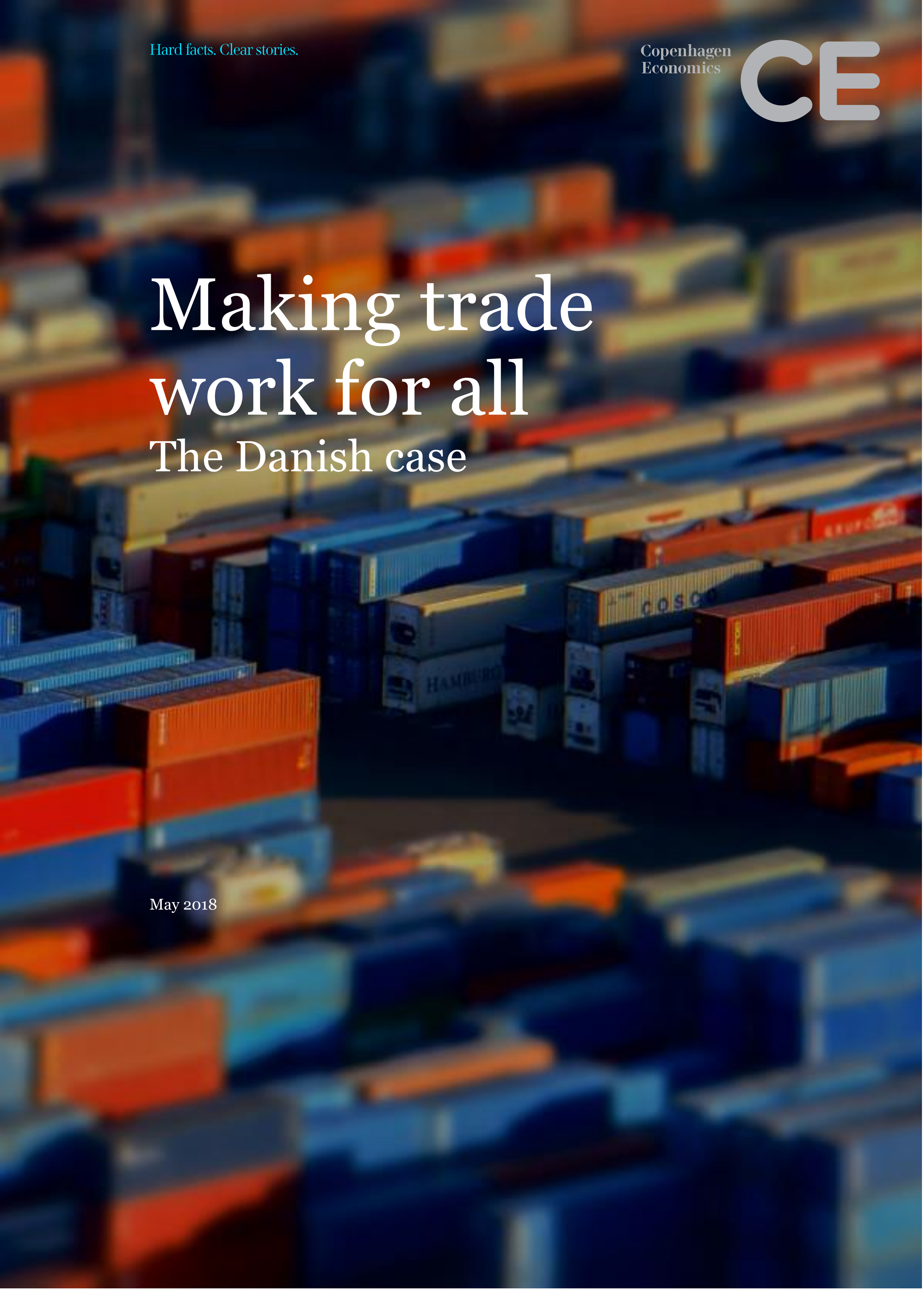
Hard facts. Clear stories.

Copenhagen Economics

Making trade work for all

The Danish case

May 2018



This report is a summary of a longer report prepared on behalf of the Danish Business Authority. The study assesses the impact of increased international trade since 1992 for employment and prosperity in Denmark. The report has been prepared in collaboration with Professor Jakob R. Munch from the University of Copenhagen.

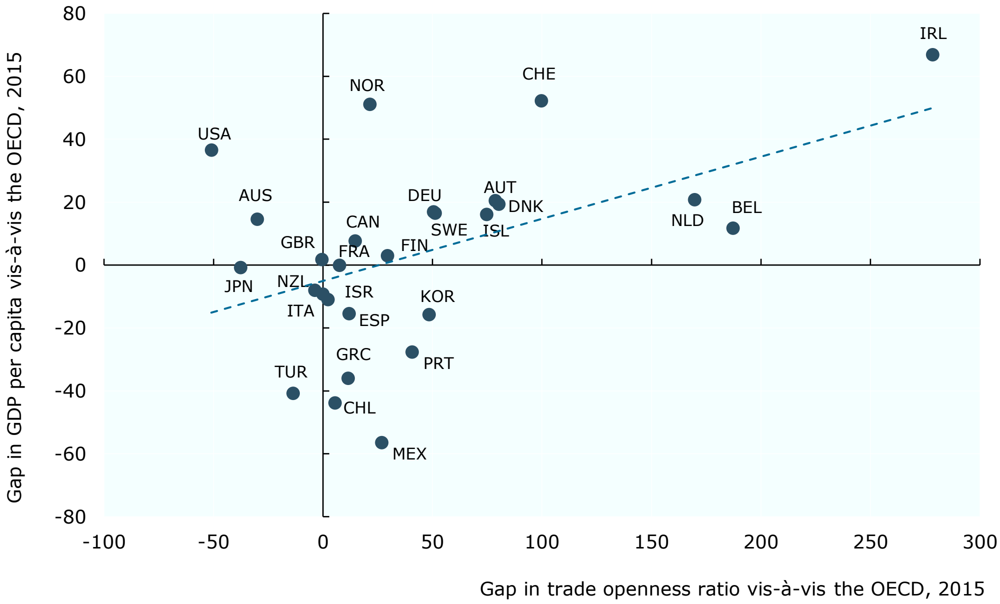
Authors:
Martin H. Thelle
Jonas J. Henriksen

1 International trade and prosperity

Trade is important to prosperity. Greater trade openness is generally associated with higher GDP per capita, cf. Figure 1. International trade enables firms to specialise in goods and service where they are most competitive and allows firms to sell to larger markets. International trade thus helps firms from smaller countries to gain scale.

More open trade also allows firms to import a large variety of inputs needed in the production process from where it finds the best quality and price. Finally, trade exposes firms to international competition and encourages firms to improve and innovate.

Figure 1 Trade and GPD per capita in selected OECD countries



Note: New EU member states and Luxemburg are not shown

Source: Copenhagen Economics based on OECD Productivity Statistics (database), April 2017

International trade and trade agreements are not only important for large companies. Smaller firms benefit from increased trade and, not least, uniform and transparent rules for international trade. Trade agreements that lower the administrative and regulatory costs of international trade are especially helpful to smaller businesses. Large companies can more easily cope with the administrative burdens, and reductions of these are a relatively larger advantage for smaller businesses.

2 The change in world trade since 1992 - hyperglobalisation

The period since 1992 was marked by an unprecedented growth in international trade and has been labelled the *hyperglobalisation* period.[1] During this period, global trade increased twice as fast as global GDP according to World Bank data.

Among other things, growth in trade was driven by new communication technology and was supported, among others, by new trade agreements and the establishment of the World Trade Organization (WTO). These initiatives enabled trade to develop in a rule-based environment, ensuring equal trading conditions and creating stable conditions for firms and consumers.

In Europe, the period was also characterised by the development of the EU's Internal Market and the enlargement of the EU with new member states. Exports and imports combined as a share of GDP increased considerably for key Western-European economies from 1992 to 2008, cf. Figure 2. After the financial crisis, the development has been more mixed.

Figure 2 More trade openness in Western Europe since 1992

Note: Trade openness is calculated as (import + export)/GDP at current prices. The figure contains both trade in goods and services. Luxembourg and Malta (not shown) are among the most open.

Source: Copenhagen Economics based on data from OECD

Even though trade openness differs across countries, all countries - and especially the smaller countries like Ireland, Belgium, Netherlands, Austria and Denmark - are still highly dependent on international trade. Exports sustain 47 per cent of private sector

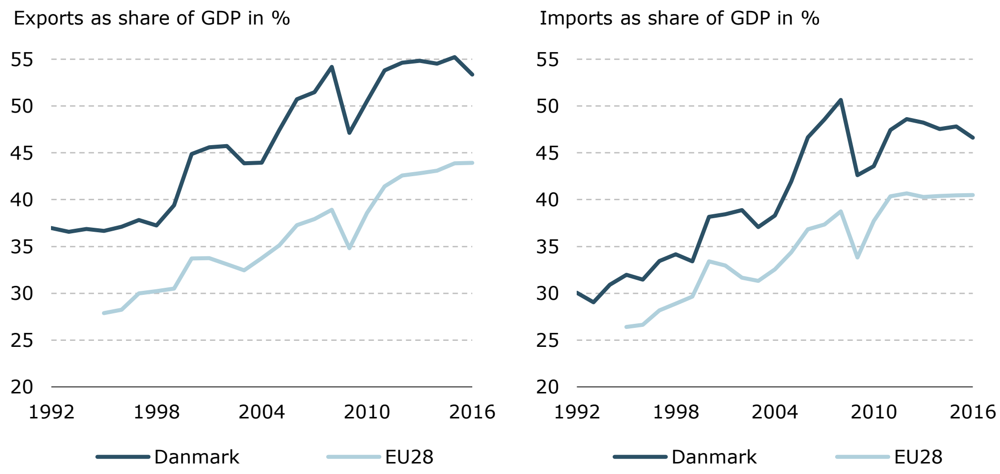
[1] See Richard Baldwin (2016), *The Great Convergence* which argues that advances in information and communications technology (ICT) transformed globalisation around 1990. Better communication allowed rich-nation firms to move manufacturing to developing nations. With the help of new information technologies, firms could suddenly combine advanced industrial-manufacturing from rich nations with low-wage workers in developing nations.

employment in Denmark, 44 per cent in Sweden and 30-35 per cent in bigger countries like Germany and the UK.[2]

3 Denmark's international trade during the hyperglobalisation period

Denmark is a small open economy and on average more dependent on international trade than the average of the EU28. Denmark's openness to trade has increased significantly since 1992. Exports rose from 37 per cent of GDP in 1992 to 54 per cent in 2008 and despite the drop in trade in 2009/10, exports have resumed this level, cf. Figure 3.

Figure 3 Denmark's high and increasing openness to trade



Note: Including both goods and services as share of GDP in current prices.

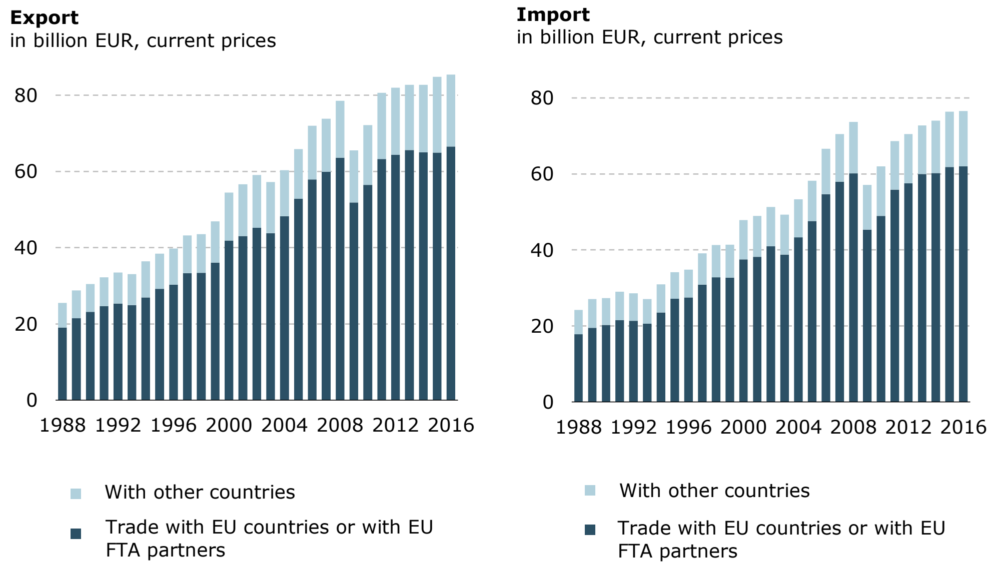
Source: Copenhagen Economics based on OECD data

Trade in both final and intermediate goods have increased. Lower trade barriers allow firms to trade intermediate goods and other inputs needed in their global value chains. Trade allows each country to specialise in the parts of the production process where they have special advantages. In the period 1995-2011, the value of Danish trade in final goods doubled, while the value of trade in intermediate goods tripled. The value of Denmark's trade in intermediate goods now far exceeds the value of trade in final goods.

Denmark benefits from the rule-based environment for open trade. About 80 per cent of Denmark's trade is covered by different types of bilateral trade agreements, cf. Figure 4. The vast majority of the remaining trade is with other WTO members.

[2] According to data from the OECD *Trade in Employment* database using 2011 data.

Figure 4 Around 80% Denmark's trade is covered by bilateral trade agreements



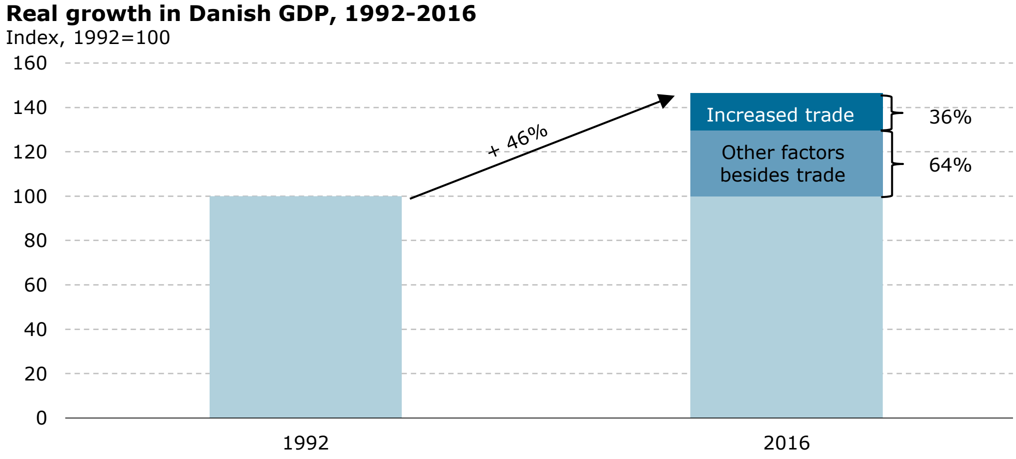
Note: EU FTA partners include both actual free trade agreements as well as customs unions and association and partnership agreements. Both agreements that are finally and temporarily implemented are included.

Source: Copenhagen Economics based on data from Statistics Denmark and information from the EU Commission, DG Trade

Danish GDP increased by 46 per cent in real terms between 1992 and 2016. New calculations by Copenhagen Economics shows that increased international trade since 1992 accounts for more than one third of this increase. More international trade has increased Danish GDP by EUR 32 billion, which is equivalent to 16 per cent increase in GDP, cf. Figure 5. This corresponds to an increased GDP per household of EUR 12,000 annually. Approximately EUR 20 billion are due to the growth in trade with the other EU Members, while EUR 12 billion are attributable to trade with countries outside the EU.[3]

[3] Based on the method in Peterson Institute for International Economics (2017) "The payoff to America from Globalization: A Fresh Look with a Focus on Costs to Workers". The method comprises two steps. *First*, the growth in trade due to lower trade barriers is identified. *Second*, the effect from the growth in trade due to lower trade barriers on real GDP is computed.

Figure 5 More than one third (36 per cent) of real growth in GDP since 1992 is due to international trade



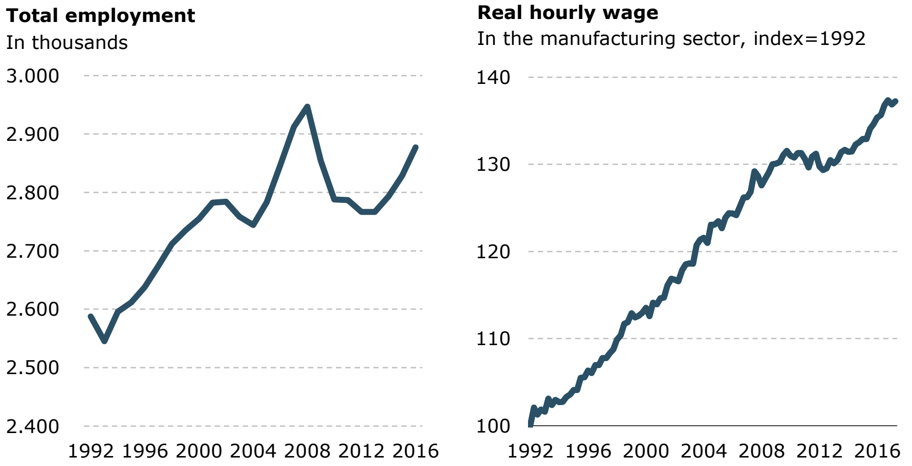
Note: Growth in GDP is calculated based on GDP measured in fixed prices (2010 level).

Source: Copenhagen Economics based on method in Peterson Institute for International Economics (2017) and data from Statistics Denmark.

4 Trade, wage and employment – the Danish case

In Denmark, increased trade has gone hand in hand with high employment and rising wages. Total employment increased by more than 350.000 people from 1992 to 2008, which corresponds to an increase from 49 per cent of the total population to a historical all time high share of 54 per cent in 2008, cf, Figure 6. Hourly wages in the Danish manufacturing sector – which is most exposed to international competition - increased on average by 1.5 per cent annually between 1992 and 2008.

Figure 6 Employment and real hourly wages are both higher than in the 1990’s



Note: The real hourly wage for the Danish manufacturing sector is shown as an index with 1992 = 100. The employment figure includes all sectors.

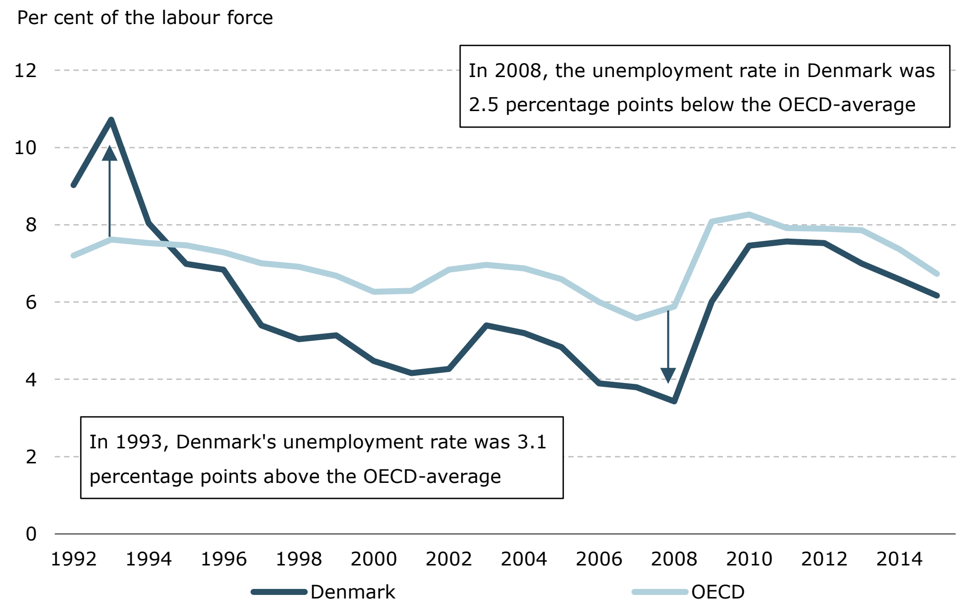
Source: Copenhagen Economics based on data from Statistics Denmark

The Danish labour market is characterised by the flexicurity model. It encompasses low cost of hiring and firing (*flexi*bility) and high levels of unemployment insurance (se*curity*). Active labour market policies are the third part of the model.

Overall, the flexicurity model appears to have proven robust and adaptable in a time of significant change. On key success criteria such as high employment and few long-term unemployed, Denmark improved its figures during the period of rapidly increasing trade.

As a result of numerous reforms and large investments in education and training, labour supply increased and unemployment fell during 1992-2008, when international trade increased substantially. In the beginning of the 1990s, Denmark's unemployment rate was above 10 per cent, and around 3 percentage points *above* the OECD-average at the time. Fifteen years late, in 2008, after a significant increase in both imports and exports, the unemployment rate was less than 4 per cent, which was 2.5 percentage points *below* the OECD average, cf. Figure 7. During the financial crisis where international trade dropped, unemployment has risen in both Denmark and in the OECD as a whole.

Figure 7 Danish unemployment decreased through the period of rapidly increasing trade

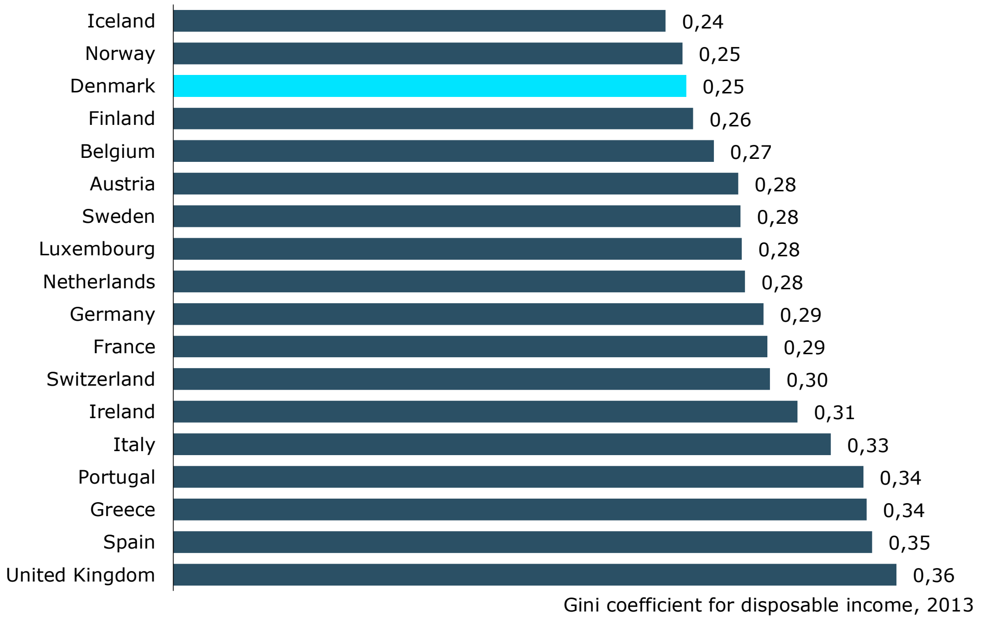


Source: Copenhagen Economics based on data from the World Bank

However, there have been workers who have experienced a downward pressure on wages following increased international trade. Trade has generally had a positive impact on real wages in the manufacturing sector during that period, cf. Hummels et al. (2014). However, not all workers have gained from increased trade. Based on detailed firm level and individual worker data from Danish manufacturing firms, the study reveals major consequences for workers who lose their jobs due to offshoring. Individual adjustment costs can be substantial, but can be reduced by effective public efforts, for example through vocational training providing relevant competencies.

Denmark has made a great effort to ensure that the gains from trade benefit the whole of society. During the period 1992-2008, average income in all Danish regions rose significantly, but the difference between the richest and the poorest regions remained unchanged. Inequality in disposable income is still very low in Denmark indicating that it is possible to combine a high degree of trade openness with a low degree of economic inequality.

Figure 8 Inequality in disposable income is low in Denmark



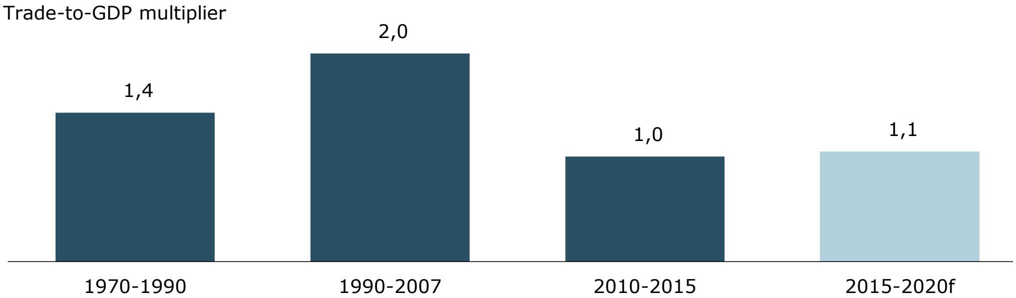
Note: Income distribution data refer to the total population and are based on equivalised household disposable income, i.e. disposable income adjusted for household size. The Gini coefficient takes values between 0 (where every person has the same income), and 1 (where all income goes to one person). Data for Finland and the Netherlands are from 2014. The figure shows the Gini coefficient for EU-15 as well as the EFTA countries (except Lichtenstein, where data was unavailable).

Source: OECD Income Distribution Database

5 Future outlook

Following the financial crisis in 2008, growth in international trade has slowed and global trade is expected to grow at a slower pace in the coming years, cf. Figure 9. Brexit and the new stand on trade policy by the US have increased the risk that the economic growth potential from international trade will not be fully realised in the coming years. The number of new protectionist measures has increased according to the Global Trade Alert Report. If these concerns materialise, it can be expensive for the European countries.

Figure 9 The growth in global trade is expected to decrease relative to the growth in GDP

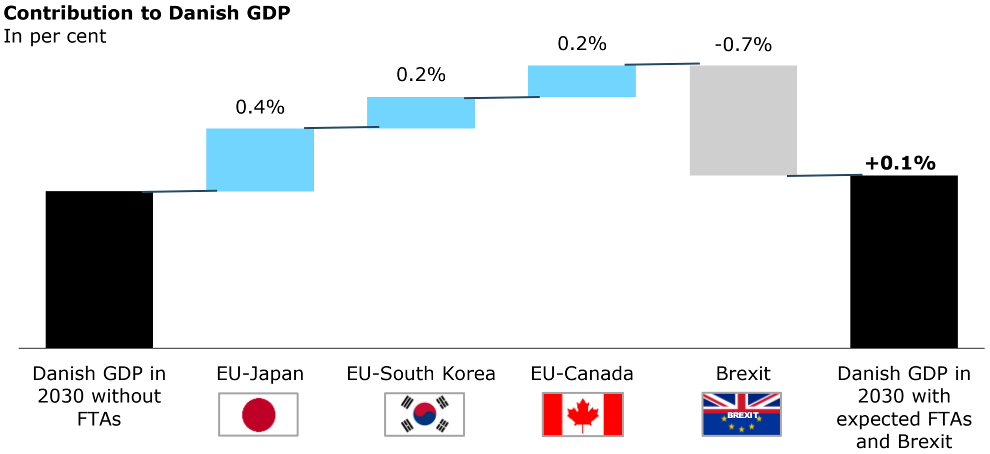


Note: The years 2008/2009 are excluded from the analysis as outliers.

Source: Copenhagen Economics based on projections by the World Bank, IMF and OECD

To illustrate the importance of such global changes to a small open economy, a study carried out by Copenhagen Economics for the Danish Ministry of Foreign Affairs estimated that Britain's exit from the EU could reduce Danish GDP by 0.7 per cent. However, trade agreements with Japan, South Korea and Canada, respectively, can in combination increase the Danish GDP by 0.8 per cent. New trade agreements are therefore able to compensate for the effect of Brexit.

Figure 10 The benefits of recent trade agreements compensate for the loss from Brexit



Note: The effects of the free trade agreements originate from an ambitious liberalisation scenario with extensive regulatory harmonisation between the countries. The effect of Brexit is calculated as an average between three scenarios.

Source: Copenhagen Economics commissioned by the Ministry of Foreign Affairs of Denmark

This illustrates a need for the EU to continue actively promoting trade through a rule-based international trading scheme in order to maintain and increase our prosperity at a time when world trade stagnates.

In the coming 5-10 years, international trade is expected to increase at a slower pace than in the period 1992-2008 for a number of structural reasons. Hence, the future holds fewer and smaller challenges and opportunities from increased international trade than past decades. Taking into account the political adaptiveness of the previous decades, the future appears manageable.

It requires willingness to change, high flexibility and active policies to ensure that gains from trade benefit all. If countries remain responsive and keep reforming policies and investing in training and education, the Danish experience gives hope that we can keep gaining from international trade in the future.