joint public investment plan for all public investments would help to prioritize different investments and it would also make it easier to postpone or advance public investments when the business cycle calls for it. A public investment plan would also help when prioritizing between public consumption and different public investment projects.

Both the rise and the fall in Danish housing prices have been larger than in a lot of other countries. The volatile housing prices have caused volatility in housing construc-

tion and private consumption. The tax freeze on property and other non-inflation-adjusted taxes has meant that important automatic fiscal stabilizer no longer function. The tax freeze resulted in a continual reduction in the effective tax on owner occupied dwellings as house prices rose. House prices are falling at the moment, and the tax freeze is thus resulting in an increase in the effective tax rate on owner occupied dwellings. Without the tax freeze, the effective tax rate would be falling at the moment and thus dampening the current fall in house prices.

The tax reform of 2009 did not incorporate any adjustments to the tax freeze on property. The Chairmanship recommends that this tax freeze be abolished in order to improve long run fiscal sustainability and to ensure a more stable housing market in the future. It is important that abolishing the tax freeze does not lead to an increase in the effective tax rate on housing, as this could have a negative impact on private spending and growth. The government should also consider introducing a capital gains tax on the sales value of owner occupied dwellings, as suggested in *Danish Economy, Autumn 2008*. Such a capital gains tax can be designed so that it does not hamper mobility in the housing market.

The Danish government has appointed a temporary Labour Market Commission which has the task of proposing employment initiatives that can improve long run fiscal sustainability. The Commission published its proposals this summer and once again it has been shown that reducing too-early retirement in Denmark should be the main focus of measures to improve fiscal sustainability³. The Chairmanship supports the Labour Market Commission's suggestion to reform the early retirement scheme and the unemployment benefit system. The sooner reform bills are passed the better.

The Labour Market Commission has suggested a reduction in the four year unemployment benefit period. This is in line

3) The effective retirement age in Denmark is considerably lower than the retirement age in other Western European countries due to an early retirement pay scheme

with earlier proposals by the Chairmanship. The Commission has suggested a two year unemployment period which could be extended by up to a year in periods of high unemployment. Such extensions of the unemployment benefit period would be granted in two steps of half a year each. The first half year extension would be granted when gross unemployment⁴ rose above 7 percent and the second half year extension would be granted when gross unemployment rose above 9 percent. The extensions would only apply to unemployed persons who reach their two-year limit while unemployment was at these levels. The suggested model would lead to a significant reduction in the average unemployment benefit period and thus increase the incentives for unemployment benefit recipients to find a new job. If the suggestion is implemented, the reduction in the unemployment benefit period would only be imposed on future, and not current, unemployed persons. Therefore, the shortening of the unemployment benefit period would not affect the unemployed until 2012.

The high growth in economic activity and employment in recent years has led to an increase in the number of jobs available to low-skilled workers who typically experience difficulties gaining a foothold in the labour market. It is important that these people do not lose their foothold in the labour market as employment falls. In a few years time, the Danish economy will once again experience labour supply shortages, and active labour market policy measures should therefore target this group.

In *Danish Economy, Spring 2007* it was concluded that labour market policy measures in the form of educational programs do not, in general, get unemployed persons into employment. Recent research done by the Labour Market Commission confirms this result. The commission finds that only a few specific work-related courses – e.g. lorry driver's license – improve the likelihood of an unemployed person getting a job. These results indicate that labour market

- 4) Gross unemployment includes persons in labour market schemes as opposed to the more official registered unemployment that does not take these persons into account.

policy measures should be more work related and focus less on education.

A recently conducted labour market policy test (*Hurtigt i gang 2*) has shown that intensive contact in the form of weekly or fortnightly meetings with the unemployed is the most effective way of getting unemployed people off public benefit programs. The central government subsidizes the municipalities' use of labour market policy measures, but the subsidy for the weekly or fortnightly meetings is less than for other measures. This system should be changed so that the municipalities have stronger incentives to use the labour market policy measures that are most likely to get unemployed persons off public benefit programs.

Chapter two: Health expenditure and financing

Danish health care policies are based on the principle that the health care sector should provide easy and equal access to health care services for all Danish citizens. This principle is generally accepted in Denmark as a central part of the Danish welfare state.

Health expenditure constitutes about $\frac{1}{10}$ of total Danish GDP. The large majority of the expenditure is financed by taxes, while direct user fees only account for 15 percent of the total. Total health expenditure (private and public) has grown faster than GDP since 1970 in most OECD countries. The growth in Danish health expenditure has been more moderate, but since 2000 health expenditure has been increasing its share of GDP.

This should not necessarily be seen as a problem. The increase may very well reflect citizens' preferences for higher quality health care. However, as the main part of health expenditure is financed by taxes, further increases in public health expenditure could lead to a public deficit or require additional tax funding. This would increase the already large tax distortions in Denmark.

Both demographic and non-demographic factors are likely to lead to increasing health expenditure in the next decades. Two demographic factors are worth mentioning:

- Cohort effects: The large cohorts born after World War Two will require more health care as they get older.
- Reduced mortality: Increases in life expectancy will further increase the number of elderly who require health care.

Earlier research suggests that improvements in life expectancy will only have a small impact on future health expenditure. The research shows that a significant portion of health expenditure in the last years of life is not age-related, but rather, is expended on individuals at the end of life (terminal costs). When life expectancy increases, the termi-

nal costs are postponed and the increases in health expenditure that follow from longer life expectancy are not as large as the increase in the number of elderly persons would suggest. This is referred to as “healthy ageing”.

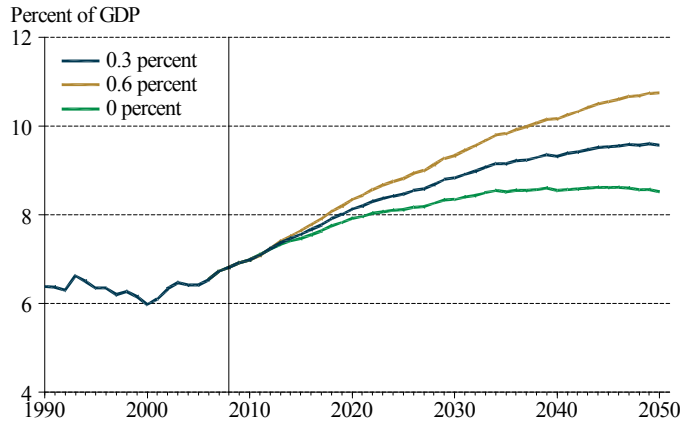
An empirical analysis of the Danish population was carried out to estimate and separate out the individual effects of age and proximity to death (reflecting terminal costs). The analysis followed the approach described in e.g., Seshamani og Gray (2004), Zweifel *et al.* (2004) and Zweifel *et al.* (1999). The analysis is based on micro panel data from the period 2000 to 2007, covering a random sample of 10 percent of the Danish population. Health expenditure includes treatment in hospitals, subsidies to prescribed medication and health care provided by general practitioners and specialists. The results show that proximity to death has a significant impact on the health costs of the individual. However, the results also show that age does influence health costs, even after indicators of proximity to death are included in the empirical model. Thus, the analysis does not support the so-called ‘red-herring’ hypothesis that states that age has no effect on health expenditure after the effect on individual health costs of proximity to death is accounted for.

The results were combined with a long term population forecast in order to predict the impact on public health expenditure of demographic change (cohort effects and the effect of improved life expectancy). Healthy aging is expected to reduce the impact of increased life expectancy on health expenditure by 50 percent compared to a situation without healthy ageing.

Generally, growth in health expenditure is higher than overall economic growth, even after accounting for demographic factors. In Denmark the average annual growth in public health expenditure has exceeded economic growth by about 0.3 percent during the last 15 years after controlling for the impact of demographic changes. If, instead, only the past ten years are analysed, growth in public health expenditure has exceeded economic growth by more than one percent per year. This reflects a shift in health care policy

from a budget-and-supply restricted system to a more demand-oriented health system, which gives a higher priority to reducing waiting times and demand for care.

Figure 2 Public health expenditure as percent of GDP



Note: The three scenarios reflect different levels of excess growth in public health expenditure relative to the overall economic growth rate (assumed to be 2 percent per year), as described in the text.

Source: Calculations based on the DREAM model

Three forecast scenarios of public health expenditure have been developed to reflect different expectations of growth rates in public health expenditure (see figure 2). In the forecasts, demographic effects are calculated by taking into account the impact of healthy ageing. The main scenario models annual growth in health expenditure that exceeds the annual growth rate of GDP by 0.3 percent. This corresponds to the actual average growth in health expenditure in Denmark over the last 15 years. In this scenario public health expenditure is forecast to increase from 6.8 percent of GDP in 2008 to 9.6 percent of GDP in 2050.

In the second scenario, growth in public health expenditure is kept the same as growth in GDP. In this scenario public health expenditure would increase from 6.8 percent of GDP to 8.5 percent, which is caused by demographic factors

only. The difference between the 8.5 percent in scenario 2 and the 9.6 percent in scenario 1 is the effect of the 0.3 percent excess growth rate of public health expenditure. In the third scenario, the annual growth rate in public health expenditure exceeds growth in GDP by 0.6 percent. In this case public health expenditure would increase to 10.8 percent of GDP by 2050.

The forecast increases in health expenditure are likely to put pressure on public expenditure over the next decades. It is therefore worth considering alternatives to tax-based financing of health expenditure. One alternative is to shift from tax payments to compulsory social health insurance, which is currently used in some countries, e.g., Germany, the Netherlands and France. However, it is not obvious that social health insurance would be cheaper than tax-funding. To institute such a change, an insurance payment system must be developed in addition to the already existing tax collection system. Furthermore, the social health insurance system suffers from the same incentive problems as the tax system. For example, patients' demand for health care does not take into account the cost of treatment, and activity-paid health care providers have little incentive to limit treatments to patients.

Also, it seems that the social health insurance system is generally less redistributive than the tax system, though this depends on the design of the insurance payments. If the insurance payment scheme has the same distributional effects as the tax-financed system, then the distortionary labour market effects are also likely to be similar.

In Denmark, the number of employer-paid supplementary private health insurance schemes has increased rapidly over the last decade, and in 2008 one million citizens were covered by such a scheme. As these schemes are exempt from tax, they constitute an indirect subsidy to private health insurance. Furthermore, as the tax-free exemption only arises for private health insurance paid for by one employer, it is only available to persons who are in the labour market and employed by an organisation that offers such a scheme, which may be against the principle of easy

and equal access to health care services for all citizens. For these reasons, it is recommended that the tax exemption should be abolished.

Instead of increasing funding, the increasing health expenditure could be limited by increasing the efficiency of the health sector through competition for supply of health services. However, as detailed below, the overall assessment is that such measures would only decrease health expenditure to a small and limited extent, because only a small share of the health services can be supplied competitively.

Competition in hospital services functions best where treatments are well defined, not specialized and that only require relatively inexpensive capital equipment. This applies to care and planned basic surgery. However, the Danish Competition Authority has assessed that planned surgery expenditure amounted to only 13 percent of the total hospital expenditure in 2003. Most health services require expensive emergency teams on standby, highly qualified personnel and/or extremely expensive equipment, which imply economies of scale and are obstacles to competition. Health services that are characterized by economies of scale are assessed as not suitable for competition.

In Denmark patients have certain rights to the free choice of hospitals. Once the required treatment has been established, a patient has the right to choose between public hospitals for that treatment. What's more, under the so called, extended free choice, if the waiting time for the treatment exceeds one month, the patient has the additional right to choose among private hospitals that offer the treatment.

In 2007, 43,000 people made use of the extended free choice of hospitals. This is only 13 percent of the patients who qualified for the extended free choice of hospitals. The extended free choice was primarily used for basic surgical procedures. Of those who qualified, it was predominantly young people, professionals and people with high incomes who opted to invoke the extended free choice.

The principles of free choice and extended free choice of hospitals gives the Danish Administrative Regions¹ incentives to provide high quality health services and to fully utilise the existing capacity of hospitals and maybe even to increase the capacity to be able to offer treatment within one month. These incentives arise from the higher price the Regions are required to pay for treatment if a patient chooses to be treated in a hospital outside the Region. However, the principles do not create direct economic incentives for the public and private hospitals to increase their cost efficiency and to minimize the prices of treatments, because prices are not determined by competition. Supply competition is only possible within the existing legislation if the Regions decide to use competitive tendering *before* the extended free choice of hospitals takes effect for the patients.

Increased efficiency in the hospital sector could be achieved through competitive tendering of services that are deemed suitable for competition. However, this would imply a trade-off with respect to patients' free choice of hospitals if it meant that patients were restricted to choosing from the cheapest offers. On the other hand, maintaining the right to choose from a high number of hospitals would weaken the price competition. To ensure good competition, legislative changes may be required to allow the Regions to restrict the number of available hospitals under the extended free choice.

One way to consider both patients' free choice and supply competition is use tenders, where the suppliers bid for the obligation – but not the right - to provide a certain quota of a specific health service. This would allow a Region to select a range of the best and cheapest suppliers, because it has no obligation to purchase a fixed number of health services. Thus, the Region may offer contracts to a range of

1) Denmark is divided into 5 Administrative Regions. They own and run the public hospitals and provide health services in the primary health sector. The regions are governed by regional politicians, who are elected for 4 years. The regions are not allowed to impose taxes and are funded by the state and local governments.

the best and cheapest suppliers, while inefficient suppliers would not be offered contracts.

Such a system would mean that suppliers would bear the cost of the uncertainty surrounding the number of health services to be provided. This implies higher expected prices compared to a tender with fixed, guaranteed demand, which would be cheaper, but then the Regions would have to carry the risk from fluctuations in demand.

This suggests that it would be profitable to combine the tenders with guaranteed demand (and lower expected prices) and the tenders with variable demand (and higher expected prices). This combination of tenders would enable the Regions to fulfil the guaranteed demand while still giving patients free choice and extended free choice of hospitals. The public hospitals and other institutions should be included in the tender process as this will strengthen their incentives to increase efficiency.

Local governments finance part of the Regions' health expenditure. This division of financial responsibility aims to give local governments incentives to establish effective preventative health and rehabilitation measures. However, the existing rate scheme is not designed to actually increase these incentives, as the basic contribution is a fixed rate per inhabitant. As the current system gives no incentives to take preventative measures, it is therefore recommended that shared financing be replaced by state financing, as the shared financing increases administrative costs. If the shared financing is maintained, it should be focussed on areas where local governments can influence health expenditure. Even with a more suitable structure, the potential for cutting health expenditure is very limited.

Fifteen percent of total Danish health expenditure is financed by user charges. User charges are mainly applied to dental services, physiotherapy, and medication. There are no user charges, for instance, for visits to casualty departments or for hospital meals, which is the case in other Nordic countries. It is recommended that user charges be applied to more health services to rectify this imbalance.

This should be applied within the existing budget for user charges, so that the user charges are reduced on some health services and increased on others. By spreading the user charges over more health services, they may be used to regulate the demand for a wider range of services.

The conclusion is that, if the existing ideal of easy and equal access to health services is to be maintained into the future, increased efficiency along with alternative financing of health services will be needed, as private insurance and user-pay charges can only contribute to a very limited extent to financing the total health expenditure.

Calculations show that the fiscal sustainability will worsen by 3 per cent of GDP with a reasonable forecast of public health expenditure. This means that the public budget has to be improved by 3 per cent every year to avoid a future tax increase. The public health expenditure per person is expected to exceed the economic growth by 0.3 percentage point. Healthy aging will lower expenditure growth per person for the elderly. The forecast also accounts for the increase in expenditure as the large cohort born after World War Two gets older.

Public health expenditure is the post on the public budget that could give rise to the biggest financial problems and therefore could put fiscal sustainability under pressure in the future.

At the moment, the increase in health expenditure, which is not financed, is due to the big cohort born after World War Two. A 2006 Danish welfare reform, which has the aim of deferring withdrawal from the labour market, is only being implemented very slowly and hence will only finance a small part of the increased expenditure.

If a tax increase is needed, it is suggested that an earmarked health care contribution tax be introduced, which only increases at the same rate as the expected increase in health expenditure. A continual adjustment of the tax rate, in accordance with the development of health expenditure,

would ensure that improvements in health care are paid for by the generations who enjoy the improvements.

The introduction of a health care contribution tax that finances the total increase in public health expenditure – whether it is caused by demographics or not – would solve the problem of fiscal sustainability. The suggested health care contribution tax would increase gradually to 2.75 percentage points in 2030. Thereafter the rate of increase would be lower and the total necessary increase in 2050 would be 4.5 percentage points compared to 2009 levels.

This major tax increase illustrates the political dilemma of financing the increase in future health expenditure. One (extreme) alternative to a health care contribution tax is a restrained development in health expenditure that ensures that health expenditure as a proportion to GDP is kept constant at the current level. Due to the pressure on health expenditure caused by aging, this would imply a slower growth rate in health expenditure per person in a given age group than growth in GDP, but it is a way to secure fiscal sustainability.

A less radical possibility is to let health expenditure increase at the same pace as average income and the development of demographic factors such as the size of cohorts and healthy aging. These are roughly the assumptions in *Denmark's Convergence programme 2008*, which is the Government's latest financial forecast. Such a development in health expenditure assumes a distinctive tightening of expenditure control and is not very realistic in the light of the present focus on prompt treatment of patients. Even if tight control of health expenditure was possible, there would still be a need for a permanent increase in taxes or structural reforms to finance the increase in health expenditure as a proportion of GDP.

If the current line in health care policy is continued, health expenditure will increase at a faster pace than average income. To finance this, either, other public expenditure has to decrease, taxes have to increase (i.e. by the proposed health care contribution tax) or more extensive reforms that

increase labour supply and, hence, income taxes would have to be introduced.

Even though the gradual increase in a health care contribution tax, can, in principle, solve the problem of fiscal sustainability, it does not mean that the need for structural adjustment disappears. Structural reforms that gradually increase labour supply will reduce the need for a tax increase and thereby tax distortions from higher marginal taxes on labour caused by the health care contribution tax.

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