ENGLISH SUMMARY

Twice a year the Danish Economic Councils publishes a report on the Danish Economy. This is the English summary of the full report, *Dansk Økonomi, efterår 2010* (Danish Economy, autumn 2010, in Danish only).

The summary is divided into the following chapters:
- The Danish Economy, chapter I
- Productivity in Denmark, chapter II

Chapter I: The Danish Economy

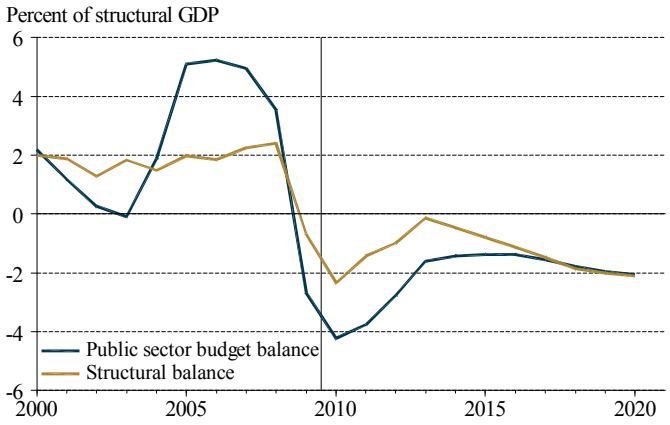
Following the sharp economic downturn, the Danish economy has experienced positive growth for four consecutive quarters. Both private consumption and exports rose markedly in the first half of 2010. However, private consumption and exports are still substantially below their pre-crisis levels. The economic recovery is partly due to a number of temporary factors. While tax cuts and the extraordinary release of the Special Pension Savings have contributed to the strong growth in private consumption, increased inventory rebuilding accounts for a large share of the increase in activity. Furthermore, large increases in public sector consumption and investment have also contributed to the rebound in activity. In the coming years, the withdrawal of these temporary stimulus measures will tend to slow down economic growth.

The economic recovery is still at a fragile stage, and it is expected that production and employment will remain below their normal levels for several years to come. This is partly because the downturn was particularly severe and partly because the planned tightening of fiscal policy will dampen growth in the coming years. In addition, the continued need for consolidation by households and firms will tend to drag aggregate demand, and hence economic growth, down. What's more, the continuing uncertainty about the future of employment, unemployment and house prices can, in itself, negatively influence consumption and investment decisions.

Public sector finances deteriorated sharply following the crisis. From 2005 to 2008 the government budget showed a surplus of 4-5 percent of GDP, and in 2010 a deficit of a similar magnitude is expected. Nearly half of the deterioration is due to the automatic stabilizers, consisting of higher expenditure and lower tax revenue as a result of the crisis.

For a number of years the structural budget balance has been about 2 percentage of GDP. However, there was a marked deterioration during the crisis, cf. Figure A. This structural deterioration, which amounts to more than 4 percent of GDP, primarily reflects the discretionary fiscal stimulus, consisting of tax cuts and extraordinarily large increases in public sector consumption and investment in 2009 and 2010.

Figure A Public sector budget balance



Source: Statistics Denmark, National Accounts and own estimates.

In spring 2010, the Danish government committed to the Fiscal Consolidation Agreement, which outlines the public sector finance recovery plan. Subsequently, this agreement has resulted in agreements with the Danish municipalities and regions as well as in the proposal for the 2010 budget. The projections for public sector finances are based on the

assumption that the consolidation measures are actually carried out. This requires, among other things, a tightening of public consumption, a reduction in the level of public investment and a postponement of planned tax cuts. The planned consolidation measures will lead to a structural improvement in public sector finances of 2 percent of GDP over the period 2011-2013. In 2013, the structural budget balance is expected to be about zero.

The medium term projection going forward to 2020 is presented in sections 1.8 and 1.9 of *Dansk Økonomi, efterår 2010*. It shows that the underlying deterioration in public sector finances is expected to continue after 2013, partly due to the ageing population. Despite the planned consolidation, the structural budget balance is forecast to decline by more than 4 percent of GDP from 2008 to 2020. This implies a structural fiscal deficit amounting to about 2 percent of GDP in 2020.

This projection is based on the agreed fiscal consolidation targets being met. Despite the likelihood that these targets would not be met this year, it is assumed that this shortfall will be compensated for by savings next year. Moreover, the projection implies that real public sector consumption will decrease by 1 percent in 2011. However, in light of the historical difficulties in meeting the planned targets for growth in real public sector consumption, this is a very ambitious assumption.

In addition to the expansionary fiscal policy, strong growth in countries such as Germany and Sweden is helping to increase Danish exports in 2010. Combined with a large contribution to growth from inventory investments, this implies expected growth of 2¼ percent in 2010. Due to extraordinarily high productivity growth it is expected that employment will fall by 50,000 in 2010, despite the growing production. The expected withdrawal of the stimulus measures together with the consolidation of fiscal policy is expected to result in a fall of 1 percent in GDP growth in 2011. In the following years, growth is expected to rise again. However, the normalization of the macroeconomic situation is expected to be slow, partly because housing

prices are only expected to rise very slowly. The medium term projection shows that the economic situation cannot be expected to be fully normalized until 2015. The key figures of the projection are presented in Table A.

Table A *Short-term outlook for the Danish Economy*

	Current prices DKK bn. 2009	**Per cent of GDP 2009**	**Percentage change, volume 2008**	**2009**	**2010**	**2011**	**2012**
Private consumption	817,6	49,2	-0,3	-4,6	2,8	1,7	2,2
Public sector consumption	496,4	29,9	1,6	3,4	1,6	-1,0	0,5
Gross fixed capital formation	308,5	18,6	-4,5	-14,6	-3,5	3,6	5,2
consisting of:							
Residential investment	83,6	5,0	-14,2	-18,1	-13,1	1,5	3,1
Business fixed investment	191,0	10,8	-0,4	-14,0	-3,7	2,7	9,3
Public sector investment	33,9	2,0	-2,9	12,4	11,2	10,0	-10,0
Stockbuilding[a)]	-18,8	-1,1	0,3	-2,0	1,4	0,4	0,0
Total domestic demand	1.603,7	96,5	-0,5	-6,2	2,4	1,6	2,2
Exports of goods and services	785,2	47,2	2,4	-10,2	3,5	2,3	3,1
Imports of goods and services	726,5	43,7	3,3	-13,2	4,1	3,4	4,2
GDP	1.662,4	100,0	-0,9	-4,7	2,2	1,1	1,8
Key indicators							
Consumer prices, percentage change[b)]			3,2	1,4	2,3	2,2	2,0
Unemployment, per cent[c)]			1,7	3,4	4,0	4,6	4,5
Current account, DKK bn.			35,2	65,5	87,4	70,3	55,0
Current account, per cent of GDP			2,0	3,9	4,9	3,9	2,9
General government budget balance, DKK bn.			59,8	-47,0	-76,5	-70,0	-52,9
General government bud. balance, per cent of GDP			3,4	-2,8	-4,3	-3,9	-2,8
Hourly wage costs, percentage change			4,2	2,9	2,3	1,9	2,3
Terms of trade, percentage change			1,2	-0,7	3,3	-1,2	-0,9

Note: a) The percentage changes are calculated as the 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.

Source:Statistics Denmark, National Accounts and own estimates.

Policy recommendations

Despite the Fiscal Consolidation Agreement, public sector deficits can be expected for a long time to come. Furthermore, the public sector's failure to constrain expenditure within the agreed budgetary limits in recent years carries the substantial risk of even larger public sector deficits in the future. Thus, there is a great need for a credible new fiscal plan that will ensure a sustainable and credible development in public sector finances leading up to 2020.

A new 2020 fiscal plan should require consolidation of the public sector finances starting in 2011, as planned. The plan should stipulate targets for public sector consumption expenditure relative to GDP and establish measures to ensure better control of expenditure. Furthermore, the plan should include abolition of the nominal tax freeze cap and specify concrete reforms to increase labour supply and thereby improve fiscal sustainability.

Fiscal policy has provided a substantial stimulus to the economy in 2009 and 2010, which has mitigated the effects of the crisis and supported the increase in production. Provided that the actual public sector spending is kept within the planned budget, the proposed tightening of fiscal policy is expected to reduce growth by ½ a percentage point in 2011. This tightening follows, however, two years of substantial stimulus from the public sector budgets. It is estimated that fiscal policy over the period 2009-11 will have resulted in a GDP level around 2¼ percent higher and an employment level approximately 70,000 higher than would have been the case had a neutral fiscal policy been in place over the same period. Given the large fiscal challenges in Denmark, the planned consolidation in 2011 is appropriate. A relatively quick recovery of public sector finances will improve fiscal sustainability and, at the same time, improve the possibility of using fiscal policy in future recessions.

Over the past 15 years, public sector consumption expenditure as a share of structural GDP has risen from about 25 percent to more than 28 percent in 2009. In 2010 actual

public sector expenditure is expected to exceed planned expenditure by DKK 8 billion, implying that expenditure as a share of structural GDP will increase to 28½ percent. Thus, public sector expenditure is currently expected to be almost DKK 40 billion higher than the government's 2015-plan target of 26½ percent of structural GDP by 2015. This situation contributes to the assessment that the current fiscal policy is unsustainable, see *Danish Economy, spring 2010* (in Danish only). A given imbalance between revenue and expenditure can be financed by structural reform and by increasing taxes, but these instruments cannot finance an imbalance that is continually increasing due to increases in expenditure's share of the economy.

Since 2000 public sector consumption expenditure has increased more than planned every year. These deviations are primarily due to the fact that the spending by local governments has exceeded the agreed and budgeted targets. These systematic overruns suggest that the municipalities do not have sufficient incentives to ensure compliance with the collective budgetary agreements. Among the crucial weaknesses of the current system is that a budget overrun in one year does not affect the budget in subsequent years and that each municipality has limited incentive to comply with the overall targets.

The present indirect control of public expenditure through capping local government taxes has shown to be ineffective. Thus, if continuation of a system of indirect control is desired, then measures that include additional income sources that can be capped more effectively should be considered.

A crucial problem in relation to the systematic deviation between planned and actual expenditure is that municipalities do not comply with the budgets. It is therefore proposed that the system of individual offsetting for cases of failure to comply with budgets, as it was in place in 2009, be reintroduced. Each municipality will then face a binding expenditure target (set by the budget), which in the case of a failure to comply with the budget is subsequently fully offset in the block grant. However, an advanced announcement of full

offsetting in the block grant will likely induce municipalities to exaggerate their budgets. Thus, it would be difficult for such a system to keep the municipal budgets within the boundaries of the collective agreement.

One possible way to increase the probability that municipalities meet the collective agreement is to tighten the existing individual sanctions in the tax area. Moreover, in the event that the overall budget exceeds the agreed target, the agreement can be supplemented with a provision that assigns each municipality with an individual expenditure target. These expenditure targets can be based on existing principles for allocating block grants and should also make it possible to trade expenditure rights between municipalities.

One of the elements in the Consolidation Agreement is to shorten the unemployment benefit entitlement period from four to two years. This reform is an important step in the right direction. However, there is a need for more structural reform to ensure the long run sustainability of public sector finances. Thus, the new 2020 fiscal plan should contain concrete reforms aimed at increasing labour supply and, thereby, improving fiscal sustainability. An increase in labour supply through a reduction in the number of individuals on transfer incomes is an effective way to improve public sector finances, because it both reduces the cost of transfers and increases the overall tax revenues.

A reduction of the voluntary early retirement pension scheme period from five to three years from 2012 with retention of pension offset rules during the first two years of the period would increase employment by about 40,000 by 2020 and improve the public sector budget balance by about 1 percent of GDP. The complete abolition of the voluntary retirement pension scheme would increase employment by 80,000 by 2020.

A further reduction in structural unemployment or fewer approvals of disability pensions would also increase labour supply. However, it is not obvious that the potential in these areas is large. For example, it is likely to be associated with

costs (e.g. wage subsidies) to ensure that potential disability pensioners have a job. Other areas that could contribute to an increase in the labour supply are integration and education, where earlier graduation could increase the effective labour supply. However, it is difficult to identify effective and appropriate instruments in these areas that could make a significant contribution to improving the public budget.

An alternative to increasing the employment rate is to increase the number of hours worked by those who are employed. This will increase tax revenue, but does not reduce the number of benefit recipients. To achieve a particular improvement in public sector finances, it is therefore necessary to increase the number of hours worked considerably compared to an increase in labour supply due to a reduction in the number of benefit recipients.

Furthermore, it is difficult to identify effective instruments for increasing the number of hours worked. Within the collective conditions of employment agreements, each employee can, to a large extent, choose the number of hours he or she wants to work. Therefore, attempting to increase the number of hours worked through the collective agreements cannot be expected to have a full impact on the actual number of hours worked. The most obvious instrument for increasing the number of hours worked is a reduction in the marginal tax rates on labour income. However, lower marginal tax rates tend to decrease tax revenues. Thus, lower marginal tax rates on labour income needs to be financed by raising other taxes or through lowering public sector expenditure.

Moreover, due to the current legislation, any increase in the number of working hours agreed upon through collective bargaining implies that public transfers increase accordingly. To obtain the fullest effect of increasing working hours on the public sector balance, it is necessary to correct this. What is more, for an unchanged number of employees in the public sector, an increase in the number of hours worked will also tend to increase the public sector wage bill. Thus, it is necessary to reduce the number employed in

the public sector to obtain the fullest effect on the public sector balance.

The overall assessment is that a reform of the early retirement scheme is the most effective way to increase employment and, thereby, improve fiscal sustainability. This is reinforced by the fact that a reform of the early retirement scheme is the only one of the actions considered where an effective instrument can be recommended.

The financial crisis in the banking sector has shown the need for tighter regulation of this sector. Thus, the tightening of rules for capital and liquidity coverage, which is planned in relation to the implementation of the Basel III rules, is assessed to be necessary. However, in relation to the Basel III rules, it would be appropriate if Danish mortgage bonds could be included to a larger extent in banks' liquid assets.

In addition to the tighter capital and liquidity coverage, a so-called 'bank tax' has been proposed in countries such as Germany, the UK and the US. It is proposed that the tax should be imposed on the least stable part of banks' financing. Such a tax has already been introduced in Sweden. Equity represents the most stable part of banks' financing while different sorts of deposits represents a less stable part. Imposing a levy on such deposits reduces banks' incentives to create credit based on uncertain funding, while banks' incentives to strengthen the capital base are increased. These two factors will tend to lead to a banking system which is less exposed, thereby reducing the risk of future financial crisis.

A tax on the least stable part of banks' financing should be implemented as part of a common set of rules at the EU level. The proposal does not depend on any requirement to build a state fund that can be used in case of a new financial crisis. Moreover, the tax should be implemented whether or not one wants to tax the financial sector harder or softer. A new tax on the least stable part of bank financing must be considered as a complement to the other regulation in the area.

Chapter II: Productivity in Denmark

Denmark is one of the wealthiest countries in the world. Measured by gross domestic product (GDP) per capita, Denmark was ranked the tenth richest OECD country in 2008 (excluding Norway and Luxembourg). To maintain this position, growth in income per hour worked combined with a high number of hours worked per capita is needed. In the long run, however, continual growth can only be maintained by increases in real income per hour, as there is a limit to how much the employment rate or the number of hours worked can grow. Growth in income per hour worked depends on the relative price of Danish exports and imports as well as the ability to increase the real income per hour worked. Thus, a decline in the growth of real income per hour worked is a cause for concern.

During the period 1966-2009, the average growth rate in Danish real income per capita was 1.9 percent per year. In the sub-period 1995-2009, growth only reached 1.3 percent per year. The causes of growth were markedly different during these two periods. During the period 1966-2009, the supply of hours worked per capita fell by 0.5 percent on average per year, and the growth in real income was attributable to growth in hourly productivity of 2.4 percent on average per year. In the shorter period 1995-2009, the increase in productivity only contributed 1.1 percent per year, while the remaining growth was due to increases of 0.2 percent per year in the total supply of hours worked.

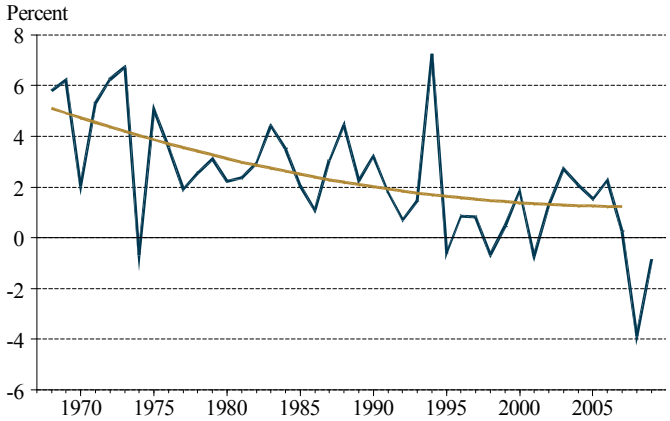
In the coming decade, the total supply of hours worked is expected to fall by 0.4 percent per year, primarily because the large birth cohorts begin to retire from the labour market. Assuming that the growth in hourly productivity remains at 1.1 percent per year, as was the case during the period 1995-2009, real income per capita is only expected to grow by 0.7 percent per year over the next decade. To maintain growth in real income per capita of 1.3 percent per year, the growth in hourly productivity needs to be increased from its current level of 1.1 percent per year to about 1.7 percent per year. To obtain growth of 1.9 percent

per year, as in the period 1966-2009, hourly productivity would need to increase by 2.3 percent per year.

By looking at the historical development in hourly productivity, it is not obvious how growth rates of such magnitudes could be obtained. When looking at the private sector (excluding primary industries) alone, growth in labour productivity per hour has fallen from about 5 percent to about 1½ percent over the period 1967-2007, cf. Figure B.

This chapter in the full report seeks to identify the reasons for this fall in productivity growth. Moreover, the chapter investigates whether elements of economic policies have contributed to this development. The first step is to determine whether the productivity slowdown is a specifically Danish development or whether it is a common phenomenon across OECD countries.

Figure B *Growth in Danish labour productivity per hour, private sector*



Note: The brown line is a squared time trend estimated for the period 1967-2007.

Source: Statistics Denmark and own calculations.

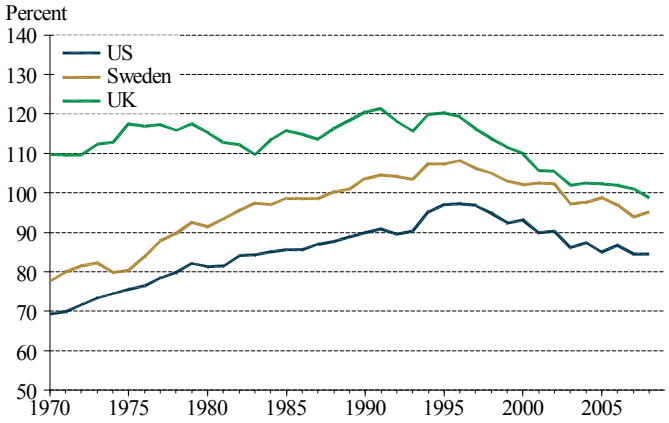
Danish hourly productivity in an international perspective

The comparison of growth in value added per hour worked across countries can be based on the development in either quantities or values. The assessment of Danish growth relative to that of other countries is robust to this choice. Moreover, it can be relevant to exclude non-market sectors, such as the public sector, when comparing the hourly productivity across countries. However, excluding non-market sectors does not alter the main findings in this chapter.

When looking at GDP per hour worked for the total economy over the period from 1970 to the mid 1990s, it seems that Denmark has had a higher average growth rate than some of the other countries included in the analysis. During this period, Denmark increased its level of GDP per hour worked from about 70 percent of the US-level in 1970 to almost the same level as the US in the mid 1990s. The creation of value per hour worked in Denmark increased from 78 percent of the Swedish level in 1970 to 108 percent in the mid 1990s. Considering that both of these countries had a higher GDP per hour worked than Denmark during most of the period under consideration, a long term convergence may explain part of the higher Danish growth rate.

During the period from 1970 to the mid 1990s, Danish GDP per hour worked also increased relative to that of the UK. Starting from a level of 110 percent of that of the UK in 1970, it increased to 120 percent in the mid 1990s. However, as the Danish starting level was above that of the UK, this development cannot be attributed to convergence. Moreover, UK GDP per hour worked has started to converge to that of Denmark since the mid 1990s, and by 2008, it had actually more than caught up with the Danish level, cf. Figure C.

Figure C GDP per hour, Danish relative level



Note: The figure shows GDP corrected for the terms of trade denominated in dollars per work hour.

Source: OECD Stat and own calculations.

In terms of the level of GDP per hour worked, Denmark has lost ground to several countries other than just the UK. Since the mid 1990s, it seems that countries that were initially more efficient than Denmark have increased their growth in GDP per hour worked at a higher rate than Denmark. During the period from the mid 1990s to 2008, Danish value added per hour worked fell from 96 percent of the German level to 88 percent. Similarly, relative Danish productivity per hour worked fell from 97 to 85 percent of that of the US. Compared to Sweden, the Danish value added per hour worked fell from 108 percent of the Swedish level to 95 percent during the same period. Furthermore, although the initial level of value creation was higher in the Netherlands than in Denmark, it is remarkable that the Danish value creation has grown at a slower rate than that of the Netherlands. Since the mid 1990s, the Danish value creation has fallen from 91 to 80 percent of that of the Netherlands. A similar picture emerges when comparing Denmark to France.

Overall, the analysis provides robust evidence that the growth rate in Danish productivity per worked hour since the mid 1990s has been weak compared to countries that are

normally considered to be similar to Denmark. Compared to the US and Sweden, this implies that most of the catch-up that Denmark obtained during the period from 1970 to the mid 1990s has been lost, and today the relative level is at the same level as in the beginning of the 1980s. Compared to Germany, France, the Netherlands, and the UK, in 2008 the relative level of Danish value added per hour worked was at its lowest level in the period analyzed.

Causes of the development in Danish hourly productivity

One way to assess the causes of the relatively weak Danish hourly productivity growth since the mid 1990s is through growth accounting.

The purpose of growth accounting is to decompose labour productivity growth into its components - capital deepening and technological progress.

First, growth depends on the growth in the ratio between capital and labour - the capital intensity. The more capital that is used relative to labour, the higher is the level of hourly productivity that can be expected. Second, the growth in productivity depends on the development in the qualifications of the workforce. These qualifications reflect the quality of the labour, and here education and work experience are potentially important factors. The growth accounting exercise corrects for changes in these factors and what remains can neither be explained by changes in the capital stock nor the quality of the workforce. Thus, this residual component has to be explained by the development of other factors that affect the total efficiency of how factors are used in a firm. Together these other factors are called total factor productivity (TFP).

According to the growth accounting exercise, the relatively weak Danish growth in hourly productivity since the mid 1990s can primarily be attributed to weak TFP growth. Despite the fact that the contribution from the increase in capital intensity to the growth in hourly productivity is

lower than in the previous period, it is not markedly different compared to that of other countries.

The conclusion is, therefore, that the weak growth in hourly productivity in Denmark cannot be explained by an inadequate level of investment in Denmark. Thus, it seems that no specific barriers to capital formation relative to other countries arise from the Danish economic policies such as the level and structure of taxation.

The slowdown in the Danish TFP growth from 1995 and onwards is especially pronounced within manufacturing and services. In manufacturing, the weak development is present in almost all sub-industries. The chemical industry is, however, a markedly different sub-industry as it has experienced high TFP-growth since the mid 1990s. In the service sector, there is more variance in TFP growth among sub-industries.

Although TFP growth is weak in Danish industries in an international perspective, the flexible Danish factor markets probably contribute positively to the Danish TFP growth compared to other countries. It seems that the private sector is better at taking advantage of the potential for growth that comes from movements of capital and labour between sub-industries, thereby reducing or even offsetting the differences in marginal returns of factors of production. Here Denmark has possibly achieved greater gains than the other countries in this analysis.

Knowledge and human capital

The growth accounting exercise separates the contributions from capital intensity and increased quality of the workforce, and the results show that these factors are unlikely to be the cause of the weak Danish TFP growth. However, growth accounting does not take into account the accumulation of knowledge based capital and this could potentially explain the weak Danish TFP growth. The low Danish TFP growth thus suggests that the accumulation of knowledge based capital has been too weak during the period under consideration.

It is difficult to construct convincing measures of the accumulation of knowledge. For this analysis, the measures of knowledge accumulation from the EU-KLEMS are used, as these are constructed to be comparable across countries. When knowledge capital is measured as accumulated research and development activity (R&D), the analysis shows that since the mid 1990s Denmark has had neither a significantly low growth in nor a low level of knowledge based capital.

This indicates that economic policy in Denmark does not impose any significant barriers to the accumulation of knowledge capital relative to those of other countries.

Although growth accounting takes changes in the quality of the workforce into account, it may not remove all the effects of a higher level of education.

There may be an additional effect on TFP from the level of education in the workforce. This additional effect can, for instance, arise from the accumulation of specific knowledge in firms as well as the general knowledge built into society, as both empower workers and firms to gain new knowledge and put it to use in production. Thus, it is relevant to compare both the level of and the development in the share of employees with a tertiary education in the private sector in Denmark with those of other countries. This comparison shows that Denmark is located in a large middle group in Europe with a share of the employees in the private sector with a tertiary education of 23 percent. Although this may contradict the widespread notion that Denmark has a very high level of education, it does not indicate that Denmark has a particular problem in education. However, it is noteworthy that the share of employees with a tertiary education is 50 percent higher in the public sector than in the private sector.

The analysis of the correlation between the level of education and the level of TFP shows that firms whose share of employees with a tertiary education is 1 percentage point higher than the average have a TFP-level that is 0.4-0.5 percent higher. Thus, there is a significant positive correla-

tion between the level of TFP in Danish firms and the level of education of their employees.

This correlation reflects that the most efficient firms employ a higher share of highly educated workers. This suggests that the Danish labour market is relatively efficient for highly educated workers in the private sector and ensures that highly educated workers are allocated to highly productive firms. At the same time, however, highly educated workers are overrepresented in low-productive firms. Therefore, by reallocating highly educated workers from low productive, often small, firms to high productive, often large, firms, there may be possible gains to productivity.

Overall, this suggests that the weak Danish productivity growth cannot be explained by the level of education of employees in Danish firms. However, this analysis also documents that the level of education in the private sector is considerably lower than in the public sector. Furthermore, the allocation of highly educated workers between firms in the private sector could be more efficient.

Productivity distribution among firms

Another factor that may be able to explain the low TFP-growth in Denmark is the distribution of TFP among firms within each industry. Unfortunately, it is not possible to compare the distribution of TFP among firms within each industry in Denmark with that of other countries and, hence, it cannot be determined whether Denmark has a problem relative to other countries.

This analysis documents, however, that an enormous difference exists in productivity across firms within the same industry. The three quarters of firms with the lowest TFPs in an industry only contribute between 8 and 30 percent of the value added in that industry, but employ between 23 and 45 percent of the total number of employees in that industry.

This suggest that it may be possible to obtain a positive effect on the average level of TFP by reallocating resources

from low productive firms to the quarter of firms with the highest levels of TFP.

As an example, the analysis considers the experiment of closing the half of the firms with the lowest level of TFP and transferring their production capacity to the remaining firms. This process is known as creative destruction. Depending on the industry under consideration, this experiment increases the average TFP-level by between 2 and 7 percent. The most prevalent effect takes place within wholesale.

Thus, the analysis points to a considerable potential for improving the average TFP by increasing competition, leading to a transfer of resources from low productive firms to more productive purposes.

At the same time, calculations show that an increase in productivity of 10 percent in the 50 percent most productive firms in an industry, would increase the average productivity in that industry by almost 10 percent. This finding is robust across all the industries under consideration. As a result, even a very large increase in the average productivity among the 50 percent least productive firms in an industry would not significantly affect the overall average productivity in that industry.

This implies that economic policies aimed at increasing the average TFP-level should aim at improving the economic environment of those firms that are already productive. Possible instruments to achieve this could be investments in R&D and by increasing the level of education in private firms.

The results also indicate that supporting small, and perhaps newly started, firms cannot be expected to have any considerable effect on the average level of TFP, even when looking at a relatively long time horizon. However, it does not imply that supporting small firms is inappropriate. From the point of view of society, such support may be necessary in order to correct the market failures that newly started firms often face. The point is simply that one should not expect

that this is a means by which Denmark could gain a considerable increase in TFP or hourly productivity within a reasonable time horizon.

The main conclusion of the analysis is that the weak Danish development in productivity per hour worked originates from the weak development in TFP growth. The predominant explanation for TFP growth is that increasing use of knowledge makes the production process more efficient. However, the analysis shows that neither the volume nor the growth of knowledge seems to point to any particular Danish problem. Moreover, the low TFP growth is not caused by lack of reallocation of resources between Danish industries. However, the analysis also demonstrates that the reallocation of resources between high productive firms and low productive firms within the same industry is inefficient. This suggests that the competition conditions in Denmark may limit the diffusion of knowledge and thereby the growth of TFP.