National Agency for Enterprise and Construction

# Economic effects of liberalising international trade in services

December 2005

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# Preface

When the international trade ministers meet in Hong Kong in December in their attempt to break the deadlock in the WTO negotiations and get them back on track, attention will be drawn to services together with the two other negotiating areas, industrial goods and agriculture.

The liberalisation of trade in services is of decisive importance for increased economic growth and employment. In this country, the sector accounts for two thirds of total sales and for three quarters of employment in the business community. In the European Community, trade in services contributes more to the economy than do industry and agriculture together. In addition, the economic significance of the sector is on the increase.

This report concludes that there is a potential for global welfare gains if global liberalisation is implemented, and that the developing countries may achieve the relatively largest share of these gains. With respect to Denmark, the report indicates increasing exports especially in the growth markets in Asia and Africa compared to the present situation, as well as an increase in total employment. Lastly, the liberalisation of trade in goods will spark a substantial increase in the services supplied by the important Danish transport sector.

This report is based, among other elements, on previous surveys mapping out the trade barriers encountered by Danish export businesses, and showing that the dismantling of these barriers is a precondition of increasing free trade. The publication of the report is to be seen in connection with the Doha Round in the context of the World Trade Organization, the WTO.

In April 2005, commissioned by the National Agency for Enterprise and Construction, Copenhagen Economics drew up the analysis of the economic effects of liberalising international trade in services.

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*December 2005*

# Summary

Both the global economy and the Danish economy are extremely dependent on the earnings and employment opportunities generated by international trade. Barriers to trade mean, however, that the full potential cannot be achieved. This analysis of the ongoing negotiations in the context of the World Trade Organization (WTO), known as the Doha Round, shows that the economic effects of liberalising international trade in services are positive with respect to the world at large (especially developing countries) and to Denmark. At global level, the analysis focuses on aggregate welfare gains and their distribution as well as on the overall effects on the global market. The analysis of the behaviour of the Danish economy includes, furthermore, the effects on selected sectors.

It is possible to sum up the economic effects into the following key issues: welfare, value added and employment. Welfare is here defined as total consumption and is, therefore, a reflection of economic welfare among consumers. Value added is measured as total payments to work and capital i.e. wages and salaries as well as return on investment. Value added thereby measures gains from the total production of goods and services. Changes in employment are measured as the net increase in the total number of people who are economically active.

The calculated economic effects are permanent changes of the economy. The analysis is based on annual data for production and trade, and the results are therefore expressions of annual and permanent changes derived from liberalising trade in services.

The analysis uses the most recent analysis methods within trade in services, and it is the first of its kind to analyse the EC's offer regarding services in the WTO negotiations. The quality of data in this area varies a great deal, and the results are therefore subject to some uncertainty.

The total results lead to the following conclusions:

Global benefits from global liberalisation of trade in services are considerable.
Consumers and enterprises throughout the world will benefit from increased productivity, lower prices, higher wages and salaries and higher employment. Global welfare gains (measured as total consumption) from liberalisation at the level of the EU's offer in the Doha Round will total approximately 0.5- 0.8 per cent or about €115-210 billion a year. The analysis shows, furthermore, that all countries will benefit from the welfare gains.

Developing countries will have the relatively largest share of the benefits from global liberalisation. The largest percentage welfare gains will go to the developing countries in Africa and Asia. In these countries, the relative gains will be two to three times as large as in the OECD. The reason is that the developing countries have higher barriers than industrialised countries. A so-called "Round for Free" for developing countries (where they do not commit themselves to more liberalisation) may, however, prove costly in the form of lower welfare. The reason is that the developing countries will lose competitive power if the industrialised countries liberalise trade in services. In order for the Doha Round to also become a development round, it is quite simply necessary that the developing countries participate in global liberalisation, also in the area of services. The results show, in other words, that developing countries have strong incentives to participate in the global liberalisation of trade in services.

All markets will grow. Production and value added will increase in all countries and sectors, and markets for both goods and services will increase considerably. Global added value in services will increase by between €160-220 billion a year. The rise in economic activity will contribute to creating new jobs.

New jobs in all countries. Total employment will increase, but productivity increases and the transfer of labour mean that employment will fall in some sectors and grow in others. The majority of new jobs will be created in the sectors where the barriers are dismantled most. The workforce will, furthermore, benefit from higher pay rates.

For Denmark, new export opportunities will open in Asia. Danish exports of services may be expected to increase by about DKK 2 billion a year as a result of global liberalisation compared to the present situation. The largest growth markets are to be found in Asia (especially China) and in Africa. Danish enterprises and consumers may, furthermore, make use of falling prices of foreign services.

All sectors of the Danish economy will benefit from global liberalisation. All sectors will grow, especially the sectors where most barriers are removed. Both enterprises and consumers will benefit from higher value added. The liberalisation of trade in services will create new jobs in the service trades without employment falling in other parts of the economy. Total employment will increase by 2000-9000 jobs. Employment will grow most in the knowledge intensive trades (for example business services and financial services), but wages and salaries will rise in the entire economy.

The developing countries are important to Denmark with respect to trade in goods and exports of transport services. If the Doha Round results in a reduction of the developing countries' tariffs on goods, it will boost trade in goods between the developing countries (the so-called south-south trade). This applies both to industrial and agricultural goods. Calculations show that the total export market for transport services will increase substantially through the liberalisation of trade in goods. It will open up huge opportunities for further export growth in the already strong transport sector. In other words, it is in Denmark's interests to promote liberalisation in both the goods and services areas.

# Chapter 1 Introduction

In order to take more advantage of global economic opportunities, it is necessary to dismantle many of the barriers which Danish and foreign enterprises encounter in Denmark and abroad. Examples of barriers that enterprises encounter are special authorisation and licence requirements, marketing rules, discriminating procurement rules, subsidies granted to local enterprises, and tax-related restrictions (National Agency for Enterprise and Construction, 2005). An important instrument for the reduction of barriers is multilateral free trade agreements.

The objective of this project is to analyse the economic effects of liberalising international trade in services. The analysis is based on the ongoing WTO negotiations in the so-called Doha Round. The analysis is therefore global, but focuses, in addition, on the effects on the Danish economy.

*Trade barriers and the Danish economy*

The Danish economy is heavily dependent on the earnings and employment opportunities generated by international trade. However, barriers mean that the full potential cannot be achieved. There are also trade barriers that impact on Danish enterprises wishing to expand internationally and wishing to use competitive foreign products.

Trade in services is important in two ways. First, services are an important resource in all parts of the Danish economy. Enterprises and consumers will, therefore, benefit from a more varied supply of services at lower prices.

Second, trade in services accounts for more than 30 per cent of total Danish exports (through cross-border supply), corresponding to almost 15 per cent of Denmark's GDP (Statistics Denmark, 2005; National Agency for Enterprise and Construction, 2005). This gives Denmark a leading position compared with other industrialised countries. The strong position depends, however, on the sharp rise in exports of transport services. Exports of transport services have tripled since 1998 (Svenskt Näringsliv, 2002) and account now for almost 60 per cent of total exports (see Table 1.1). However, exports of goods remain considerably larger than exports of services.

Table 1.1: Danish exports of goods and selected services, in 2003

| | **Provision of goods, consultancy, etc.** | **Financial and cultural services** | **Communi-cations services, etc.** | **Transport services** | **Goods** |
|---|---|---|---|---|---|
| Share of exports of services | 15 % | 5 % | 7 % | 57 % | - |
| Share of total exports | 5 % | 2 % | 2 % | 19 % | 67 % |
| Share of GDP | 2 % | 1 % | 1 % | 9 % | 30 % |

Source: Statistics Denmark (2005).

Exports of other services (for example business services and financial services) are more modest with respect to both volume and growth. In 2003, they accounted for about 27 per cent of total exports of services, corresponding to about 9 per cent of total exports (Statistics Denmark,2005). Between 1993 and 2001, the growth rate was, furthermore, disappointing compared with other countries (National Agency for Enterprise and Construction, 2005).

On the whole, the composition and nature of Danish exports of services differ from those of many other European countries (see for example Svenskt Näringsliv, 2002). It means that it is important to analyse in particular the effects on the Danish economy when discussing global liberalisation of trade in services.

*Benefits from liberalising trade in services*

There is a general tendency in both everyday debate and the ongoing WTO negotiations to focus on the dismantlement of trade barriers to goods and agricultural produce. The liberalisation of trade in services has attracted very little attention. This is rather paradoxical as numerous studies show that the benefits from more open trade in services may be just as large if not larger than the benefits from liberalising trade in goods and agricultural produce (for an overview see for example Whalley, 2004,). This analysis will focus on the benefits from liberalising trade in services by reviewing the offer submitted by the EU in the Doha Round.

The current negotiations are progressing slowly, and most offers have been relatively modest up to now (Ministry of Foreign Affairs, 2005). This is, among other things, the result of opposition among developing countries in spite of the fact that the developing countries stand to achieve large-scale benefits from liberalisation in the domestic markets (see for example Francois et al, 2003). This analysis will highlight the benefits for the developing countries by reviewing their participation in both global and differentiated liberalisation of international trade in services.

Thus, the global economic effects of international liberalisation of trade in services constitute the core of the analysis. At global level, the total benefits from liberalising services are calculated in order to be able to compare with the potential benefits from liberalising trade in goods and agricultural produce. The analysis will, furthermore, describe the distribution of benefits between industrialised countries and developing countries in order to highlight incentives for developing countries to participate in global liberalisation.

*Effects on the Danish economy*

In the light of the global effects, the analysis includes, furthermore, the specific economic effects on the Danish economy. Taking into consideration the structure of the Danish economy, overall welfare gains and other significant effects will be analysed in detail. The sectors with the greatest prospects of benefiting from the liberalisation of trade in services will receive special attention.

By highlighting both global effects and the effects on the Danish economy, the analysis may contribute to a more informed Danish debate in which the liberalisation of trade in services is placed high up on the agenda.

# Chapter 2 Scenarios

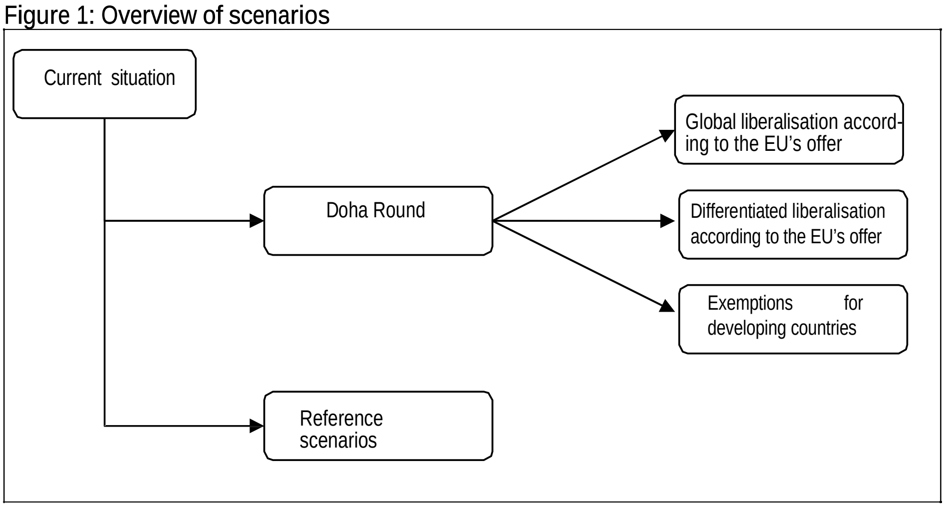
This chapter is a presentation of the scenarios included in the analysis. The context of the analysis is the current WTO negotiations in the Doha Round. The scenarios have been developed in order to enable a complete analysis of the economic effects of liberalising international trade in services. With a view to providing a fundamental idea of the economic effects of the scenarios, Box 1 (at the end of this chapter) will, furthermore, describe the general economic effects of reducing barriers to trade in services.

## 2.1. Introduction to the scenarios

The scenarios comprise an analysis of effects at global level as well as on Denmark. In order to facilitate the analysis, each scenario includes only a limited number of policy changes. Each scenario holds, therefore, only a few elements of a realistic negotiation result. It means that the total set of scenarios will enable an analysis of a great number of potential negotiation results.

The scenarios may be divided into two groups, cf. Figure 1. The Doha Round is the point of departure for the most important group of key policy scenarios. Another group of scenarios sets out different hypothetical points of reference. (For example full liberalisation of trade in both goods and services).

Figure 1: Overview of scenarios




Source: Copenhagen Economics.

The scenarios are set out in detail in the following sections. Exact formulations and technical definitions of the scenarios are presented in Annex IV.

## 2.2. Current situation

In order to establish a basis of comparison for the subsequent policy analysis, the current situation is modelled into a so-called baseline scenario. The baseline scenario takes into account the enlargement of the EU, post-Uruguay Round tariffs on goods, the abolition of textile quotas and China's accession to the WTO. All other scenarios are compared with the baseline scenario in order to quantify the economic effects of further liberalisation.

## 2.3. Doha Round

The ongoing Doha Round negotiations will probably lead to partial liberalisation of international trade in services. In addition, it is expected that developing countries will commit themselves to less liberalisation than the industrialised countries. In the WTO, there is no fixed definition of developing countries as it is up to each individual country to choose its status. Korea, Singapore and Brazil, for example, have the status of developing countries. In this analysis, developing countries are defined as all countries outside the OECD. In order to enable a specific analysis of the Doha Round, the three scenarios will be based on the initial offer submitted by the EU to the WTO (World Trade Organization, 2003).

The EU's offer (which is one of the most significant ) contains commitments regarding improved market access within professional services, computer and related services, telecommunications, postal and courier services, construction and engineering services, distribution services, environmental services, financial services, tourism, news agencies services and transport services. The scope of the proposed commitments differs, however, from one sector to another.

Table 2.1 provides an overview of the EU's offer. Attention is drawn to the fact that the offer is conditional on general progress in the Doha Round. It means that it can only be realised if it is matched by commitments made by others. The interpretation of the offer is presented in Annex III.

The analysis of the offer does not include horizontal limitations on, for example, the temporary movement of natural persons. The reason is that the analyses of barriers in (Kalirajan,2000) and (Nguyen-Hong, 2000) do not suggest any significant economic effects of the horizontal limitations contained in the EU's offer. This conclusion is, however, based on calculations with many limitations both regarding data and method.

Table 2.1: Overview of the EU's offer regarding services

| Sector | Overview of new improvements |
|---|---|
| Professional services | Improved market access to the EU, including for legal services, but limited access to practicing EU and national EU law. Non-discrimination of accountants, architects and engineers. |
| Computer and related services | Full market access to foreign service providers. |
| Business services | Improved market access regarding packaging, printing and publishing services. Some nationality conditions etc, to be removed. |
| Postal and courier services | Confirmation of foreign operators' access to deregulated postal services, but continued possibility of letter post monopoly. |
| Telecommunications | Full market access for foreign operators and the removal of horizontal limitations, but continued possibility of protecting national interests. |
| Construction and related engineering services | Some national limitations to market access and especially obstacles for foreign companies to set up business in the EU to be eliminated. |
| Distribution services | Improved market access to, for example, opening department stores and for commission agents to provide cross-border services and to liberalise franchising. |
| Environmental services | Full market access for foreign suppliers of waste water and sanitation services as well as noise and vibration abating services. Commitments regarding cross-border supply of advisory services regarding biodiversity and landscape. |
| Financial services | Improved market access for foreign enterprises, including investment funds and reinsurance. |
| Tourism and travel-related services | Improved market access when setting up travel agencies etc. |
| News agencies and entertainment services | Some discriminating limitations regarding foreign ownership to be lifted. |
| Transport services | Reintroduction of the offer for maritime transport from the Uruguay Round (open possibility of providing international maritime transport, land-based auxiliary services, access to and use of port services and the opportunity of multimodal transport (where there exists a sea link). Furthermore, movement of own empty containers between ports in the same country, and feedering of own international cargo). Groundhandling and airport services for air transport. |

Source: European Commission (2003) and World Trade Organization (2003).

*Global liberalisation according to the EU's offer*

The first negotiation scenario implies that barriers to trade in services in all WTO member countries are reduced according to the EU's offer. Basing the scenario on a specific policy proposal, it is possible to establish a direct and clear linkage between the ongoing negotiations and the model analysis. It is, however, very optimistic to assume that all WTO members will implement liberalisation according to the EU's offer. Nevertheless, the scenario presents important information on the upper limit to the potential benefits to be made from the liberalisation of trade in services in the Doha Round.

*Differentiated liberalisation according to the EU's offer*

The WTO Services Agreement (GATS) allows the individual country itself to define the scope of liberalisation it wishes to extend to third countries. In the present situation, the developing countries have liberalised to a very modest extent compared to the industrialised countries. Differentiated liberalisation is, therefore, a likely result of the Doha Round (see for example Sally, 2003; Francois et al, 2003), in spite of the fact that economic literature shows that the developing countries may emerge as the greatest beneficiaries from liberalisation.

This scenario implies that the industrialised countries liberalise trade in services according to the EU's offer, but that the developing countries negotiate more limited commitments. It may, for example, be expected that the developing countries will negotiate very limited commitments regarding the establishment of foreign enterprises (Sally, 2003).

Developing countries are here defined as all countries outside the OECD. The definition reflects the general expectation that the liberalisation of trade in services will take place primarily within the OECD. In practice, however, the EU uses a more detailed classification when presenting demands to third countries. The most comprehensive demands are presented to a group of industrialised countries and developing countries on the increase. Other countries are divided up into a group of middle-income countries and a group of the poorest and least developed countries (so-called LDC countries). This level of detail is, however, not obtainable in practice in this analysis due to the poor quality of the necessary statistics.

The scenario implies that the developing countries will implement half of the barrier reductions made in the industrialised countries. By contrast, the scenario does not consider which specific barriers they are, merely that the direct economic effect will be half as large as in the industrialised countries. The barrier reductions for the developing countries are presented in Annex VI.

*Exemption for developing countries*
The last scenario based on the Doha negotiations analyses the possibility that developing countries get a "Round for Free" and do not change their market access regulation. The scenario is based on the developing countries' demand for special treatment and the assumption that political consideration will prevent developing countries from offering more commitments ( Sally, 2003). In this connection, developing countries are once again defined as all countries outside the OECD in order to demonstrate the effects of loss of trade between the developing countries. The scenario implies that the industrialised countries will reduce their barriers according to the EU's offer.

## 2.4. Reference scenarios

*Full liberalisation of trade in services*
This scenario implies full liberalisation of international trade in services. The scenario provides an important reference point in relation to measures that imply liberalisation in excess of the baseline scenario, but which do not achieve full liberalisation. Full liberalisation means that all estimated barriers to the supply of services are dismantled throughout the world.

Full liberalisation is not a possible outcome of the ongoing negotiations and not a wished-for result for Denmark in all sectors, but the scenario enables a quantification of total, potential benefits from liberalising trade in services. The benefits from full liberalisation of trade in services may subsequently be compared with estimated benefits from, for example, the liberalisation of trade in goods and trade facilitation. Furthermore, the benefits from full liberalisation are useful in order to place the benefits from partial liberalisation into perspective.

*Full liberalisation of trade in goods and agricultural produce*
Many services are important production factors for the production and supply of goods and agricultural produce. International trade in goods is, for example, dependent on transport services, including in particular maritime transport. The size and distribution of the benefits from liberalising trade in services may therefore change considerably if trade in goods increases. Given the relatively high share of maritime transport services of Danish exports, Denmark may be particularly affected by the liberalisation of trade in both goods and services.

In order to analyse the spill-over effects of increased trade in goods on the trade in services, this scenario is based on the assumption that trade in goods has been fully liberalised. Full liberalisation implies that all tariffs on goods and agricultural produce have been eliminated.

*Best-case scenario*

This scenario focuses on the Danish economy and on how much barriers may be reduced. National preferences may motivate some regulation, but non-legal barriers (for example linguistic and cultural factors) can never be eliminated completely. However, comprehensive liberalisation of services is on the agenda in the EU as well as in the entire OECD.

90 per cent of Danish exports of services go to the OECD countries, and comprehensive liberalisation within the OECD will, therefore, have major consequences for Denmark. The best- case scenario analyses the effects of comprehensive liberalisation corresponding to setting up a ”Single Market” comprising the entire OECD. Thus, the scenario has no connection with the WTO or the Doha Round.

The scenario implies that barriers to trade in services within the OECD are reduced by 90 per cent. This is in accordance with the view that most barriers can be removed, but some regulation will remain.

*Worst-case scenario*

Danish exports are heavily dominated by maritime transport services. Unless the Doha Round results in further liberalisation of the market for maritime transport services, it will be of great importance for Denmark merely to bind the present liberalisation level. The speculative worst-case scenario is, therefore, based on the assumption that the developing countries introduce high barriers against imports of transport services. The scenario is not based on any specific barriers, but will be implemented through the introduction of 50 per cent import tariffs on all foreign transport services by the developing countries.

Box 1: The economic effects of reducing barriers to trade in services

International trade in services is normally not regulated by tariffs. Instead, it is domestic regulation that establishes barriers to the international movement of services and the enterprises that produce the services. Enterprises that, for example, wish to set up in business abroad may be denied access to the market or encounter discriminating demands. Cross-border supply may, for example, be impeded by cumbersome administrative formalities. Barriers to trade in services may, therefore, both increase the costs and enable already established enterprises to capitalise on limited competition.

When barriers to trade in services are reduced, both prices and costs will be affected. For example, increased competition from foreign enterprises will mean that established enterprises may have to reduce their prices. This results in a smaller price wedge between the producers' prices and costs, leading to allocation gains and lower prices. It will benefit consumers, but implies lower profits for established enterprises.

Furthermore, lower costs mean increased productivity, as the production requires fewer resources. Productivity increases will enable higher value added and lower prices, which will generate profits. These profits will be distributed as higher wages and salaries, higher return on capital and lower consumer prices.

Some jobs will disappear due to higher work productivity, but increased demand and higher expenses will, by contrast, stimulate employment as lower prices and higher consumption will stimulate demand in the entire economy. Increased demand implies that production grows, which will compensate for the jobs that are lost due to increased work productivity .

On the whole, total employment and welfare effects will vary in different sectors and countries depending on economic structures, trade patterns and on how much the barriers are reduced.

*Quantification of barriers to trade in services*

In the scenarios and the model analysis, the barriers are represented by the estimated price and cost effects of legal barriers to trade in services. The price and cost effects are formulated as hypothetical tax equivalents that are calculated in such a way that they generate economic effects that are equivalent to the economic effects of the real barriers. Barriers to trade in services (for example restrictions on foreign investment) will in this way be transformed into quantitative dimensions (for example a comparable production tax).

There is a great deal of literature on the measurement of qualitative barriers, but research into price and cost effects is very modest. Estimates regarding barriers to trade in services are based on the groundbreaking work carried out by the Australian Productivity Commission (APC). They have drawn up estimates for price and cost effects regarding, for example, banking services (Kalirajan et al., 2000), engineering services (Nguyen-Hong, 2000), distribution services (Kalirajan, 2000), telecommunications, electricity supply and air transport (Doove et al., 2001).

These studies represent the most detailed work with respect to services and constitute the most complete collection of estimates. However, the measurement of barriers to trade in services is subject to many limitations regarding both data and method (for an overview, see for example Whalley, 2004). The results must therefore be interpreted cautiously. This applies in particular to the countries and sectors for which no original data exist. Attention is, furthermore, drawn to the fact that the estimates describe average effects for relatively aggregate sectors, and that the behaviour of individual business sectors may be different.

Source: Copenhagen Economics.

# Chapter 3 Results

The analysis of the economic effects of liberalising international trade in services casts light on a variety of economic conditions. At global level, the analysis focuses therefore on total welfare gains and their distribution as well as on the overall effects on the global market. The analysis of the Danish economy includes, furthermore, the effects on selected sectors.

The scenarios have been analysed in Copenhagen Economics Trade Model (Copenhagen Economics, 2005). Copenhagen Economics Trade Model (CETM) is a so-called general equilibrium model providing a complete idea of the global economy. It means that the calculations include both the direct effects of reducing barriers in the individual sectors as well as the spill-over effects on other sectors and the rest of the national and global economies. The model makes use of state-of-the-art analysis methods regarding trade in services. This version is based on the most recent version of the CTAP database, GTAP6 with data from 2001 ( Dimaranan and McDougall, 2005).

## 3.1. The effects of the Doha Round at global level

On the whole, the analysis shows that the liberalisation of international trade in services according to the EU's offer may imply significant economic benefits for all countries. Aggregate results at global level are presented in Table 3.1 below. As the trade barrier statistics are subject to some uncertainty, lower and upper limits are calculated for the aggregate effects. The lower limit corresponds to a conservative interpretation of existing statistics, whereas the upper limit corresponds to an aggressive interpretation. The following sections present the results that correspond to the conservative interpretation. Selected results corresponding to the aggressive interpretation are presented in Annex I.

In absolute figures, it is a matter of an increase in welfare (measured as total consumption) corresponding to €115-210 billion a year at global level. As the interpretation of the EU's offer is optimistic, especially with respect to the developing countries' participation regarding services, it is likely that a realistic negotiation result will lead to benefits in the lower part of the interval.

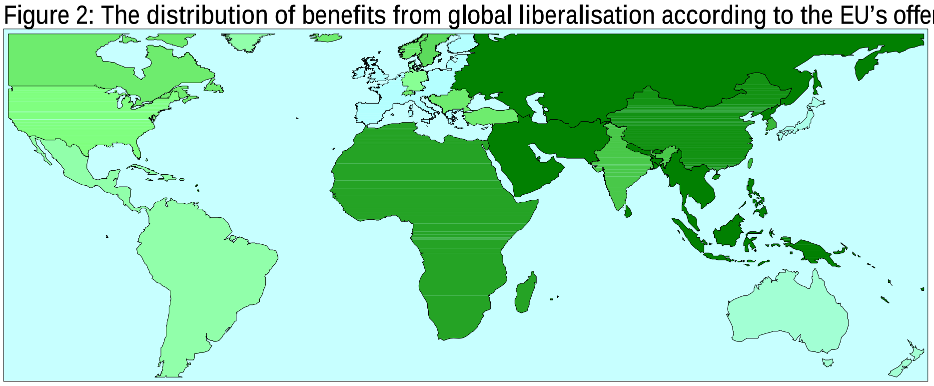
Table 3.1: The economic effects of liberalisation according to the EU's offer

| Global effects | Exemption for developing countries | Differentiated liberalisation | Global liberalisation |
|---|---|---|---|
| Welfare (%) | 0.5 % | 0.6 % | 0.8 % |
| Welfare (€) | 115 billion | 160 billion | 210 billion |
| Wages and salaries | 0.6 % | 0.7 % | 0.8 % |
| Employment | 0.1 % | 0.1 % | 0.1 % |
| **Effects regarding services** | | | |
| Employment | 0.1 % | 0.1 % | 0.1 % |
| Value added | 0.8 % | 0.9 % | 1.1 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects. Welfare is measured as total consumption. The absolute figures reflect annual benefits.
Source: CETM model - Copenhagen Economics.

The distribution of benefits from global liberalisation according to the EU's offer is uneven, with the relatively largest benefits going to the developing countries. This appears from Figure 2, where larger benefits are marked in a darker green colouring. The reason for this result is that the developing countries have the highest barriers and will, therefore, achieve large benefits if they liberalise according to the EU's offer. In absolute figures, the developing countries will achieve almost half the total benefits (about €90 billion a year).

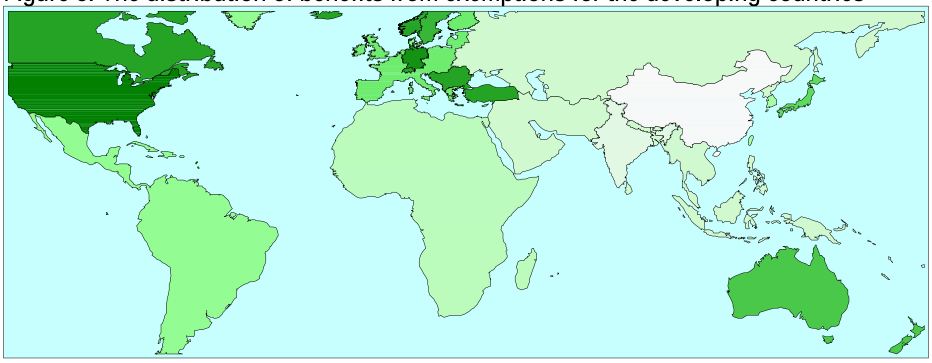
Figure 2: The distribution of benefits from global liberalisation according to the EU's offer



Note: the figure shows the global distribution of welfare gains from global liberalisation according to the EU's offer. Higher gains are marked in a darker green colouring. Welfare is measured as total consumption.
Source: CETM model - Copenhagen Economics.

The benefits require, however, that the developing countries participate in global liberalisation, as their benefits will fall dramatically in case of differentiated liberalisation. Figure 3 shows how the distribution of global benefits will shift in favour of the industrialised countries if the developing countries are exempted from further liberalisation. The so-called "Round for Free" for the developing countries may even prove to imply costs in the form of lower welfare (see Table 3.2 ). The reason is that liberalisation within the OECD increases productivity in the OECD countries' services sectors, which will place the developing countries in a worse competitive situation. This applies in particular to the developing countries' ability to attract foreign investment. The results show, therefore, that the developing countries should have strong economic incentives to participate in global liberalisation of trade in services. In order for the Doha Round to become a development round also in the services area, it is quite simply necessary that the developing countries participate in global liberalisation.

Figure 3: The distribution of benefits from exemptions for the developing countries



Note: the figure shows the global distribution of welfare gains from global liberalisation according to the EU's offer, but with exemptions for the developing countries. Higher gains are marked in a darker green colouring. Welfare is measured as total consumption.
Source: CETM model - Copenhagen Economics.

In addition, Table 3.2 shows that the benefits for industrialised countries depend to a less extent on whether the developing countries participate in global liberalisation. The reason is that the vast bulk of industrialised countries' trade in services goes to other industrialised countries. The benefits among industrialised countries are relatively evenly distributed, but in general the USA achieves somewhat higher benefits than for example the EU. This is, among other explanations, a consequence of the fact that the USA is better at exploiting economies of scale in a liberalised market (see for example Francois et al., 2003).

Table 3.2: Welfare gains from the liberalisation of trade in services

| **Region** | **Exemption for developing countries** | **Differentiated liberalisation** | **Global liberalisation** |
|---|---|---|---|
| World | 0.5 % | 0.6 % | 0.8 % |
| EU | 0.4 % | 0.5 % | 0.4 % |
| USA | 0.8 % | 0.7 % | 0.6 % |
| Japan | 0.4 % | 0.4 % | 0.4 % |
| China | -0.1 % | 1.2 % | 2.9 % |
| India | -0.1 % | 0.7 % | 1.8 % |
| Rest of Asia | -0.1 % | 1.5 % | 3.6 % |
| Africa | -0.1 % | 1.0 % | 2.4 % |
| Latin America | 0.0 % | 0.2 % | 0.5 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of the scenarios. Welfare is measured as total consumption.
Source: CETM model - Copenhagen Economics.

The calculated economic effects are permanent changes in the economy. The analysis is based on annual data for production and trade, and the results therefore reflect the annual and permanent changes of liberalising trade in services.

*Detailed review of the results at global level*

The following results show only the effects of global liberalisation according to the EU's offer on the basis of full commitments for the developing countries. Table 3.3 shows that the value added (which may be compared to the gains of enterprises) and market size (measured as the total value of domestic and foreign enterprises' production) will increase in all sectors at global level. In absolute figures, it is a matter of an increase in global value added in the services sectors of approximately €220 billion, of which about €44 billion in the EC and a total of €64 billion in the developing countries.

Table 3.3: The global market effects of global liberalisation according to the EU's offer

| | Business services | Financial services | Communi-cations services | Distribution services | Transport services |
|---|---|---|---|---|---|
| Value added | 3.0 % | 1.5 % | 3.8 % | 1.0 % | 1.3 % |
| Market size | 1.2 % | 1.7 % | 1.7 % | 1.1 % | 1.3 % |
| Employment | 1.3 % | 0.2 % | 2.9 % | -0.1 % | 0.3 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of global liberalisation according to the EU's offer. Market size is measured as the total value of domestic and foreign enterprises' production.
Source: CETM model - Copenhagen Economics.

Table 3.3 shows that the value added may increase in particular with respect to business services and communications services. These are, furthermore, the two sectors in which the largest progress in global employment may be achieved. Growth in global markets is, by contrast, more evenly distributed among the sectors. The total effects on value added and employment in the entire global services sector are presented in Annex I.

Total employment will increase in all regions, but demand for labour will fall in some sectors. In general, most new jobs will be created in the sectors where the barriers are most reduced.

Growth markets stimulate international trade both through the establishment of foreign enterprises and through cross-border supply, which appears from Table 3.4. Growth in international trade is generally strongest in the sectors where the barriers are most reduced. This applies, for example, to business services and financial services in large developing countries like China and India. In these countries, calculations show that the establishment of foreign enterprises will increase by between 15-40 per cent. Similarly, higher demand leads to an increase in international trade in goods, which will also lead to an increase in global exports of transport services.

Table 3.4: The international trade effects of global liberalisation according to the EU's offer

| | Business services | Financial services | Communi-cations services | Distribution services | Transport services |
|---|---|---|---|---|---|
| Cross-border supply | 2 % | 4 % | 1 % | 2 % | 1 % |
| Establish-ment of foreign enterprises | 16 % | 39 % | 0 % | 3 % | 1 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of global liberalisation according to the EU's offer. The establishment of foreign enterprises is measured as the value of foreign enterprises' production.
Source: CETM model - Copenhagen Economics.

Table 3.5 shows changes in total prices at global level. Prices will, in general, fall most in the sectors where the barriers are most reduced. Calculations show that especially the prices of financial services will fall considerably as a result of liberalisation in the developing countries. In most sectors, the price-reducing effects (lower barriers) will offset the price-increasing effects (for example higher wages and salaries). By contrast, prices may rise in other parts of the economy due to higher labour and capital costs.

Table 3.5: The price effects at global level of global liberalisation according to the EU's offer

| | Business services | Financial services | Communi-cations services | Distribution services | Transport services |
|---|---|---|---|---|---|
| Total price | -0.4 % | -3.1 % | -2.8 % | 0.1 % | 0.2 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of global liberalisation according to the EU's offer.

## 3.2. Effects on the Danish economy

On the whole, the global analysis shows that the liberalisation of international trade in services may result in considerable economic benefits for all countries. The potential benefits are considerable also for Denmark, as illustrated in Table 3.6 below. In absolute figures, it is for Denmark a matter of welfare gains totalling DKK 4-11 billion a year and approximately 2000-9000 new jobs. The results are a reflection of the lower and upper estimates of the effects of global liberalisation according to the EU's offer. As the interpretation of the EU's offer is optimistic, a result in the lower part of the interval is most likely.

Table 3.6: The economic effects of global liberalisation of trade in services

| Region | Welfare | Employment | Wages and salaries |
|---|---|---|---|
| Denmark | 0.5 – 1.4 % | 0.1 – 0.4 % | 0.5 – 1.6 % |
| EU | 0.4 – 1.6 % | 0.0 – 0.6 % | 0.5 – 2.6 % |
| World | 0.8 – 2.0 % | 0.1 – 0.7 % | 0.8 – 3.0 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower and upper estimates of the effects of global liberalisation according to the EU's offer. Welfare is measured as total consumption.
Source: CETM model - Copenhagen Economics.

The benefits for Denmark are, relatively seen, lower than for the world at large, but at the same level as for the EU. The reason is that the Danish economy is very open already, and the existing barriers therefore relatively low. In comparison, Table 3.2 showed that the developing countries would achieve the relatively highest benefits because they have the highest barriers from the outset. However, attention is drawn to the fact that the analysis does not completely capture the positive effects that are the result of increased Danish investment abroad. The reason is that existing statistics do not enable an assessment of final ownership in connection with foreign establishments.

Table 3.7 presents the market effects of global liberalisation according to the EU's offer on the Danish services sectors. It is a matter of an increase in the value added in Denmark of about DKK 4 billion a year. The largest benefits go to the sectors for communications services, business services and financial services. The effects on the communications sector must, however, be interpreted extremely cautiously, as many of the benefits have already been realised through liberalisation under the auspices of the EU in recent years (see for example Henten, 2004). Furthermore, the transport sector experiences a relatively large increase in spite of the fact that the scenario does not imply any reduction of barriers to transport services[1]. The increase is the result of spill-over effects, as the increase in global demand stimulates international trade in goods and thus the consumption of transport services.

[1] No sufficient data exist for analysing barrier reductions for transport services. The analysis includes, however, a scenario that analyses the benefits to be achieved by binding the present liberalisation level for maritime transport.

Table 3.7: The market effects in Denmark of global liberalisation according to the EU's offer

| | Business services | Financial services | Communi-cations services | Distribution services | Transport services |
|---|---|---|---|---|---|
| Value added | 1.2 % | 1.6 % | 4.8 % | 0.6 % | 0.7 % |
| Market size | 1.0 % | 0.7 % | 1.6 % | 0.6 % | 0.7 % |
| Employment | 0.7 % | 0.8 % | 4.4 % | 0.0 % | 0.2 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of global liberalisation according to the EU's offer. The marked size is measured as the total value of domestic and foreign enterprises' production.
Source: CETM model - Copenhagen Economics.

The most interesting effects are the prospects of new jobs in the services trades. The liberalisation of trade in services will create new jobs in the services sector without any decrease in employment in other parts of the economy. The fact is that altogether new jobs will be created in services. Employment will increase most in knowledge intensive trades, so it is matter of new high-quality jobs. Real wages and salaries will, furthermore, increase in the entire economy. With respect to Denmark, the liberalisation of trade in services will, in other words, lead to further specialisation within attractive and high-income trades.

*Effects on Danish exports of services*
The EU's offer will imply that the barriers are reduced abroad. This will benefit Denmark through increased opportunities for exports of services. Danish exports of services will increase for all types of services, but the effect on total production is modest. The reason is that the production of services is nationally oriented with the exception of the Danish maritime transport sector.

Total increase in exports through cross-border supply (given global liberalisation according to the EU's offer) runs into approximately DKK 2 billion a year. The growth in exports of transport services accounts for almost half of this amount. Thus, growth in Danish exports of services is positive, but modest. In relative figures, growth may be expected to prove strongest for business services and communications services (see Table 3.8). Once again, attention is drawn to the fact that the increase in exports of transport services is almost as large as the increase in financial services. This is so, in spite of the fact that the scenario does not include reduced barriers for the transport sector and, consequently, underestimates the effects on the transport sector. It demonstrates very clearly the strength of the Danish transport sector.

Exports of transport services may, moreover, be expected to increase further, as the Doha Round will also lead to tariff reductions and thereby increased trade in goods. The impact of increased trade in goods on the trade in services is analysed in Chapter 3.3. The main conclusion of the analysis is that Danish exports of maritime transport services may increase considerably if the developing countries reduce their tariffs on trade, and if the so-called south-south trade between developing countries increases.

In absolute figures, the increase in exports of transport services is, nevertheless, larger than for business services. The figures for exports of communications services must once again be interpreted very cautiously, as the effects have already been realised to a great extent.

Table 3.8: The effects on Danish exports of global liberalisation according to the EU's offer

| | Business services | Financial services | Communi-cations services | Distribution services | Transport services |
|---|---|---|---|---|---|
| Cross-border supply | 1.3 % | 0.9 % | 3.3 % | -0.3 % | 0.7 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of global liberalisation according to the EU's offer.
Source: CETM model - Copenhagen Economics.

Four export markets show particularly high growth for both business services and transport services. Table 3.9 shows that it is a matter of the large growth markets in Asia and Africa. Attention is, however, drawn to the fact that the growth in business services starts from a very low level, especially with respect to Africa.

Table 3.9: The largest value-added markets for Danish exports of services

| Top 4 value- added markets (%) | | | |
|---|---|---|---|
| **Business services** | | **Transport services** | |
| Rest of Asia-Pacific | 5.4 % | Rest of Asia-Pacific | 3.3 % |
| Africa | 4.1 % | China | 2.9 % |
| China | 3.7 % | Africa | 2.3 % |
| High-income Asia | 3.6 % | High-income Asia | 1.7 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of global liberalisation according to the EU's offer.
Source: CETM model - Copenhagen Economics.

*Benefits from improved access to foreign services*
Foreign services are provided through direct, cross-border supply and through the establishment of foreign enterprises. The best method to measure access to foreign services is to analyse prices. Table 3.10 shows the effects of liberalisation on the prices of foreign services in Denmark. The prices of foreign services are declining in all sectors apart from business services.

Table 3.10: Effects on the prices of foreign services in Denmark

| | Business services | Financial services | Communi-cations services | Distribution services | Transport services |
|---|---|---|---|---|---|
| Cross-border imports | 0.0 % | -0.7 % | -3.8 % | -0.4 % | -0.3 % |
| Foreign enterprises in Denmark | 0.4 % | -3.2 % | -3.3 % | -0.1 % | 0.1 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of global liberalisation according to the EU's offer.
Source: CETM model - Copenhagen Economics.

The price effect on foreign suppliers of business services in Denmark is paradoxically enough the result of the Danish economy being very open. As foreign enterprises already now encounter relatively low barriers in Denmark, the EU's offer will only lead to a limited increase in the establishment of foreign enterprises. In some sectors, for example business services, there is even the possibility that the establishment of foreign enterprises will decline because it becomes relatively more attractive to invest in countries where there are more barriers that are being reduced.

### 3.3. Potential benefits from further liberalisation

As the Doha Round is merely a step down towards free trade in services, greater benefits may be achieved from full liberalisation. Full liberalisation in the area of services implies, however, radical changes in many countries' national regulation. In this way, full liberalisation of trade in services differs from the traditional definition of full liberalisation of trade in goods (which normally only includes border regulation). Full liberalisation of trade in services may almost be compared with comprehensive trade facilitation in the area of goods. This section analyses the potential effects of the special best-case scenario, as well as full liberalisation of trade in services and trade in goods. As it is a matter of hypothetical scenarios, the results must be interpreted very cautiously.

Table 3.11 presents two general messages. First, global liberalisation according to the EU's offer may be expected to realise a maximum of 20-40 per cent of the benefits from full liberalisation, depending on whether the developing countries comply with the EU's offer (see Table 3.1 for comparison). It will, however, not prove easy to achieve the full benefits, as it requires the dismantling of many domestic barriers, especially in the developing countries.

Second, the effects of full liberalisation of trade in services are much larger than the effects of full liberalisation of trade in goods. The reason is that trade in goods already has become considerably liberalised compared with trade in services. Average tariffs on goods are about 3-4 per cent in industrialised countries and somewhat higher in the developing countries. By comparison, barriers to trade in services are often up to 30-40 per cent. The effects of full liberalisation of trade in services will, therefore, be very large, up to ten times as large as for the liberalisation of trade in goods.

Attention is, however, drawn to the fact that the effects on trade in goods are based on a conservative estimate, as the analysis does not include economies of scale in the production of goods and trade facilitation regarding trade in goods. The effects of liberalising trade in goods in this analysis are, however, of the same size as in other studies, see for example Francois et al. (2003).

Table 3.11: The global economic effects of radical liberalisation

| **Total effects** | **Best-case scenario** | **Full liberalisation of trade in services** | **Full liberalisation of trade in goods and services** |
|---|---|---|---|
| Welfare (%) | 1.3 % | 2.4 % | 2.5 % |
| Welfare (€) | 330 billion | 590 billion | 630 billion |
| Wages and salaries | 1.9 % | 3.2 % | 4.0 % |
| Employment | 0.4 % | 0.6 % | 0.9 % |
| **Effects regarding services** | | | |
| Employment | 0.5 % | 0.7 % | 0.7 % |
| Value added | 2.8 % | 4.5 % | 5.2 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects. Welfare is measured as total consumption. The absolute figures reflect annual benefits.
Source: CETM model - Copenhagen Economics.

As expected, the benefits from the best-case scenario go primarily to the industrialised countries, see Table 3.12. However, comprehensive liberalisation generates such a huge increase in total demand that the developing countries will benefit, too.

Table 3.12: Welfare gains from the liberalisation of trade in services

| Region | Best-case scenario | Full liberalisation of trade in services | Full liberalisation of trade in goods and services |
|---|---|---|---|
| World | 1.3 % | 2.4 % | 2.5 % |
| EU | 1.2 % | 1.5 % | 1.6 % |
| USA | 1.3 % | 1.3 % | 1.2 % |
| Japan | 2.1 % | 2.6 % | 3.0 % |
| China | 0.4 % | 7.5 % | 9.4 % |
| India | 0.2 % | 4.0 % | 4.1 % |
| Rest of Asia | 0.7 % | 8.0 % | 8.2 % |
| Africa | 0.4 % | 5.1 % | 4.8 % |
| Latin America | 0.4 % | 3.2 % | 3.7 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects. Welfare is measured as total consumption.
Source: CETM model - Copenhagen Economics.

*Potential benefits for Denmark*
With respect to Denmark, the analysis of the more speculative scenarios focuses on the size of the potential benefits of the best-case scenario and on the effects of liberalising trade in goods on exports of transport services.

The best-case scenario shows that the benefits from comprehensive liberalisation regarding services are considerable. The welfare gain is 1 per cent (corresponding to about DKK 7 billion a year)[2]. The market effects in Denmark are, furthermore, very large, see Table 3.13.

Table 3.13: Market effects in Denmark (best-case scenario)

| | Business services | Financial services | Distribution services | Transport services |
|---|---|---|---|---|
| Value added | 3.2 % | 3.3 % | 3.1 % | 17 % |
| Market size | 3.2 % | 2.5 % | 3.5 % | 8.1 % |
| Employment | 0.6 % | 0.6 % | -0.1 % | 15 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects. The market size is measured as the total value of domestic and foreign enterprises' production.
Source: CETM model - Copenhagen Economics.

As the scenario is speculative, the figures must be interpreted very cautiously. It is, however, obvious that Denmark will benefit considerably from more liberalised trade in transport services. If the OECD market becomes more liberalised, Denmark will have the opportunity of benefiting from economies of scale in the maritime transport sector. The Danish transport sector will, therefore, grow considerably more than the average. The transport sector increase is primarily due to a substantial rise in international trade in goods, and calculations show an increase in exports of transport services of more than 8 per cent.

For Denmark, the objective of the analysis of full liberalisation of trade in goods and services is to identify the spill-over effects of increased trade in goods on exports of transport services. As full liberalisation of trade in goods will imply comprehensive changes of the trading pattern, especially among developing countries, it is most expedient to analyse the overall effects on the global consumption of transport services. Therefore, Table 3.14 shows the results for the global export supply of transport services in connection with full liberalisation of trade in services and full liberalisation of trade in both goods and services.

2 The results are adjusted for the liberalisation of the communications sector in recent years (see Henten, 2004).

Table 3.14: Effects on global exports of transport services (full liberalisation)

| | Full liberalisation of trade in services | Full liberalisation of trade in goods and services |
|---|---|---|
| Global export supply of transport services | 0.9 % | 5.8 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects of the scenarios for full liberalisation.
Source: CETM model - Copenhagen Economics.

Table 3.14 shows that the total supply (and thus consumption) of international transport services will increase considerably as a result of full liberalisation of trade in goods. As the market will grow substantially, Denmark will have good opportunities of sharing in the increase. Growth is primarily the result of a huge increase in international trade between the developing countries (so-called south-south trade). This means, in relation to the Doha Round that Danish exports of maritime transport services may increase considerably if the developing countries reduce their tariffs on goods.

*Potential losses for Denmark*
The Doha Round may not lead to further liberalisation of trade in transport services. However, a valuable result could also be that regulation is bound at the present, relatively low level. The speculative worst-case scenario shows large potential losses for Denmark if the developing countries reintroduce barriers to trade in transport services (see Table 3.15). In absolute figures, the drop in cross-border supply corresponds to about DKK 3 billion a year.

Table 3.15: Market effects in Denmark (worst-case scenario)

| | Transport services |
|---|---|
| Cross-border supply | -3 % |
| Value added | -2 % |
| Market size | -2 % |
| Employment | -2 % |

Note: all results are reported as percentage changes from the current situation. The results reflect the lower estimate of the effects. The market size is measured as the total value of domestic and foreign enterprises' production.
Source: CETM model - Copenhagen Economics.

# Chapter 4 Conclusions

Denmark is deeply interested in actively promoting the liberalisation of trade in services. The analysis shows that, on the whole, the Danish economy will benefit from liberalisation according to the EU's offer in the Doha Round. All sectors will grow, especially the sectors from which most barriers are removed. Enterprises will benefit from larger markets and greater value added. Total value added to the Danish services sector will increase by DKK 4-14 billion a year through global liberalisation. Furthermore, liberalisation will create more jobs and raise wages and salaries in all sectors in Denmark. Employment will increase most in the knowledge intensive trades, which means that it will be a matter of new high-quality jobs. On the whole, a total of 2000-9000 new jobs may be created in Denmark.

When the world trade becomes more open, Danish enterprises will have greater opportunities of expanding internationally. The analysis shows that Danish exports of business services and transport services have great prospects of benefiting from further liberalisation of trade in services. Through global liberalisation, growth in cross-border supply will be relatively most pronounced for markets in developing countries in Asia and Africa.

For Denmark, the developing countries are, furthermore, very important in relation to trade in goods. If the Doha Round results in reductions in the developing countries' tariffs on trade, it will boost trade in goods between the developing countries (the so-called south-south trade). Calculations show that the total export market for transport services will grow considerably from the liberalisation of trade in services. This will generate large opportunities for further export growth in the already strong maritime transport sector. In other words, it is in Denmark's interests to support liberalisation in both the goods and services areas.

Global liberalisation of international trade in services will, however, benefit all countries. Total economic benefits from global liberalisation according to the EU's offer may run into € 115-210 billion a year. The size of the global effects will depend, to a large extent, on whether the developing countries participate in global liberalisation. Calculations show, as a matter of fact, that almost half the total benefits may go to the developing countries if they participate in global liberalisation. The developing countries may achieve relative welfare gains from global liberalisation that are 2-3 times larger than for the OECD countries. The reason for the large gains going to the developing countries is that their economies are much restricted by current regulation. Global liberalisation may, therefore, contribute to making the Doha Round a development round.

Calculations show also that actual participation in global liberalisation is a precondition if the developing countries are to achieve benefits. A so-called "Round for Free" for the developing countries may very well have negative consequences. The reason is that further liberalisation in the OECD countries will make it less attractive for foreign enterprises to invest in the developing countries. In other words, the developing countries have considerable incentives to actively participate in further liberalisation of trade in services.

The conclusions are based on the most recent analysis methods and the most detailed work regarding barriers to global trade in services. The analysis tools are state-of-the-art, but as research in the area is rather modest, there is much room for further improvements of the modelling of, for example, supply modes. International trade in services is, moreover, an area where data in many cases are non-existent or the quality is poor.

Results for individual countries and sectors must, therefore, be interpreted cautiously. This applies in particular to countries and sectors where no original data exist. Consequently, the conclusions identify the overall effects that, according to the sensitivity analysis, are robust with regard to the uncertainty of the analysis.

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# Annex I: Detailed results

Conservative estimates

Exemption from liberalisation of the developing countries i.e. no commitments for the developing countries

## Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **0,5** | **116** | **0,6** | **0,5** | **0,1** | **0,1** | **0,8** | **159** |
| **EU25** | **0,4** | **27** | **0,5** | **0,6** | **0,1** | **0,1** | **0,9** | **43** |
| Denmark | 0,3 | 0 | 0,4 | 0,6 | 0,1 | 0,1 | 0,6 | 0 |
| Sweden | 0,5 | 1 | 0,6 | 0,8 | 0,2 | 0,2 | 0,8 | 1 |
| Germany | 0,6 | 7 | 0,7 | 0,7 | 0,1 | 0,1 | 1,1 | 13 |
| Other EU | 0,4 | 18 | 0,5 | 0,5 | 0,1 | 0,2 | 0,8 | 29 |
| USA | 0,8 | 71 | 0,9 | 0,8 | 0,2 | 0,2 | 1,2 | 86 |
| Other OECD | 0,5 | 8 | 0,5 | 0,5 | 0,1 | 0,1 | 0,7 | 9 |
| Japan | 0,4 | 11 | 0,5 | 0,4 | 0,1 | 0,1 | 0,6 | 16 |
| China | -0,1 | -1 | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 0 |
| Australia and New | 0,4 | 1 | 0,6 | 0,5 | 0,1 | 0,1 | 0,8 | 2 |
| India | -0,1 | 0 | -0,1 | 0,0 | 0,0 | 0,0 | 0,1 | 0 |
| Latin America | 0,0 | 0 | -0,1 | 0,0 | 0,0 | 0,0 | 0,2 | 1 |
| Africa | -0,1 | 0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 0 |
| High income Asia | 0,0 | 0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,2 | 0 |
| Other Asia-Pacific | -0,1 | -1 | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 1 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Market seize (percentage change )

| | Business services | Financial services | Communication services | Distribution trade | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **0,9** | **1,0** | **1,1** | **0,6** | **0,5** | **0,5** | **0,5** | **0,5** |
| **EU25** | **0,7** | **1,0** | **1,0** | **0,6** | **0,6** | **0,6** | **0,4** | **0,5** |
| Denmark | 0,7 | 0,7 | 2,0 | 0,6 | 0,7 | 0,5 | 0,3 | 0,5 |
| Sweden | 0,8 | 1,2 | 1,4 | 0,8 | 0,8 | 0,8 | 0,5 | 0,9 |
| Germany | 0,8 | 1,2 | 1,3 | 0,8 | 0,8 | 0,8 | 0,6 | 0,7 |
| Other EU | 0,7 | 0,9 | 0,9 | 0,6 | 0,5 | 0,4 | 0,3 | 0,5 |
| USA | 1,3 | 1,3 | 1,8 | 1,0 | 1,0 | 0,8 | 0,8 | 0,9 |
| Other OECD | 1,0 | 0,8 | 1,3 | 0,6 | 0,6 | 0,4 | 0,4 | 0,6 |
| Japan | 0,7 | 0,8 | 0,9 | 0,5 | 0,6 | 0,2 | 0,3 | 0,5 |
| China | 0,1 | -0,1 | -0,2 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Australia and New Zealand | 0,8 | 1,1 | 0,7 | 0,7 | 0,7 | 0,4 | 0,4 | 0,6 |
| India | 0,0 | -0,1 | -0,1 | -0,1 | -0,1 | 0,0 | 0,0 | -0,1 |
| Latin America | 0,0 | -0,1 | -0,5 | -0,1 | -0,1 | 0,0 | 0,0 | -0,1 |
| Africa | 0,0 | -0,1 | -0,5 | 0,0 | -0,1 | 0,0 | 0,0 | 0,0 |
| High income Asia | 0,1 | -0,1 | -0,4 | 0,0 | -0,1 | 0,0 | 0,0 | -0,1 |
| Other Asia-Pacific | 0,0 | -0,1 | -0,4 | 0,0 | -0,1 | 0,0 | 0,0 | -0,1 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Value added (percentage change )

| | Business services | Financial services | Communication services | Distribution trade | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **2,5** | **1,8** | **2,8** | **0,7** | **0,5** | **0,5** | **0,5** | **0,5** |
| **EU25** | **2,4** | **1,9** | **3,3** | **0,7** | **0,6** | **0,6** | **0,4** | **0,5** |
| Denmark | 0,9 | 1,6 | 5,2 | 0,6 | 0,7 | 0,5 | 0,3 | 0,5 |
| Sweden | 2,3 | 2,2 | 3,5 | 0,8 | 0,8 | 0,8 | 0,5 | 0,8 |
| Germany | 3,8 | 2,2 | 4,4 | 0,8 | 0,9 | 0,8 | 0,6 | 0,7 |
| Other EU | 1,9 | 1,9 | 3,1 | 0,6 | 0,6 | 0,5 | 0,4 | 0,4 |
| USA | 3,2 | 2,2 | 4,9 | 1,0 | 1,0 | 0,8 | 0,8 | 0,9 |
| Other OECD | 3,3 | 0,9 | 3,4 | 0,6 | 0,6 | 0,4 | 0,3 | 0,6 |
| Japan | 2,2 | 1,9 | 2,4 | 0,5 | 0,6 | 0,2 | 0,3 | 0,5 |
| China | 0,1 | 0,1 | -0,2 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Australia and New | 1,4 | 2,9 | 1,8 | 0,6 | 0,7 | 0,4 | 0,4 | 0,6 |
| India | 0,0 | 0,2 | -0,1 | -0,1 | -0,1 | 0,0 | 0,0 | -0,1 |
| Latin America | -0,1 | -0,1 | -0,5 | -0,1 | -0,1 | 0,0 | 0,0 | -0,1 |
| Africa | 0,0 | 0,1 | -0,5 | -0,1 | -0,1 | 0,0 | 0,0 | 0,0 |
| High income Asia | 0,0 | 0,1 | -0,4 | -0,1 | -0,1 | 0,0 | 0,0 | -0,1 |
| Other Asia-Pacific | 0,0 | 0,0 | -0,4 | -0,1 | -0,1 | 0,0 | 0,0 | 0,0 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Employment (percentage change )

| | Business services | Financial services | Communication services | Distribution trade | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **1,1** | **0,8** | **2,4** | **-0,1** | **0,1** | **-0,1** | **-0,1** | **0,0** |
| **EU25** | **0,9** | **0,9** | **2,8** | **-0,1** | **0,1** | **0,1** | **-0,1** | **-0,1** |
| Denmark | 0,4 | 0,8 | 4,9 | 0,0 | 0,3 | 0,1 | -0,1 | 0,1 |
| Sweden | 1,2 | 1,1 | 2,9 | 0,0 | 0,2 | 0,2 | -0,1 | 0,2 |
| Germany | 1,6 | 1,0 | 3,7 | -0,1 | 0,2 | 0,2 | 0,0 | 0,1 |
| Other EU | 0,9 | 0,9 | 2,6 | -0,1 | 0,1 | 0,0 | -0,1 | -0,2 |
| USA | 1,4 | 0,9 | 4,0 | -0,2 | 0,1 | -0,1 | -0,1 | 0,0 |
| Other OECD | 1,4 | 0,4 | 2,9 | -0,1 | 0,1 | -0,1 | -0,2 | 0,0 |
| Japan | 1,0 | 0,9 | 1,9 | 0,1 | 0,1 | -0,2 | -0,2 | 0,1 |
| China | 0,2 | 0,1 | -0,2 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Australia and New Zeala | 0,6 | 1,3 | 1,3 | 0,0 | 0,1 | -0,2 | -0,2 | 0,0 |
| India | 0,2 | 0,5 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Latin America | 0,2 | 0,0 | -0,4 | 0,0 | -0,1 | 0,0 | 0,0 | -0,1 |
| Africa | 0,2 | 0,2 | -0,5 | 0,0 | -0,1 | 0,0 | 0,0 | 0,0 |
| High income Asia | 0,1 | 0,1 | -0,4 | 0,0 | -0,1 | 0,0 | 0,0 | 0,0 |
| Other Asia-Pacific | 0,2 | 0,1 | -0,4 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

# Differentiated liberalisation according to the EU's offer

## Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **0,6** | **159** | **0,7** | **0,7** | **0,1** | **0,1** | **0,9** | **184** |
| **EU25** | **0,5** | **28** | **0,5** | **0,6** | **0,1** | **0,2** | **0,9** | **44** |
| Denmark | 0,4 | 0 | 0,4 | 0,6 | 0,1 | 0,1 | 0,6 | 1 |
| Sweden | 0,6 | 1 | 0,6 | 0,8 | 0,1 | 0,2 | 0,9 | 1 |
| Germany | 0,6 | 8 | 0,6 | 0,7 | 0,1 | 0,1 | 1,1 | 13 |
| Other EU | 0,4 | 19 | 0,5 | 0,5 | 0,1 | 0,2 | 0,8 | 29 |
| USA | 0,7 | 68 | 0,9 | 0,8 | 0,2 | 0,2 | 1,2 | 85 |
| Other OECD | 0,5 | 10 | 0,6 | 0,5 | 0,1 | 0,1 | 0,7 | 9 |
| Japan | 0,4 | 12 | 0,5 | 0,4 | 0,1 | 0,1 | 0,7 | 16 |
| China | 1,2 | 10 | 0,9 | 1,0 | 0,1 | -0,4 | 0,5 | 5 |
| Australia and New | 0,4 | 1 | 0,6 | 0,5 | 0,1 | 0,1 | 0,8 | 2 |
| India | 0,7 | 3 | 0,7 | 0,6 | 0,1 | -0,1 | 0,4 | 2 |
| Latin America | 0,2 | 2 | 0,3 | 0,3 | 0,1 | 0,1 | 0,5 | 4 |
| Africa | 1,0 | 5 | 1,0 | 1,1 | 0,1 | -0,2 | 0,7 | 3 |
| High income Asia | 0,8 | 3 | 0,8 | 0,8 | 0,1 | 0,1 | 1,0 | 3 |
| Other Asia-Pacific | 1,5 | 18 | 1,1 | 1,3 | 0,0 | -0,4 | 0,8 | 12 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Market seize (percentage change )

| | Business services | Financial services | Communication services | Distribution trade | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **1,0** | **1,2** | **1,3** | **0,8** | **0,9** | **0,6** | **0,6** | **0,8** |
| **EU25** | **0,7** | **0,9** | **1,0** | **0,6** | **0,6** | **0,6** | **0,4** | **0,5** |
| Denmark | 0,8 | 0,7 | 1,8 | 0,6 | 0,7 | 0,5 | 0,3 | 0,5 |
| Sweden | 0,9 | 1,1 | 1,2 | 0,8 | 0,8 | 0,8 | 0,5 | 0,8 |
| Germany | 0,8 | 1,1 | 1,2 | 0,7 | 0,8 | 0,8 | 0,6 | 0,6 |
| Other EU | 0,7 | 0,9 | 0,9 | 0,6 | 0,5 | 0,4 | 0,3 | 0,4 |
| USA | 1,3 | 1,3 | 1,7 | 1,0 | 1,0 | 0,8 | 0,8 | 0,9 |
| Other OECD | 1,0 | 0,8 | 1,2 | 0,6 | 0,7 | 0,4 | 0,4 | 0,6 |
| Japan | 0,7 | 0,8 | 0,9 | 0,5 | 0,6 | 0,2 | 0,3 | 0,5 |
| China | 1,4 | 2,8 | 1,4 | 1,5 | 1,5 | 0,6 | 0,5 | 1,3 |
| Australia and New | 0,8 | 1,1 | 0,6 | 0,6 | 0,6 | 0,4 | 0,4 | 0,6 |
| India | 1,6 | 1,6 | 1,3 | 0,9 | 1,0 | 0,6 | 0,3 | 1,0 |
| Latin America | 0,5 | 0,5 | 0,2 | 0,3 | 0,3 | 0,3 | 0,2 | 0,3 |
| Africa | 1,9 | 2,5 | 1,8 | 1,4 | 1,6 | 0,9 | 0,9 | 1,4 |
| High income Asia | 1,4 | 2,0 | 1,2 | 1,0 | 1,0 | 0,8 | 0,8 | 1,0 |
| Other Asia-Pacific | 2,1 | 4,4 | 2,3 | 1,7 | 1,7 | 1,2 | 0,9 | 1,8 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Value added (percentage change )

| | Business services | Financial services | Communication services | Distribution trade | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **2,7** | **1,5** | **3,3** | **0,8** | **0,9** | **0,6** | **0,6** | **0,8** |
| **EU25** | **2,3** | **1,9** | **3,2** | **0,6** | **0,6** | **0,6** | **0,4** | **0,4** |
| Denmark | 1,0 | 1,6 | 5,0 | 0,6 | 0,7 | 0,5 | 0,3 | 0,5 |
| Sweden | 2,4 | 2,1 | 3,4 | 0,8 | 0,8 | 0,8 | 0,5 | 0,7 |
| Germany | 3,7 | 2,1 | 4,3 | 0,8 | 0,8 | 0,8 | 0,6 | 0,6 |
| Other EU | 1,9 | 1,8 | 3,0 | 0,6 | 0,6 | 0,5 | 0,4 | 0,3 |
| USA | 3,2 | 2,1 | 4,8 | 1,0 | 1,0 | 0,8 | 0,8 | 0,9 |
| Other OECD | 3,3 | 0,9 | 3,4 | 0,6 | 0,7 | 0,4 | 0,4 | 0,6 |
| Japan | 2,2 | 1,8 | 2,4 | 0,5 | 0,6 | 0,2 | 0,3 | 0,5 |
| China | 2,5 | -10,1 | 2,7 | 1,4 | 1,5 | 0,6 | 0,5 | 1,3 |
| Australia and New | 1,4 | 2,8 | 1,8 | 0,6 | 0,6 | 0,4 | 0,4 | 0,6 |
| India | 2,4 | 4,1 | 2,5 | 0,9 | 1,0 | 0,5 | 0,3 | 1,1 |
| Latin America | 1,6 | 1,4 | 1,3 | 0,3 | 0,3 | 0,2 | 0,2 | 0,3 |
| Africa | 2,9 | -2,0 | 3,1 | 1,4 | 1,6 | 0,9 | 0,9 | 1,5 |
| High income Asia | 1,8 | 2,1 | 2,7 | 1,0 | 1,0 | 0,8 | 0,8 | 1,0 |
| Other Asia-Pacific | 3,3 | -10,8 | 3,6 | 1,8 | 1,7 | 1,2 | 0,9 | 1,8 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Employment (percentage change )

| | Business services | Financial services | Communication services | Distribution trade | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **1,2** | **0,4** | **2,6** | **-0,1** | **0,2** | **-0,1** | **-0,1** | **0,1** |
| **EU25** | **0,9** | **0,9** | **2,7** | **-0,1** | **0,1** | **0,1** | **-0,1** | **-0,1** |
| Denmark | 0,6 | 0,8 | 4,6 | 0,0 | 0,3 | 0,1 | -0,1 | 0,0 |
| Sweden | 1,3 | 1,1 | 2,8 | 0,0 | 0,2 | 0,2 | -0,1 | 0,1 |
| Germany | 1,6 | 1,0 | 3,7 | -0,1 | 0,2 | 0,2 | 0,0 | 0,0 |
| Other EU | 0,9 | 0,9 | 2,5 | -0,1 | 0,1 | 0,0 | -0,1 | -0,2 |
| USA | 1,4 | 0,9 | 3,9 | -0,2 | 0,1 | -0,1 | -0,1 | 0,0 |
| Other OECD | 1,5 | 0,4 | 2,9 | -0,1 | 0,1 | -0,1 | -0,2 | 0,0 |
| Japan | 1,0 | 0,9 | 1,9 | 0,1 | 0,1 | -0,2 | -0,2 | 0,0 |
| China | 1,0 | -12,2 | 1,8 | 0,3 | 0,6 | -0,2 | -0,4 | 0,4 |
| Australia and New | 0,6 | 1,3 | 1,2 | 0,0 | 0,1 | -0,2 | -0,1 | 0,0 |
| India | 1,3 | -0,7 | 1,9 | -0,1 | 0,3 | -0,2 | -0,4 | 0,3 |
| Latin America | 0,8 | 0,7 | 1,0 | 0,0 | 0,0 | -0,1 | -0,1 | 0,0 |
| Africa | 1,2 | -5,2 | 2,1 | 0,1 | 0,6 | -0,1 | -0,1 | 0,5 |
| High income Asia | 0,9 | -0,3 | 1,9 | 0,2 | 0,1 | -0,1 | 0,0 | 0,2 |
| Other Asia-Pacific | 1,4 | -13,1 | 2,5 | 0,3 | 0,6 | 0,0 | -0,3 | 0,7 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Global liberalisation according to the EU's offer

### Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **0,8** | **210** | **0,8** | **0,9** | **0,1** | **0,1** | **1,1** | **220** |
| **EU25** | **0,4** | **27** | **0,5** | **0,5** | **0,0** | **0,2** | **0,9** | **44** |
| Denmark | 0,5 | 0 | 0,5 | 0,6 | 0,1 | 0,1 | 0,7 | 1 |
| Sweden | 0,7 | 1 | 0,6 | 0,8 | 0,1 | 0,2 | 0,9 | 1 |
| Germany | 0,6 | 8 | 0,6 | 0,7 | 0,1 | 0,2 | 1,1 | 13 |
| Other EU | 0,4 | 17 | 0,5 | 0,5 | 0,0 | 0,2 | 0,9 | 30 |
| USA | 0,6 | 61 | 0,8 | 0,8 | 0,1 | 0,2 | 1,2 | 83 |
| Other OECD | 0,6 | 11 | 0,6 | 0,5 | 0,1 | 0,1 | 0,8 | 10 |
| Japan | 0,4 | 12 | 0,4 | 0,4 | 0,1 | 0,1 | 0,7 | 17 |
| China | 2,9 | 24 | 2,1 | 2,3 | 0,2 | -0,7 | 1,4 | 12 |
| Australia and New | 0,4 | 1 | 0,5 | 0,5 | 0,1 | 0,1 | 0,8 | 2 |
| India | 1,8 | 7 | 1,8 | 1,5 | 0,2 | -0,2 | 1,1 | 4 |
| Latin America | 0,5 | 5 | 0,7 | 0,6 | 0,1 | 0,2 | 0,9 | 7 |
| Africa | 2,4 | 11 | 2,4 | 2,5 | 0,3 | -0,2 | 1,9 | 7 |
| High income Asia | 1,9 | 7 | 2,1 | 2,0 | 0,3 | 0,3 | 2,3 | 6 |
| Other Asia-Pacific | 3,6 | 43 | 2,9 | 3,4 | 0,2 | -0,8 | 2,2 | 28 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Market seize (percentage change )

| | Business services | Financial services | Communication services | Distribution services | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **1,2** | **1,7** | **1,7** | **1,1** | **1,3** | **0,8** | **0,7** | **1,3** |
| **EU25** | **0,7** | **0,9** | **0,9** | **0,5** | **0,5** | **0,5** | **0,4** | **0,4** |
| Denmark | 1,0 | 0,7 | 1,6 | 0,6 | 0,7 | 0,5 | 0,3 | 0,5 |
| Sweden | 0,9 | 1,1 | 1,1 | 0,8 | 0,9 | 0,8 | 0,5 | 0,6 |
| Germany | 0,8 | 1,1 | 1,2 | 0,7 | 0,7 | 0,7 | 0,5 | 0,5 |
| Other EU | 0,7 | 0,8 | 0,8 | 0,5 | 0,5 | 0,4 | 0,3 | 0,3 |
| USA | 1,2 | 1,2 | 1,6 | 0,9 | 0,9 | 0,7 | 0,7 | 0,8 |
| Other OECD | 1,1 | 0,9 | 1,2 | 0,7 | 0,7 | 0,4 | 0,4 | 0,5 |
| Japan | 0,6 | 0,8 | 0,9 | 0,5 | 0,6 | 0,2 | 0,3 | 0,4 |
| China | 3,5 | 7,7 | 3,9 | 3,6 | 3,6 | 1,6 | 1,2 | 3,0 |
| Australia and New | 0,8 | 1,0 | 0,6 | 0,6 | 0,6 | 0,4 | 0,4 | 0,5 |
| India | 3,8 | 4,3 | 3,6 | 2,2 | 2,4 | 1,4 | 0,7 | 2,3 |
| Latin America | 1,0 | 1,0 | 1,0 | 0,7 | 0,8 | 0,6 | 0,4 | 0,8 |
| Africa | 4,6 | 6,7 | 5,1 | 3,3 | 3,8 | 2,1 | 2,1 | 3,3 |
| High income Asia | 3,3 | 5,4 | 3,4 | 2,4 | 2,4 | 1,9 | 2,0 | 2,4 |
| Other Asia-Pacific | 5,6 | 13,7 | 6,8 | 4,3 | 4,4 | 3,0 | 2,1 | 4,6 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Value added (percentage change )

| | Business services | Financial services | Communication services | Distribution services | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **3,0** | **1,5** | **3,8** | **1,0** | **1,3** | **0,8** | **0,7** | **1,2** |
| **EU25** | **2,3** | **1,8** | **3,1** | **0,5** | **0,6** | **0,6** | **0,4** | **0,3** |
| Denmark | 1,2 | 1,6 | 4,8 | 0,6 | 0,7 | 0,5 | 0,4 | 0,4 |
| Sweden | 2,4 | 2,0 | 3,3 | 0,8 | 0,9 | 0,8 | 0,5 | 0,6 |
| Germany | 3,5 | 2,0 | 4,2 | 0,7 | 0,8 | 0,7 | 0,6 | 0,5 |
| Other EU | 1,8 | 1,7 | 2,9 | 0,5 | 0,5 | 0,5 | 0,3 | 0,2 |
| USA | 3,0 | 2,0 | 4,7 | 0,9 | 0,9 | 0,7 | 0,7 | 0,8 |
| Other OECD | 3,4 | 0,9 | 3,4 | 0,6 | 0,7 | 0,4 | 0,4 | 0,5 |
| Japan | 2,2 | 1,7 | 2,4 | 0,5 | 0,6 | 0,2 | 0,3 | 0,4 |
| China | 6,2 | -17,3 | 6,5 | 3,4 | 3,6 | 1,6 | 1,2 | 3,0 |
| Australia and New | 1,3 | 2,7 | 1,7 | 0,5 | 0,6 | 0,4 | 0,4 | 0,5 |
| India | 5,8 | 15,9 | 6,1 | 2,3 | 2,4 | 1,4 | 0,7 | 2,5 |
| Latin America | 3,9 | 2,1 | 3,1 | 0,7 | 0,8 | 0,6 | 0,4 | 0,8 |
| Africa | 7,3 | 2,2 | 7,7 | 3,4 | 3,8 | 2,1 | 2,1 | 3,4 |
| High income Asia | 4,5 | 7,5 | 6,5 | 2,4 | 2,4 | 1,9 | 2,0 | 2,4 |
| Other Asia-Pacific | 8,8 | -18,7 | 9,5 | 4,5 | 4,4 | 3,0 | 2,1 | 4,5 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Employment (percentage change )

| | Business services | Financial services | Communication services | Distribution services | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **1,3** | **0,2** | **2,9** | **-0,1** | **0,3** | **-0,1** | **-0,2** | **0,1** |
| **EU25** | **1,0** | **0,9** | **2,6** | **-0,1** | **0,1** | **0,1** | **-0,1** | **-0,2** |
| Denmark | 0,7 | 0,8 | 4,4 | 0,0 | 0,2 | 0,1 | -0,1 | 0,0 |
| Sweden | 1,3 | 1,1 | 2,7 | 0,0 | 0,3 | 0,2 | -0,1 | 0,0 |
| Germany | 1,7 | 1,1 | 3,7 | -0,1 | 0,2 | 0,2 | 0,0 | -0,1 |
| Other EU | 0,9 | 0,9 | 2,4 | -0,2 | 0,1 | 0,0 | -0,1 | -0,2 |
| USA | 1,4 | 0,9 | 3,9 | -0,2 | 0,1 | -0,1 | -0,1 | 0,0 |
| Other OECD | 1,5 | 0,5 | 2,8 | -0,1 | 0,1 | -0,2 | -0,2 | -0,1 |
| Japan | 1,0 | 1,0 | 1,9 | 0,1 | 0,1 | -0,2 | -0,1 | 0,0 |
| China | 2,4 | -22,4 | 4,4 | 0,7 | 1,5 | -0,5 | -0,9 | 0,9 |
| Australia and New | 0,6 | 1,4 | 1,2 | 0,0 | 0,0 | -0,1 | -0,1 | 0,0 |
| India | 2,8 | 3,1 | 4,3 | -0,3 | 0,5 | -0,5 | -1,1 | 0,7 |
| Latin America | 1,6 | 0,9 | 2,5 | 0,0 | 0,1 | -0,2 | -0,3 | 0,1 |
| Africa | 2,9 | -6,1 | 5,2 | 0,1 | 1,4 | -0,3 | -0,3 | 0,9 |
| High income Asia | 1,9 | 1,3 | 4,4 | 0,3 | 0,3 | -0,2 | -0,1 | 0,3 |
| Other Asia-Pacific | 3,4 | -24,4 | 6,4 | 0,6 | 1,4 | 0,1 | -0,8 | 1,5 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Best case scenario

### Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **1,3** | **331** | **1,9** | **2,5** | **0,4** | **0,5** | **2,8** | **496** |
| **EU25** | **1,2** | **75** | **1,9** | **2,7** | **0,4** | **0,5** | **2,8** | **138** |
| Denmark | 1,2 | 1 | 2,3 | 4,2 | 0,8 | 1,1 | 4,2 | 3 |
| Sweden | 1,3 | 2 | 2,2 | 3,3 | 0,7 | 0,6 | 3,0 | 4 |
| Germany | 1,2 | 16 | 1,7 | 2,2 | 0,4 | 0,4 | 2,4 | 29 |
| Other EU | 1,2 | 56 | 1,9 | 2,8 | 0,4 | 0,5 | 2,9 | 103 |
| USA | 1,3 | 124 | 1,7 | 2,2 | 0,3 | 0,4 | 2,4 | 161 |
| Other OECD | 2,4 | 42 | 4,4 | 5,6 | 1,0 | 1,8 | 6,9 | 70 |
| Japan | 2,1 | 64 | 3,3 | 4,5 | 0,9 | 1,1 | 4,9 | 105 |
| China | 0,4 | 4 | 0,3 | 0,3 | 0,0 | -0,4 | -0,1 | 2 |
| Australia and New | 1,6 | 5 | 2,3 | 3,0 | 0,5 | 0,5 | 3,2 | 7 |
| India | 0,2 | 1 | 0,1 | 0,2 | 0,0 | -0,1 | 0,2 | 1 |
| Latin America | 0,4 | 4 | 0,2 | 0,3 | 0,0 | -0,2 | 0,3 | 3 |
| Africa | 0,4 | 2 | 0,3 | 0,4 | 0,0 | -0,4 | 0,0 | 1 |
| High income Asia | 0,6 | 2 | 0,4 | 0,5 | 0,0 | -0,3 | 0,3 | 2 |
| Other Asia-Pacific | 0,7 | 8 | 0,4 | 0,5 | 0,0 | -0,3 | 0,3 | 5 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

### Market seize (percentage change )

| | Business services | Financial services | Communicati on services | Distribution services | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **2,9** | **2,9** | **3,1** | **2,1** | **2,6** | **1,6** | **1,6** | **1,8** |
| **EU25** | **2,7** | **2,3** | **3,0** | **2,3** | **4,2** | **1,8** | **1,5** | **2,0** |
| Denmark | 3,2 | 2,5 | 6,0 | 3,5 | 8,1 | 2,8 | 1,7 | 2,4 |
| Sweden | 2,7 | 3,3 | 4,1 | 3,3 | 5,3 | 2,7 | 1,7 | 3,0 |
| Germany | 2,0 | 2,0 | 2,7 | 2,1 | 3,1 | 1,9 | 1,3 | 1,9 |
| Other EU | 2,8 | 2,3 | 3,0 | 2,3 | 4,2 | 1,6 | 1,5 | 2,0 |
| USA | 2,5 | 2,2 | 2,9 | 2,0 | 3,8 | 1,4 | 1,5 | 1,8 |
| Other OECD | 6,5 | 12,6 | 6,5 | 4,0 | 4,5 | 3,6 | 3,4 | 3,7 |
| Japan | 5,4 | 6,3 | 5,3 | 3,6 | 4,5 | 2,2 | 2,7 | 3,5 |
| China | 0,2 | -0,2 | 0,1 | 0,1 | -2,2 | 0,1 | 0,2 | 0,4 |
| Australia and New | 3,5 | 2,8 | 3,4 | 2,8 | 4,0 | 1,6 | 1,4 | 2,4 |
| India | 0,2 | -0,1 | 0,0 | 0,1 | -0,8 | 0,1 | 0,1 | 0,1 |
| Latin America | 0,2 | 0,0 | -0,2 | 0,3 | -2,2 | 0,2 | 0,2 | 0,2 |
| Africa | 0,3 | -0,1 | -0,1 | 0,5 | -3,4 | 0,2 | 0,3 | 0,4 |
| High income Asia | 0,6 | 0,0 | 0,0 | 0,5 | -3,7 | 0,4 | 0,4 | 0,5 |
| Other Asia-Pacific | 0,5 | 0,1 | 0,1 | 0,6 | -2,3 | 0,3 | 0,4 | 0,4 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Value Added (percentage change )

| | Business services | Financial services | Communication services | Distribution services | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **4,0** | **5,8** | **5,2** | **2,0** | **9,4** | **1,6** | **1,6** | **2,0** |
| **EU25** | **3,8** | **3,2** | **5,3** | **2,0** | **13,1** | **1,8** | **1,5** | **2,1** |
| Denmark | 3,2 | 3,3 | 9,3 | 3,1 | 17,2 | 2,9 | 1,7 | 2,4 |
| Sweden | 3,9 | 4,3 | 6,4 | 2,8 | 14,2 | 2,7 | 1,7 | 3,1 |
| Germany | 4,6 | 2,9 | 5,8 | 1,8 | 11,9 | 1,9 | 1,4 | 2,1 |
| Other EU | 3,5 | 3,2 | 5,1 | 2,0 | 13,1 | 1,7 | 1,6 | 2,1 |
| USA | 3,8 | 3,0 | 6,1 | 2,0 | 12,7 | 1,4 | 1,5 | 1,8 |
| Other OECD | 8,3 | 30,3 | 8,8 | 3,6 | 13,4 | 3,6 | 3,3 | 3,7 |
| Japan | 6,5 | 18,0 | 6,8 | 3,1 | 13,4 | 2,3 | 2,7 | 3,6 |
| China | 0,2 | -0,1 | 0,1 | 0,1 | -2,2 | 0,1 | 0,2 | 0,6 |
| Australia and New | 3,4 | 4,5 | 4,5 | 2,8 | 12,9 | 1,6 | 1,4 | 2,6 |
| India | 0,3 | 0,2 | -0,1 | 0,0 | -0,8 | 0,1 | 0,1 | 0,1 |
| Latin America | 0,1 | 0,0 | -0,2 | 0,3 | -2,2 | 0,2 | 0,2 | 0,5 |
| Africa | 0,3 | 0,1 | -0,1 | 0,4 | -3,4 | 0,2 | 0,3 | 0,8 |
| High income Asia | 0,5 | 0,1 | 0,0 | 0,5 | -3,7 | 0,4 | 0,4 | 0,9 |
| Other Asia-Pacific | 0,4 | 0,1 | 0,1 | 0,5 | -2,3 | 0,3 | 0,4 | 0,8 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Employment (percentage change )

| | Business services | Financial services | Communication services | Distribution services | Transport services | Other services | Public services | Rest of the economy |
|---|---|---|---|---|---|---|---|---|
| **World** | **-0,2** | **3,2** | **3,1** | **-0,4** | **7,6** | **-0,3** | **-0,3** | **0,2** |
| **EU25** | **-0,2** | **0,8** | **3,4** | **-0,8** | **11,0** | **-0,1** | **-0,4** | **0,2** |
| Denmark | 0,6 | 0,6 | 6,9 | -0,1 | 14,6 | 0,5 | -0,6 | 0,1 |
| Sweden | 1,0 | 1,6 | 4,1 | 0,1 | 11,8 | 0,5 | -0,4 | 0,9 |
| Germany | -1,1 | 0,7 | 4,1 | -0,7 | 10,0 | 0,2 | -0,4 | 0,3 |
| Other EU | -0,2 | 0,8 | 3,2 | -0,9 | 11,0 | -0,2 | -0,3 | 0,1 |
| USA | -0,9 | 1,0 | 4,3 | 0,0 | 10,8 | -0,3 | -0,1 | 0,1 |
| Other OECD | 1,3 | 25,1 | 4,2 | -2,4 | 8,7 | -0,7 | -1,0 | -0,6 |
| Japan | 1,2 | 13,7 | 3,4 | -0,8 | 9,8 | -1,1 | -0,7 | 0,2 |
| China | 0,1 | -0,4 | -0,2 | -0,2 | -2,5 | -0,2 | -0,1 | 0,3 |
| Australia and New | 0,2 | 1,2 | 2,2 | 0,4 | 10,4 | -0,7 | -0,9 | 0,3 |
| India | 0,2 | 0,3 | -0,1 | 0,0 | -0,9 | 0,0 | 0,0 | 0,0 |
| Latin America | 0,2 | -0,1 | -0,4 | 0,1 | -2,4 | 0,0 | 0,0 | 0,3 |
| Africa | 0,2 | -0,2 | -0,4 | 0,2 | -3,7 | -0,1 | 0,0 | 0,5 |
| High income Asia | 0,3 | -0,2 | -0,3 | 0,2 | -4,1 | 0,1 | 0,1 | 0,6 |
| Other Asia-Pacific | 0,3 | -0,3 | -0,3 | 0,2 | -2,7 | -0,1 | 0,0 | 0,4 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Full liberalisation of trade in services

### Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **2,4** | **593** | **3,2** | **4,7** | **0,6** | **0,7** | **4,5** | **784** |
| **EU25** | **1,5** | **90** | **2,1** | **3,1** | **0,4** | **0,4** | **3,1** | **160** |
| Denmark | 1,5 | 1 | 2,7 | 4,8 | 0,9 | 0,9 | 4,3 | 3 |
| Sweden | 2,1 | 3 | 2,6 | 3,9 | 0,7 | 0,6 | 3,6 | 5 |
| Germany | 1,7 | 22 | 1,9 | 2,5 | 0,3 | 0,3 | 2,8 | 34 |
| Other EU | 1,4 | 64 | 2,1 | 3,2 | 0,4 | 0,4 | 3,2 | 118 |
| USA | 1,3 | 120 | 1,7 | 2,4 | 0,3 | 0,4 | 2,6 | 177 |
| Other OECD | 2,9 | 52 | 4,9 | 6,3 | 1,1 | 1,9 | 7,7 | 80 |
| Japan | 2,6 | 77 | 3,8 | 5,1 | 0,9 | 1,2 | 5,6 | 121 |
| China | 7,5 | 61 | 6,8 | 9,5 | 1,2 | 0,9 | 9,5 | 41 |
| Australia and New | 2,0 | 6 | 2,5 | 3,5 | 0,5 | 0,5 | 3,5 | 8 |
| India | 4,0 | 15 | 5,2 | 6,5 | 0,8 | 1,2 | 7,3 | 14 |
| Latin America | 3,2 | 35 | 6,0 | 7,8 | 1,4 | 2,3 | 9,3 | 56 |
| Africa | 5,1 | 24 | 6,8 | 8,3 | 1,2 | 1,8 | 9,2 | 21 |
| High income Asia | 4,8 | 17 | 7,0 | 8,8 | 1,6 | 2,5 | 10,4 | 21 |
| Other Asia-Pacific | 8,0 | 96 | 8,6 | 10,8 | 1,2 | 0,5 | 10,0 | 85 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Full liberalisation of trade in goods and services

### Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **2,5** | **633** | **4,0** | **6,2** | **0,9** | **0,7** | **5,2** | **974** |
| **EU25** | **1,6** | **99** | **2,6** | **3,7** | **0,6** | **0,3** | **3,5** | **190** |
| Denmark | 3,2 | 3 | 3,8 | 6,7 | 1,0 | 0,3 | 4,9 | 4 |
| Sweden | 2,7 | 4 | 3,1 | 4,5 | 0,8 | 0,6 | 4,0 | 6 |
| Germany | 2,1 | 27 | 2,5 | 3,0 | 0,4 | 0,3 | 3,2 | 40 |
| Other EU | 1,4 | 65 | 2,6 | 3,8 | 0,6 | 0,3 | 3,5 | 140 |
| USA | 1,2 | 112 | 1,8 | 2,7 | 0,4 | 0,3 | 2,7 | 192 |
| Other OECD | 2,9 | 52 | 6,2 | 8,4 | 1,5 | 1,8 | 8,9 | 102 |
| Japan | 3,0 | 89 | 4,5 | 6,2 | 1,1 | 1,2 | 6,3 | 143 |
| China | 9,4 | 76 | 10,7 | 15,2 | 2,2 | 0,5 | 13,3 | 65 |
| Australia and New | 3,0 | 9 | 4,1 | 6,2 | 0,9 | 0,3 | 4,8 | 13 |
| India | 4,1 | 16 | 8,1 | 10,5 | 1,7 | 2,3 | 12,0 | 22 |
| Latin America | 3,7 | 41 | 8,1 | 11,1 | 2,0 | 2,1 | 11,2 | 76 |
| Africa | 4,8 | 22 | 10,6 | 14,1 | 2,5 | 2,5 | 14,4 | 34 |
| High income Asia | 5,3 | 19 | 8,7 | 11,5 | 2,0 | 2,0 | 11,6 | 27 |
| Other Asia-Pacific | 8,2 | 98 | 11,1 | 14,6 | 1,9 | 0,4 | 12,4 | 111 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Aggressive estimates

Exemption from liberalisation of the developing countries i.e. no commitments for the developing countries

### Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **1,3** | **333** | **2,3** | **3,4** | **0,6** | **0,9** | **3,8** | **600** |
| **EU25** | **1,5** | **88** | **2,5** | **4,3** | **0,6** | **1,0** | **4,3** | **190** |
| Denmark | 1,0 | 1 | 1,5 | 2,2 | 0,4 | 0,3 | 1,9 | 2 |
| Sweden | 2,0 | 3 | 2,7 | 4,4 | 0,8 | 1,0 | 4,1 | 5 |
| Germany | 1,2 | 16 | 2,3 | 6,5 | 0,6 | 0,9 | 5,3 | 56 |
| Other EU | 1,5 | 68 | 2,6 | 3,7 | 0,6 | 1,0 | 4,0 | 128 |
| USA | 1,7 | 158 | 3,2 | 5,1 | 0,8 | 1,2 | 5,2 | 295 |
| Other OECD | 1,3 | 23 | 1,9 | 2,3 | 0,4 | 0,8 | 3,1 | 29 |
| Japan | 1,5 | 45 | 2,2 | 3,2 | 0,6 | 0,8 | 3,4 | 69 |
| China | 0,2 | 2 | 0,1 | 0,1 | 0,0 | -0,2 | -0,1 | 1 |
| Australia and New | 1,7 | 5 | 2,8 | 3,6 | 0,7 | 1,0 | 4,3 | 8 |
| India | 0,1 | 1 | 0,0 | 0,1 | 0,0 | -0,2 | 0,0 | 0 |
| Latin America | 0,2 | 2 | 0,1 | 0,1 | 0,0 | -0,1 | 0,1 | 2 |
| Africa | 0,3 | 2 | 0,2 | 0,3 | 0,0 | -0,2 | 0,1 | 1 |
| High income Asia | 0,3 | 1 | 0,2 | 0,3 | 0,0 | -0,4 | -0,2 | 1 |
| Other Asia-Pacific | 0,5 | 6 | 0,4 | 0,4 | 0,0 | -0,2 | 0,2 | 4 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Differentiated liberalisation according to the EU's offer

### Overview of the results (percentage change )

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **1,6** | **401** | **2,6** | **3,9** | **0,6** | **0,9** | **4,2** | **665** |
| **EU25** | **1,5** | **91** | **2,6** | **4,3** | **0,6** | **0,9** | **4,3** | **192** |
| Denmark | 1,2 | 1 | 1,5 | 2,3 | 0,4 | 0,2 | 1,9 | 2 |
| Sweden | 2,3 | 3 | 2,9 | 4,5 | 0,8 | 0,9 | 4,1 | 5 |
| Germany | 1,3 | 17 | 2,4 | 6,5 | 0,6 | 0,9 | 5,3 | 57 |
| Other EU | 1,5 | 69 | 2,6 | 3,8 | 0,6 | 0,9 | 4,0 | 129 |
| USA | 1,7 | 156 | 3,2 | 5,1 | 0,8 | 1,2 | 5,2 | 295 |
| Other OECD | 1,4 | 25 | 1,9 | 2,4 | 0,4 | 0,8 | 3,0 | 30 |
| Japan | 1,6 | 47 | 2,3 | 3,3 | 0,5 | 0,8 | 3,5 | 70 |
| China | 1,6 | 13 | 1,4 | 1,8 | 0,2 | 0,3 | 2,0 | 8 |
| Australia and New | 1,7 | 5 | 2,9 | 3,7 | 0,7 | 1,0 | 4,2 | 8 |
| India | 1,0 | 4 | 1,1 | 1,6 | 0,1 | 0,2 | 1,9 | 3 |
| Latin America | 1,1 | 12 | 2,0 | 2,6 | 0,4 | 0,7 | 3,1 | 18 |
| Africa | 1,5 | 7 | 1,9 | 2,3 | 0,3 | 0,6 | 2,7 | 6 |
| High income Asia | 3,2 | 11 | 3,9 | 4,8 | 0,7 | 1,2 | 5,5 | 11 |
| Other Asia-Pacific | 2,5 | 30 | 2,5 | 3,2 | 0,3 | 0,4 | 3,4 | 24 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

## Global liberalisation according to the EU's offer

### Overview of the results (change in %)

| | Total effects | | | | | Effects on the service sectors | | |
|---|---|---|---|---|---|---|---|---|
| | Welfare | Welfare[a] | Real wage | Yields on capital | Total employment | Employment | Value added | Value added[a] |
| **World** | **2,0** | **497** | **3,0** | **4,6** | **0,7** | **1,0** | **4,8** | **752** |
| **EU25** | **1,6** | **95** | **2,6** | **4,4** | **0,6** | **0,8** | **4,2** | **196** |
| Denmark | 1,4 | 1 | 1,6 | 2,6 | 0,4 | 0,0 | 1,8 | 2 |
| Sweden | 2,6 | 4 | 3,1 | 4,7 | 0,8 | 0,8 | 4,2 | 5 |
| Germany | 1,5 | 19 | 2,6 | 6,6 | 0,7 | 0,9 | 5,4 | 58 |
| Other EU | 1,6 | 71 | 2,7 | 3,8 | 0,6 | 0,8 | 3,9 | 131 |
| USA | 1,6 | 154 | 3,2 | 5,1 | 0,8 | 1,1 | 5,1 | 296 |
| Other OECD | 1,5 | 27 | 2,0 | 2,5 | 0,4 | 0,7 | 3,0 | 31 |
| Japan | 1,7 | 50 | 2,3 | 3,3 | 0,5 | 0,8 | 3,5 | 72 |
| China | 3,9 | 31 | 3,5 | 4,7 | 0,6 | 1,4 | 5,7 | 20 |
| Australia and New Zealand | 1,8 | 6 | 2,9 | 3,8 | 0,7 | 0,9 | 4,2 | 8 |
| India | 2,6 | 10 | 3,0 | 4,5 | 0,4 | 1,1 | 5,7 | 8 |
| Latin America | 1,6 | 18 | 3,0 | 4,2 | 0,7 | 1,2 | 4,9 | 27 |
| Africa | 3,5 | 16 | 4,7 | 5,7 | 0,9 | 2,1 | 7,4 | 14 |
| High income Asia | 5,7 | 21 | 7,3 | 8,9 | 1,5 | 2,9 | 11,2 | 21 |
| Other Asia-Pacific | 5,9 | 70 | 6,2 | 7,9 | 0,8 | 1,4 | 8,7 | 59 |

Note: (a) change in billion Euro

Source: CETM model - Copenhagen Economics

# Annex II: Sensitivity analysis

The sensitivity of the results regarding data quality, model assumptions and scenario definitions has been tested by both simple and systematic sensitivity analysis. The simple sensitivity analysis merely allows the change of one parameter. The systematic sensitivity analysis allows several parameters to be changed at the same time within certain limits. The model is subsequently used to calculate the same scenario many times, each time with new values for the selected parameters.

*Simple sensitivity analysis*

As foreign and domestic enterprises encounter different barriers, it is important to analyse if poor data quality or changed assumptions regarding the structure of foreign enterprises provide significantly different results and conclusions. Table 1 shows that this is not the case. It means that the overall results are robust with respect to changes in both the initial market share of foreign enterprises and their use of input from parent companies.

The results show, furthermore, small and predictable effects from changing the elasticity of labour supply. The labour supply elasticity has a modest welfare effect and impacts primarily on the employment rate. As expected, the results are more sensitive to the size of the tax equivalents. If the effects of global liberalisation according to the EU's offer are 15 per cent lower or higher than calculated, it will correspond to a welfare effect of between 0.3-0.9 per cent for the entire EU. The results are, however, of the same size as previously.

Table 1: Simple sensitivity analysis

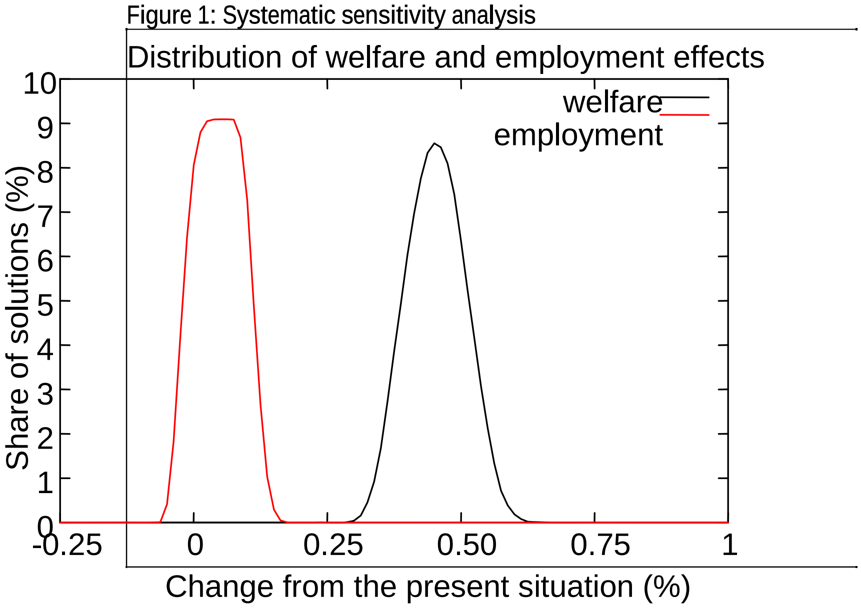
| | Value | Economic effects | | |
|---|---|---|---|---|
| | | Welfare | Wages and salaries | Employment |
| Global liberalisation according to the EU's offer | EU | 0.4 | 0.5 | 0.0 |
| **Data** | | | | |
| Market share for foreign | Half | 0.3 | 0.3 | 0.0 |
| enterprises | Double | 0.7 | 0.8 | 0.1 |
| Foreign enterprises' use of input from | 5 % | 0.7 | 0.8 | 0.1 |
| the parent company | 50 % | 0.4 | 0.5 | 0.0 |
| **Model assumptions** | | | | |
| Elasticity of labour supply | 0.1 | 0.4 | 0.5 | 0.0 |
| | 0.3 | 0.5 | 0.5 | 0.1 |
| **Scenario definitions** | | | | |
| Effect of the offer | Low | 0.3 | 0.4 | 0.0 |
| | High | 0.9 | 1.1 | 0.2 |

Note: the table shows the effects for the entire EU. All results are reported as percentage changes from the current situation. The sensitivity analysis is based on the lower estimate of the effects of global liberalisation according to the EU's offer.
Source: CETM model - Copenhagen Economics.

*Systematic sensitivity analysis*
In the systematic sensitivity analysis, the effects of global liberalisation according to the EU's offer have been calculated 2000 times with different values for the parameters that are included in the simple sensitivity analysis. The systematic sensitivity analysis includes, furthermore, the elasticity of substitution between individual varieties of services.

The analysis shows again that the results are robust with regard to changes in strategic parameters. Figure 1 shows that both the welfare and employment effects are distributed over a relatively small interval. A very small percentage of solutions show, however, a negative employment effect. In these cases, the pay development in the services sector is so strong that it has a dampening effect on employment.

Figure 1: Systematic sensitivity analysis




Note: the figure shows the effects for the entire EU. All results are reported as percentage changes from the current situation. The sensitivity analysis is based on the lower estimate of the effects of global liberalisation according to the EU's offer.
Source: CETM model - Copenhagen Economics.

# Annex III: Interpretation of the EU offer

| GTAP code | ISIC3 code | Description | Barrier estimates | Restrictions on market access and national treatment | Reference | Interpretation |
|---|---|---|---|---|---|---|
| cns | 45 | **Construction services** | no | None | 3 | - |
| trd | | **Distributive trade** | | | | |
| | 50 | Sales, maintenance and repair of motor vehicles; retail sale of automotive fuel | no | None | 4.C & 4.D | No discrimination |
| | 51 | Wholesale trade and commission trade | yes | None | 4.A & 4.B | |
| | 521 | Non-specialized retail trade in stores | yes | None | 4.C & 4.D | |
| | 522 | Retail sale of food, beverage and tobacco in specialized stores | yes | None | 4.C & 4.D | |
| | 523 | Other retail trade of new goods in specialized stores | yes | None | 4.C & 4.D | |
| | 524 | Retail sale of second-hand goods in stores | yes | None | 4.C & 4.D | |
| | 525 | Retail trade not in stores | no | None | 4.C & 4.D | |
| | 526 | Repair of personal and household goods | no | n.a. | n.a. | |
| | 55 | Hotels and restaurants | no | None | 9.A | |
| otp | | **Transport nec** | | | | |
| | 60 | Land transport; transport via pipelines | no | Unbound | 11.E & 11.F | - |
| | 63 | Supporting and auxiliary transport activities; activities of travel agencies | no | Some | 9.B & 11.H | |
| wtp | 61 | **Water transport** | yes | Some | 11.A | Some reductions |
| atp | 62 | **Air transport** | yes | Mostly unbound | 11.C | Unchanged barriers |
| cmn | 64 | **Communication** | yes | None | 2 & 2.C | No discrimination |
| fin | | **Financial services** | | | | |
| ofi | 65 | Financial intermediation, expect insurance and pension funding | yes | Few | 7.B | No discrimination |
| isr | 66 | Insurance and pension funding, except compulsory social security | yes | Few | 7.A | No discrimination |
| obs | | **Business services** | | | | |
| | 70 | Real estate activities | yes | None | 1.D | No discrimination |
| | 711 | Renting of transport equipment | yes | Few | 1.E | |
| | 712 | Renting of other machinery and equipment | yes | None | 1.E.d) | |
| | 713 | Renting of personal and household goods n.e.c. | yes | n.a. | n.a. | |
| | 72 | Computer and related activities | yes | None | 1.B | |
| | 73 | Research and development | yes | Mostly unbound | 1.C | |
| | 74 | Other business activities | yes | Few | 1.A & 1.F | |
| ros | | **Recreational and other services** | | | | |
| | 92 | Recreational, cultural and sporting activities | no | Few | 10.A-D | - |
| | 93 | Other service activities | no | n.a. | n.a. | |
| | 95 | Private households with employed persons | no | n.a. | n.a. | |
| osg | | **Public services** | | | | |
| | 75 | Public administration and defence; compulsory social security | no | Unbound | n.a. | - |
| | 80 | Education | no | Mostly unbound | (5.A-D) | |
| | 85 | Health and social work | no | Mostly unbound | 8.A & 8.C | |
| | 90 | Sewage and refuse disposal, sanitation and similar activities | no | None | 6.A-E | |
| | 91 | Activities of membership organisations n.e.c. | no | n.a. | n.a. | |
| | 99 | Extra-territorial organisations and bodies | no | n.a. | n.a. | |

# Annex IV: Technical scenario definitions

This Annex contains information on the technical implementation of the scenarios. Furthermore, it presents the EU's offer in the context of the WTO, and an assessment of the impact of the offer on barriers to trade in services. Finally, this Annex also describes the geographical regions in the analysis and how existing estimates for barriers are used in the model.

## Interpretation of the EU's offer to the WTO

The analysis of the negotiations under the Doha Round is based on the EU's offer regarding services. Attention is drawn to the fact that the offer is conditional upon general progress in the Doha Round, and that a final agreement may contain liberalisation of more or less significance. There will, however, be no question of liberalisation of public services. Only services that are not linked to the exercise of public authority (or air transport) may be liberalised under GATS. In practice, it is up to every GATS member country to define which services it considers public services and thus exempted from liberalisation under GATS. The members can, therefore, choose exactly which sectors they wish to liberalise and the EU's offer does not include any public services (for example health-related and social services).

The EU's offer contains improvements regarding market access and national treatment of a variety of commercial suppliers of services. An economic analysis of these qualitative improvements requires an interpretation in the form of quantitative effects on prices and costs in the services trades.

Economic literature on price and cost effects is, however, not fully developed. The lack of fully developed research constitutes a direct obstacle to the interpretation of the EU's offer with respect to the effects of both deregulation and the business sectors that can be analysed. No agreement exists on how the effects are to be measured, and many theoretical and empirical barriers must be overcome. There exist only a limited number of estimates for the price and cost effects of barriers to trade in services. As for the scenario design, the two criteria that have governed the interpretation of the offer have been political relevance and available data.

The interpretation of the EU's offer is based directly on the price and cost estimates of the Australian Productivity Commission (APC), their division into business sectors and the business sector division of the database GTAP6. The estimates represent the barriers as hypothetical tax equivalents for domestic and foreign enterprises. The tax equivalents may be interpreted as hypothetical taxes that are calculated so that they generate economic effects that are equivalent to the economic effects of the actual barriers. Full market access and national treatment of foreign suppliers of services are interpreted as if all discrimination of foreign enterprises is removed.

This is one of the first projects ever endeavouring to establish a clear correlation between the qualitative improvements of the EU's offer and the quantitative goals for the effects of the barriers. In order to address this challenge, the offer has been analysed to identify the business sectors where discrimination will be altogether removed or almost altogether removed. The division into sectors according to GATS has subsequently been transferred to the corresponding sectors in the GTAP database. An overview of the effects of the EU's offer in relation to this analysis is presented in Table 1. A detailed interpretation of the offer is set out in Annex III. Table 1 shows that the analysis of the effects of the EU's offer in this report focuses on reduced barriers to business services, financial services, communications services as well as distribution services.

Table 1: Overview of the effects of the EU's offer in the scenario analysis

| **Sector** | **Barrier estimates exist** | **Restrictions on market access and national treatment** | **Interpretation of this model analysis** |
|---|---|---|---|
| Business services | Yes | Few | No discrimination |
| Financial services | Yes | Few | No discrimination |
| Communications services | Yes | Few | No discrimination |
| Distribution services | Yes | None | No discrimination |
| Maritime transport services | Yes* | Some restrictions | No effect* |
| Air transport services | Yes | Unbound | No effect |
| Land transport services | No | Mostly unbound | No effect |
| Construction and engineering | No | Few | Not included |
| Recreation, culture and sport | No | Partly unbound | Not included |
| Public service | No | Unbound | Not included |

Note: the table shows the overall effects transferred to GTAP sectors.
* The barrier estimates cover only the USA and are not sufficient to unambiguously quantify the effects of the EU's offer. Therefore, the formal model analysis does not include any direct effects of the EU's offer. However, the analysis includes spill-over effects and a scenario that analyses the benefits from binding the current liberalisation level for maritime transport.
Source: Copenhagen Economics.

To assume that all discrimination will be removed from business services, financial services, communications services as well as for distribution services is probably overestimated. Nevertheless, this interpretation fulfils three important objectives: first, the interpretation can be presented in the model analysis on the basis of existing data for price and cost effects (this increases the distinctness of the analysis and eliminates the need for arbitrary preconditions). Second, the interpretation is clear, and it implies that the final results may be interpreted in relation to the real effects in different countries and sub-sectors. Third, the optimistic interpretation compensates for the fact that the analysis cannot capture all the effects of the EU's offer in the sectors where there exist no estimates for price and cost effects.

Attention is drawn to the fact that the existing estimates for price and cost effects of barriers to transport services are not sufficient to enable an unambiguous quantification of barrier reductions in the EU's offer. At this point, data regarding the maritime transport sector are too sparse and the existing analysis methods (Fink et al., 2002; Kang, 2000) are not satisfactorily developed. The interpretation in relation to the formal model analysis of the Doha Round will therefore be that the EU's offer will have no effects on maritime transport services. This interpretation applies only to this model analysis. It does not imply that in reality there are no barriers in the field of maritime transport that, if they are reduced, will result in economic benefits. Therefore, the analysis of the Doha Round probably underestimates the effects of the EU's offer.

## Regions in the scenarios

The effects of the EU's offer are calculated for 15 regions. The OECD, which receives almost 90 per cent of Danish exports of services, is represented by eight regions (inclusive of Denmark).

The scenario analysis requires a division of the regions into industrialised countries and developing countries. It is a difficult task to divide the countries into different categories, and there are no WTO definitions of industrialised countries and developing countries. In order to reflect general expectations that most progress in services will take place within the OECD, the division applied assumes that all European countries and all OECD countries are industrialised countries. All other countries are classified as developing countries. Attention is drawn to the fact that the objective of the division is merely to capture the defined scenarios in this analysis in the best possible manner.

In practice, the EU applies a much more detailed division when demands on third countries are drawn up. The most comprehensive demands are made with regard to a group of industrialised countries and developing countries on the increase. Other countries are divided into a group of middle-income countries as well as a group of the poorest and least developed countries (so-called LDC countries). In practice, this detail level is, however, not possible in this analysis due to the poor quality of the necessary statistics.

Table 2 presents the regions defined in the analysis and their classification for the scenario analysis. The exact definition of each region is presented in Annex V.

Table 2: Regions in the analysis

| Region | Type |
|---|---|
| Denmark | Industrialised country |
| Sweden | Industrialised country |
| Germany | Industrialised country |
| Rest of EU | Industrialised country |
| US | Industrialised country |
| Japan | Industrialised country |
| Australia and New Zealand | Industrialised country |
| Rest of OECD/Europe | Industrialised country |
| China | Developing country |
| India | Developing country |
| High-income Asia | Developing country |
| Rest of Asia-Pacific | Developing country |
| Latin America | Developing country |
| Africa | Developing country |

Note: the exact definition of each region is presented in Annex V.

Source: Copenhagen Economics.

## Overview of tax equivalents

The economic analysis is based on the price and cost effects that are the result of barriers. The price and cost effects are calculated as hypothetical tax equivalents in order to compare them with ordinary tariffs on trade in goods. The tax equivalents may be interpreted as hypothetical taxes that are calculated so that they generate economic effects that are equivalent to the economic effects of the actual barriers. The tax equivalents are calculated by means of economic models that include detailed barrier data and a vast number of variables at corporate level.

The estimates for barriers to trade in services are based on the groundbreaking work of the Australian Productivity Commission (APC). Table 3 presents an overview of the estimates that have been used in this analysis. As the estimates only cover selected business sectors, there is not complete agreement between the sectors in the model and the sectors for which the estimates have been calculated. The tax equivalents for, for example, engineering services are therefore assumed to be representative of all business services.

In the same way, it is implied that the tax equivalents for maritime transport (which are exclusively based on data for the USA) are representative of all transport services. This is a deliberate choice which reflects the predominant position of maritime transport regarding Danish exports of services. As the data do not enable an economic quantification of the barrier reductions for maritime transport services in the EU's offer, the extrapolation of the estimates for maritime transport has no bearing on the analysis of the Doha Round. Furthermore, existing tax equivalents for transport services show that the price effects of the barriers are of the same size for both maritime transport and air transport.

Table 3: Sectors and sources for tax equivalents

| Sector in model analysis | Representative sector in literature | Number of countries with estimates | Source |
|---|---|---|---|
| Business services | Engineering services | 20 | Nguyen-Hong (2000) |
| Financial services | Banking services | 29 | Kalirajan, McGuire, Nguyen-Hong and Scheule (2000) |
| Communications services | Telecommunications | 47 | Doove et al. (2001) |
| Distribution services | | 18 | Kalirajan (2000) |
| Transport services | Maritime transport | (1) | Fink, Mattoo and Neagu (2002) |

Note: regarding maritime transport services, there exists only one single estimate for the USA's imports.

Source: Copenhagen Economics.

Table 4 shows how non-existent estimates are handled for each region and sector in the analysis. Coverage is reasonable for the leading European and Asian economies, but very modest for the developing countries. Non-existent estimates are replaced with unweighted averages for the most relevant region. The regional averages are as a rule calculated on the basis of the existing estimates for each region. For the regions where no estimates exist, the regional estimate for a comparable region is used. With respect to transport services, the individual available estimate is used for all regions.

Table 4: The handling of non-existent estimates for tax equivalents

| Region | Business services | Financial services | Communi-cations | Distribution |
|---|---|---|---|---|
| Denmark | OK | OK | OK | EU average |
| Sweden | OK | OK | EU average | EU average |
| Germany | OK | OK | OK | EU average |
| Rest of EU | EU average | EU average | EU average | EU average |
| USA | OK | EU average | OK | OK |
| Japan | OK | OK | OK | OK |
| Australia and New Zealand | Regional average | Regional average | Regional average | Regional average |
| Rest of OECD/Europe | Regional average | Regional average | Regional average | Regional average |
| China | Average for Asia-Pacific | Average for Asia-Pacific | Average for Asia-Pacific | Average for Asia-Pacific |
| India | Average for Asia-Pacific | Average for Asia-Pacific | Average for Asia-Pacific | Average for Asia-Pacific |
| High-income Asia | Regional average | Regional average | Regional average | Regional average |
| Rest of Asia-Pacific | Regional average | Regional average | Regional average | Regional average |
| Latin America | Average for Asia-Pacific | Regional average | Regional average | Regional average |
| Africa | Average for Asia-Pacific | Average for Asia-Pacific | Average for Asia-Pacific | Average for Asia-Pacific |

Note: 'OK' means that relevant estimates exist. The dark fields indicate regions where estimates from other regions are used. Regional averages are un-weighted and calculated on the basis of existing estimates.

Source: Copenhagen Economics.

The exact tax equivalents that are used to calculate the regional averages are presented in Annex VII.

*Price-increasing and cost-increasing barriers*

Barriers impact on the suppliers of services in two ways. First, some barriers protect already established enterprises. It means less competition and enables established enterprises to demand higher prices. This type of barrier is called ”price-increasing” barriers. Second, some barriers generate real costs for the suppliers of services (for example by requiring comprehensive paper work). This type of barrier is called ”cost-increasing ” barriers. Therefore, the estimates for tax equivalents contain both price-increasing and cost-increasing barriers.

Two general trends indicate that the complete set of tax equivalents provide a presentation of the trade barriers that is in agreement with ordinary economic intuition.

First, tax equivalents are lower in sectors that generally are less regulated (for example business services and trade). By contrast, the tax equivalents are higher in more regulated sectors (for example financial services and communications services). Attention is drawn to the fact that the tax equivalents for communications services do not allow for the comprehensive, unilateral liberalisation of the telecommunications area that has taken place within the EU in recent years. The tax equivalents are, however, consistent with the fact that the price and cost effects of liberalisation had not achieved any considerable impact in 2001 (the base year for the database GTAP6).

Second, the tax equivalents are generally lower in industrialised countries and higher in developing countries. This is in accordance with the generally held view that industrialised countries typically have more liberalised economies than developing countries.

It is, however, possible to interpret the existing estimates for price effects on business services and financial services in different ways in relation to how the tax equivalents impact on domestic and foreign enterprises[3]. The analysis is, therefore, based both on a moderate and an aggressive interpretation of the estimates. The moderate interpretation implies that domestic enterprises cannot demand higher prices to the same extent as foreign enterprises. The interpretation is very close to the immediate significance of the estimates, but the limitations of the underlying econometric method underestimate the importance of the barriers. By contrast, the aggressive interpretation implies that domestic enterprises can raise their prices to the same extent as foreign enterprises. This interpretation is more intuitive but not quite consistent with the econometric method for calculating the estimates. The aggressive interpretation is, therefore, only used to calculate an upper limit to the aggregate effects, but not to analyse more specific variables as for example prices or exports.

Tables 5 to 7 present a preliminary picture of the price and cost effects in the present situation. Table 5 presents the moderate interpretation of the estimates for price effects, and Table 6 shows the aggressive interpretation.

[3] With respect to communications services and transport services, the existing estimates do not distinguish between domestic and foreign enterprises. It means that only one interpretation is possible.

Table 5: Price-increasing barriers in the current situation (moderate interpretation)

| | Business services | | Financial services | | Communi-cations | | Transport | |
|---|---|---|---|---|---|---|---|---|
| | Dom. | For. | Dom. | For. | Dom. | For. | Dom. | For. |
| Denmark | 0.0 | 1.1 | 0.0 | 5.3 | 39.0 | 39.0 | 8.7 | 8.7 |
| Sweden | 0.0 | 6.8 | 0.0 | 5.3 | 30.2 | 30.2 | 8.7 | 8.7 |
| Germany | 0.0 | 10.2 | 0.0 | 5.3 | 38.0 | 38.0 | 8.7 | 8.7 |
| Rest of EU | 0.0 | 5.0 | 0.0 | 5.3 | 29.5 | 29.5 | 8.7 | 8.7 |
| USA | 0.0 | 7.4 | 0.0 | 5.3 | 38.0 | 38.0 | 8.7 | 8.7 |
| Japan | 0.0 | 6.6 | 10.0 | 15.3 | 23.0 | 23.0 | 8.7 | 8.7 |
| Australia and New Zealand | 0.0 | 2.8 | 0.0 | 9.3 | 19.0 | 19.0 | 8.7 | 8.7 |
| Rest of OECD/Europe | 0.0 | 9.8 | 14.9 | 16.0 | 30.3 | 30.3 | 8.7 | 8.7 |
| China | 0.0 | 11.1 | 12.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |
| India | 0.0 | 11.1 | 12.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |
| High-income Asia | 0.0 | 5.0 | 8.4 | 31.5 | 38.0 | 38.0 | 8.7 | 8.7 |
| Rest of Asia-Pacific | 0.0 | 11.1 | 12.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |
| Latin America | 0.0 | 11.1 | 13.7 | 19.2 | 30.3 | 30.3 | 8.7 | 8.7 |
| Africa | 0.0 | 11.1 | 12.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |

Note: the table shows tax equivalents in percentage. Dom.: Domestic, For.: Foreign.
Source: Copenhagen Economics.

Table 6: Price-increasing barriers in the current situation (aggressive interpretation)

| | Business services | | Financial services | | Communi-cations | | Transport | |
|---|---|---|---|---|---|---|---|---|
| | Dom. | For. | Dom. | For. | Dom. | For. | Dom. | For. |
| Denmark | 1.1 | 1.1 | 5.3 | 5.3 | 39.0 | 39.0 | 8.7 | 8.7 |
| Sweden | 6.8 | 6.8 | 5.3 | 5.3 | 30.2 | 30.2 | 8.7 | 8.7 |
| Germany | 10.2 | 10.2 | 5.3 | 5.3 | 38.0 | 38.0 | 8.7 | 8.7 |
| Rest of EU | 5.0 | 5.0 | 5.3 | 5.3 | 29.5 | 29.5 | 8.7 | 8.7 |
| USA | 7.4 | 7.4 | 5.3 | 5.3 | 38.0 | 38.0 | 8.7 | 8.7 |
| Japan | 6.6 | 6.6 | 15.3 | 15.3 | 23.0 | 23.0 | 8.7 | 8.7 |
| Australia and New Zealand | 2.8 | 2.8 | 9.3 | 9.3 | 19.0 | 19.0 | 8.7 | 8.7 |
| Rest of OECD/Europe | 9.8 | 9.8 | 16.0 | 16.0 | 30.3 | 30.3 | 8.7 | 8.7 |
| China | 11.1 | 11.1 | 47.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |
| India | 11.1 | 11.1 | 47.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |
| High-income Asia | 5.0 | 5.0 | 31.5 | 31.5 | 38.0 | 38.0 | 8.7 | 8.7 |
| Rest of Asia-Pacific | 11.1 | 11.1 | 47.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |
| Latin America | 11.1 | 11.1 | 19.2 | 19.2 | 30.3 | 30.3 | 8.7 | 8.7 |
| Africa | 11.1 | 11.1 | 47.6 | 47.6 | 33.8 | 33.8 | 8.7 | 8.7 |

Note: the table shows tax equivalents in percentage. Dom.: Domestic, For.: Foreign.
Source: Copenhagen Economics.

Table 7: Cost-increasing barriers in the current situation

| | Business services | | Distribution services | |
|---|---|---|---|---|
| | Dom. | For. | Dom. | For. |
| Denmark | 0.7 | 0.7 | 1.7 | 3.1 |
| Sweden | 0.7 | 0.7 | 1.7 | 3.1 |
| Germany | 2.9 | 2.9 | 1.7 | 3.1 |
| Rest of EU | 2.5 | 2.5 | 1.7 | 3.1 |
| USA | 3.8 | 3.8 | 0.0 | 2.3 |
| Japan | 2.2 | 2.2 | 2.3 | 2.3 |
| Australia and New Zealand | 2.1 | 2.1 | 0.0 | 0.7 |
| Rest of OECD/Europe | 2.3 | 2.3 | 3.1 | 4.2 |
| China | 4.3 | 4.3 | 2.0 | 5.9 |
| India | 4.3 | 4.3 | 2.0 | 5.9 |
| High-income Asia | 0.8 | 0.8 | 0.0 | 0.0 |
| Rest of Asia-Pacific | 4.3 | 4.3 | 2.0 | 5.9 |
| Latin America | 4.3 | 4.3 | 1.3 | 1.3 |
| Africa | 4.3 | 4.3 | 2.0 | 5.9 |

Note: the table shows tax equivalents in percentage.
Source: Copenhagen Economics.

## Implementation of the scenarios when using the moderate interpretation

This section provides a presentation of how the tax equivalents for each scenario have been calculated on the basis of the moderate interpretation of statistics. The complete presentation of tax equivalents is to be found in Annex VI. The tax equivalents in the previous section constitute the direct basis for the implementation of the scenarios. The exact implementation differs slightly from one sector to another, depending on the features of the underlying estimates.

*Global liberalisation according to the EU's offer*

The core of this scenario is to eliminate discriminating barriers. The technical implementation varies between the sectors, depending on how the underlying estimates have been calculated.

- Business services: the tax equivalents for the current situation show that discrimination exists as a difference in the price-increasing barriers. Discrimination is eliminated through the introduction of the tax equivalents for domestic enterprises and for foreign enterprises. Attention is drawn to the fact that cost-increasing barriers are not affected.

- Financial services: the tax equivalents for the current situation show discrimination as a difference in the price –increasing barriers. Discrimination is eliminated through the introduction of the tax equivalents for domestic enterprises and for foreign enterprises as well. The effect is relatively modest in the OECD (a reduction of about five percentage points), but very large in the developing countries (reductions of up to 35 percentage points).

- Distribution services: discrimination is eliminated through the introduction of the cost-increasing tax equivalents for domestic enterprises and for foreign enterprises as well. The effect is modest (reductions of one to five percentage points).

- Communications services: the underlying tax equivalents do not distinguish between domestic and foreign enterprises. It is, therefore, assumed that the elimination of discrimination will reduce the price-increasing tax equivalents by five per cent for all enterprises.

- Transport services: no change. The reason is that the data for the existing estimates are too uncertain to enable an interpretation of the barrier reductions of the EU's offer.

*Differentiated liberalisation according to the EU's offer*
The scenario has been implemented in the same way as the previous scenario based on global liberalisation, but with the difference that discrimination is only reduced by 50 per cent in the developing countries. Thus, an indirect precondition of the implementation is that the political decision-makers use the price-increasing tax equivalents as a policy variable.

*Exemptions for developing countries*
The scenario has been implemented in the same way as the scenario based on global liberalisation, but with the difference that discrimination is only eliminated for industrialised countries.

*Full liberalisation of trade in services*
In this scenario, all tax equivalents will be 0.0 for all countries and sectors.

*Best-case scenario*
All tax equivalents will be reduced by 90 per cent for all sectors (inclusive of transport services) in industrialised countries, but without any change in the developing countries.

*Worst-case scenario*
All developing countries will introduce 50 per cent import tariffs on cross-border imports of transport services.

## Implementation of the scenarios when using the aggressive interpretation

This section provides a presentation of how the tax equivalents for each scenario have been calculated on the basis of the aggressive interpretation of statistics. The complete presentation of tax equivalents is to be found in Annex VI. The tax equivalents in section 5.3 constitute the direct basis for the implementation of the scenarios. The exact implementation differs slightly from one sector to another, depending on the features of the underlying estimates.

*Global liberalisation according to the EU's offer*
The core of this scenario is to eliminate discriminating barriers. The technical implementation varies between the sectors, depending on how the underlying estimates have been calculated.

- Business services: the tax equivalents for the current situation are interpreted in such a way that discrimination appears in the form of price-increasing barriers that apply to both domestic and foreign enterprises. Discrimination is eliminated through the introduction of the original tax equivalents for domestic enterprises and for foreign enterprises as well. This implies that all barriers are eliminated. Attention is drawn to the fact that cost-increasing barriers are not affected.

- Financial services: the tax equivalents for the current situation are interpreted in such a way that the price-increasing barriers to foreign enterprises apply to all enterprises.

Discrimination is eliminated through the introduction of the original tax equivalents for domestic enterprises for all enterprises (domestic and foreign). The effect is relatively modest in the OECD (a reduction of about five percentage points), but very large in the developing countries (reductions of up to 35 percentage points).

- Distribution services: discrimination is eliminated through the introduction of the original cost-increasing tax equivalents for domestic enterprises and for foreign enterprises as well. The effect is modest (reductions of about one to five percentage points).

- Communications services: the underlying tax equivalents do not distinguish between domestic and foreign enterprises. It is, therefore, assumed that the elimination of discrimination will reduce the price-increasing tax equivalents by five per cent for all enterprises.

- Transport services: no change. The reason is that the data for the existing estimates are too uncertain to enable an interpretation of the barrier reductions of the EU's offer. The existing estimate does not distinguish between domestic and foreign enterprises. It means that only one interpretation is possible.

*Differentiated liberalisation according to the EU's offer*
The scenario has been implemented in the same way as the previous scenario based on global liberalisation, but with the difference that discrimination is only reduced by 50 per cent in the developing countries. Thus, an indirect precondition of the implementation is that the political decision-makers use the price-increasing tax equivalents as a policy variable.

*Exemptions for developing countries*
The scenario has been implemented in the same way as the scenario based on global liberalisation, but with the difference that discrimination is only eliminated for industrialised countries.

*Full liberalisation of trade in services*
In this scenario, all tax equivalents will be 0.0 for all countries and sectors.

*Best-case scenario*
All tax equivalents will be reduced by 90 per cent for all sectors (inclusive of transport services) in industrialised countries, but without any change in the developing countries.

*Worst-case scenario*
All developing countries will introduce 50 per cent import tariffs on cross-border imports of transport services.

# Annex V: Regional aggregation in the analysis

**Table 1: Regions in the model analysis**

| Region in the model | Country |
|---|---|
| Denmark | Denmark |
| Sweden | Sweden |
| Germany | Germany |
| The Rest of EU | Austria, Belgium, Finland, England, Greece, Ireland, Italy, Luxemborg, Netherlands, Portugal, Spain, Cypress, Czech Republic, Hungry,Malta, Pollen, Slovakia, Slovenia, Estonia, Latvia, Lithuania. |
| USA | USA |
| Japan | Japan |
| Australia and New Zealand | Australia and New Zealand |
| The rest of OECD/Europe | Canada, Switzerland, Turkey, rest of the EFTA, Albania, Bulgaria, Croatia, Romania, the rest of Europe |
| China | China, Hong Kong |
| India | India |
| High Income Asia | Singapore, South Korea, Taiwan, the rest of South Asia |
| The rest of Asia Pacific | Indonesia, Malaysia, Philippines, Thailand, Vietnam, Bangladesh, Sri Lanka, the rest of East Asia, the rest of South East Asia. |
| Latin America | Argentina, Brazil, Chile, Colombia, Peru, Uruguay, Venezuela, the rest of Andean Pact, the rest of South America, Central America,Mexico, the rest of FTAA, the rest of Caribbean. |
| Africa | Morocco, Tunisia, Botswana, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe, Madagascar, Uganda, South Africa, the rest of SADC, the rest of Africa. |

Source: Copenhagen Economics

# Annex VI: Tax equivalents in the analyses

## Conservative estimates

**Cost increasing barriers to trade and distribution (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,3 | 0,0 | 0,0 |
| Sweden | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,3 | 0,0 | 0,0 |
| Germany | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,3 | 0,0 | 0,0 |
| Rest of the EU | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,3 | 0,0 | 0,0 |
| USA | 0,0 | 2,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,2 | 0,0 | 0,0 |
| Japan | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 0,2 | 0,2 | 0,0 | 0,0 |
| Australia and New Zealan | 0,0 | 0,7 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 0,0 | 0,0 |
| Rest of the OECD | 3,1 | 4,2 | 3,1 | 3,1 | 3,1 | 3,1 | 3,1 | 3,1 | 0,3 | 0,4 | 0,0 | 0,0 |
| China | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 5,9 | 0,0 | 0,0 |
| India | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 5,9 | 0,0 | 0,0 |
| High income Asia | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Other Asia-Pacific | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 5,9 | 0,0 | 0,0 |
| Latin America | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 0,0 | 0,0 |
| Africa | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 5,9 | 0,0 | 0,0 |

**Price increasing barriers to financial services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 0,0 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,0 | 0,0 |
| Sweden | 0,0 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,0 | 0,0 |
| Germany | 0,0 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,0 | 0,0 |
| Rest of the EU | 0,0 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,0 | 0,0 |
| USA | 0,0 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,0 | 0,0 |
| Japan | 10,0 | 15,3 | 10,0 | 10,0 | 10,0 | 10,0 | 10,0 | 10,0 | 1,0 | 1,5 | 0,0 | 0,0 |
| Australia and New Zealan | 0,0 | 9,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,9 | 0,0 | 0,0 |
| Rest of the OECD | 14,9 | 16,0 | 14,9 | 14,9 | 14,9 | 14,9 | 14,9 | 14,9 | 1,5 | 1,6 | 0,0 | 0,0 |
| China | 12,6 | 47,6 | 12,6 | 12,6 | 12,6 | 28,5 | 12,6 | 47,6 | 12,6 | 47,6 | 0,0 | 0,0 |
| India | 12,6 | 47,6 | 12,6 | 12,6 | 12,6 | 28,5 | 12,6 | 47,6 | 12,6 | 47,6 | 0,0 | 0,0 |
| High income Asia | 8,4 | 31,5 | 8,4 | 8,4 | 8,4 | 19,9 | 8,4 | 31,5 | 8,4 | 31,5 | 0,0 | 0,0 |
| Other Asia-Pacific | 12,6 | 47,6 | 12,6 | 12,6 | 12,6 | 28,5 | 12,6 | 47,6 | 12,6 | 47,6 | 0,0 | 0,0 |
| Latin America | 13,7 | 19,2 | 13,7 | 13,7 | 13,7 | 14,2 | 13,7 | 19,2 | 13,7 | 19,2 | 0,0 | 0,0 |
| Africa | 12,6 | 47,6 | 12,6 | 12,6 | 12,6 | 28,5 | 12,6 | 47,6 | 12,6 | 47,6 | 0,0 | 0,0 |

**Price increasing barriers to business services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 0,0 | 1,1 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 0,0 | 0,0 |
| Sweden | 0,0 | 6,8 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,7 | 0,0 | 0,0 |
| Germany | 0,0 | 10,2 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 1,0 | 0,0 | 0,0 |
| Rest of the EU | 0,0 | 5,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,0 | 0,0 |
| USA | 0,0 | 7,4 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,7 | 0,0 | 0,0 |
| Japan | 0,0 | 6,6 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,7 | 0,0 | 0,0 |
| Australia and New Zealan | 0,0 | 2,8 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,3 | 0,0 | 0,0 |
| Rest of the OECD | 0,0 | 9,8 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 1,0 | 0,0 | 0,0 |
| China | 0,0 | 11,1 | 0,0 | 0,0 | 0,0 | 5,6 | 0,0 | 11,1 | 0,0 | 11,1 | 0,0 | 0,0 |
| India | 0,0 | 11,1 | 0,0 | 0,0 | 0,0 | 5,6 | 0,0 | 11,1 | 0,0 | 11,1 | 0,0 | 0,0 |
| High income Asia | 0,0 | 5,0 | 0,0 | 0,0 | 0,0 | 2,5 | 0,0 | 5,0 | 0,0 | 5,0 | 0,0 | 0,0 |
| Other Asia-Pacific | 0,0 | 11,1 | 0,0 | 0,0 | 0,0 | 5,6 | 0,0 | 11,1 | 0,0 | 11,1 | 0,0 | 0,0 |
| Latin America | 0,0 | 11,1 | 0,0 | 0,0 | 0,0 | 5,6 | 0,0 | 11,1 | 0,0 | 11,1 | 0,0 | 0,0 |
| Africa | 0,0 | 11,1 | 0,0 | 0,0 | 0,0 | 5,6 | 0,0 | 11,1 | 0,0 | 11,1 | 0,0 | 0,0 |

**Cost increasing barriers to businessl services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,1 | 0,1 | 0,0 | 0,0 |
| Sweden | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,1 | 0,1 | 0,0 | 0,0 |
| Germany | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 0,3 | 0,3 | 0,0 | 0,0 |
| Rest of the EU | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 0,2 | 0,2 | 0,0 | 0,0 |
| USA | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 0,4 | 0,4 | 0,0 | 0,0 |
| Japan | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 0,2 | 0,2 | 0,0 | 0,0 |
| Australia and New Zealan | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 0,2 | 0,2 | 0,0 | 0,0 |
| Rest of the OECD | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 0,2 | 0,2 | 0,0 | 0,0 |
| China | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| India | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| High income Asia | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,0 | 0,0 |
| Other Asia-Pacific | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| Latin America | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| Africa | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |

**Price increasing barriers to communication services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 39,0 | 39,0 | 37,1 | 37,1 | 37,1 | 37,1 | 37,1 | 37,1 | 3,9 | 3,9 | 0,0 | 0,0 |
| Sweden | 30,2 | 30,2 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 3,0 | 3,0 | 0,0 | 0,0 |
| Germany | 38,0 | 38,0 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 3,8 | 3,8 | 0,0 | 0,0 |
| Rest of the EU | 29,5 | 29,5 | 28,0 | 28,0 | 28,0 | 28,0 | 28,0 | 28,0 | 2,9 | 2,9 | 0,0 | 0,0 |
| USA | 38,0 | 38,0 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 3,8 | 3,8 | 0,0 | 0,0 |
| Japan | 23,0 | 23,0 | 21,9 | 21,9 | 21,9 | 21,9 | 21,9 | 21,9 | 2,3 | 2,3 | 0,0 | 0,0 |
| Australia and New Zealan | 19,0 | 19,0 | 18,1 | 18,1 | 18,1 | 18,1 | 18,1 | 18,1 | 1,9 | 1,9 | 0,0 | 0,0 |
| Rest of the OECD | 30,3 | 30,3 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 3,0 | 3,0 | 0,0 | 0,0 |
| China | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |
| India | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |
| High income Asia | 38,0 | 38,0 | 36,1 | 36,1 | 37,1 | 37,1 | 38,0 | 38,0 | 38,0 | 38,0 | 0,0 | 0,0 |
| Other Asia-Pacific | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |
| Latin America | 30,3 | 30,3 | 28,8 | 28,8 | 29,6 | 29,6 | 30,3 | 30,3 | 30,3 | 30,3 | 0,0 | 0,0 |
| Africa | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |

**Price increasing barriers to transport services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Sweden | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Germany | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Rest of the EU | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| USA | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Japan | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Australia and New Zealan | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Rest of the OECD | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| China | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| India | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| High income Asia | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| Other Asia-Pacific | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| Latin America | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| Africa | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |

## Agressive estimates

**Cost increasing barriers to trade and distribution (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,2 | 0,0 | 0,0 |
| Sweden | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,2 | 0,0 | 0,0 |
| Germany | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,2 | 0,0 | 0,0 |
| Other EU | 1,7 | 3,1 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 1,7 | 0,2 | 0,2 | 0,0 | 0,0 |
| USA | 0,0 | 2,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Japan | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 0,2 | 0,2 | 0,0 | 0,0 |
| Australia and New Zealan | 0,0 | 0,7 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Other OECD | 3,1 | 4,2 | 3,1 | 3,1 | 3,1 | 3,1 | 3,1 | 3,1 | 0,3 | 0,3 | 0,0 | 0,0 |
| China | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 2,0 | 0,0 | 0,0 |
| India | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 2,0 | 0,0 | 0,0 |
| High income Asia | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Other Asia-Pacific | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 2,0 | 0,0 | 0,0 |
| Latin America | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 0,0 | 0,0 |
| Africa | 2,0 | 5,9 | 2,0 | 2,0 | 2,0 | 4,0 | 2,0 | 5,9 | 2,0 | 2,0 | 0,0 | 0,0 |

**Price increasing barriers to financial services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated liberalisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 5,3 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,5 | 0,0 | 0,0 |
| Sweden | 5,3 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,5 | 0,0 | 0,0 |
| Germany | 5,3 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,5 | 0,0 | 0,0 |
| Other EU | 5,3 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,5 | 0,0 | 0,0 |
| USA | 5,3 | 5,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,5 | 0,0 | 0,0 |
| Japan | 15,3 | 15,3 | 10,0 | 10,0 | 10,0 | 10,0 | 10,0 | 10,0 | 1,5 | 1,5 | 0,0 | 0,0 |
| Australia and New Zealan | 9,3 | 9,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,9 | 0,9 | 0,0 | 0,0 |
| Other OECD | 16,0 | 16,0 | 14,9 | 14,9 | 14,9 | 14,9 | 14,9 | 14,9 | 1,6 | 1,6 | 0,0 | 0,0 |
| China | 47,6 | 47,6 | 12,6 | 12,6 | 28,5 | 28,5 | 47,6 | 47,6 | 47,6 | 47,6 | 0,0 | 0,0 |
| India | 47,6 | 47,6 | 12,6 | 12,6 | 28,5 | 28,5 | 47,6 | 47,6 | 47,6 | 47,6 | 0,0 | 0,0 |
| High income Asia | 31,5 | 31,5 | 8,4 | 8,4 | 19,9 | 19,9 | 31,5 | 31,5 | 31,5 | 31,5 | 0,0 | 0,0 |
| Other Asia-Pacific | 47,6 | 47,6 | 12,6 | 12,6 | 28,5 | 28,5 | 47,6 | 47,6 | 47,6 | 47,6 | 0,0 | 0,0 |
| Latin America | 19,2 | 19,2 | 13,7 | 13,7 | 14,2 | 14,2 | 19,2 | 19,2 | 19,2 | 19,2 | 0,0 | 0,0 |
| Africa | 47,6 | 47,6 | 12,6 | 12,6 | 28,5 | 28,5 | 47,6 | 47,6 | 47,6 | 47,6 | 0,0 | 0,0 |

**Price increasing barriers to business services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated liberalisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 1,1 | 1,1 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,1 | 0,1 | 0,0 | 0,0 |
| Sweden | 6,8 | 6,8 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,7 | 0,7 | 0,0 | 0,0 |
| Germany | 10,2 | 10,2 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 1,0 | 1,0 | 0,0 | 0,0 |
| Rest of the EU | 5,0 | 5,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,5 | 0,5 | 0,0 | 0,0 |
| USA | 7,4 | 7,4 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,7 | 0,7 | 0,0 | 0,0 |
| Japan | 6,6 | 6,6 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,7 | 0,7 | 0,0 | 0,0 |
| Australia and New Zealan | 2,8 | 2,8 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,3 | 0,3 | 0,0 | 0,0 |
| Rest of the OECD | 9,8 | 9,8 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 1,0 | 1,0 | 0,0 | 0,0 |
| China | 11,1 | 11,1 | 0,0 | 0,0 | 5,6 | 5,6 | 11,1 | 11,1 | 11,1 | 11,1 | 0,0 | 0,0 |
| India | 11,1 | 11,1 | 0,0 | 0,0 | 5,6 | 5,6 | 11,1 | 11,1 | 11,1 | 11,1 | 0,0 | 0,0 |
| High income Asia | 5,0 | 5,0 | 0,0 | 0,0 | 2,5 | 2,5 | 5,0 | 5,0 | 5,0 | 5,0 | 0,0 | 0,0 |
| Other Asia-Pacific | 11,1 | 11,1 | 0,0 | 0,0 | 5,6 | 5,6 | 11,1 | 11,1 | 11,1 | 11,1 | 0,0 | 0,0 |
| Latin America | 11,1 | 11,1 | 0,0 | 0,0 | 5,6 | 5,6 | 11,1 | 11,1 | 11,1 | 11,1 | 0,0 | 0,0 |
| Africa | 11,1 | 11,1 | 0,0 | 0,0 | 5,6 | 5,6 | 11,1 | 11,1 | 11,1 | 11,1 | 0,0 | 0,0 |

**Cost increasing barriers to business services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated liberalisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,1 | 0,1 | 0,0 | 0,0 |
| Sweden | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,7 | 0,1 | 0,1 | 0,0 | 0,0 |
| Germany | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 2,9 | 0,3 | 0,3 | 0,0 | 0,0 |
| Rest of the EU | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 0,2 | 0,2 | 0,0 | 0,0 |
| USA | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 3,8 | 0,4 | 0,4 | 0,0 | 0,0 |
| Japan | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 2,2 | 0,2 | 0,2 | 0,0 | 0,0 |
| Australia and New Zealan | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 2,1 | 0,2 | 0,2 | 0,0 | 0,0 |
| Rest of the OECD | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 2,3 | 0,2 | 0,2 | 0,0 | 0,0 |
| China | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| India | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| High income Asia | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,0 | 0,0 |
| Other Asia-Pacific | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| Latin America | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |
| Africa | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 4,3 | 0,0 | 0,0 |

**Price increasing barriers to communication services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 39,0 | 39,0 | 37,1 | 37,1 | 37,1 | 37,1 | 37,1 | 37,1 | 3,9 | 3,9 | 0,0 | 0,0 |
| Sweden | 30,2 | 30,2 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 3,0 | 3,0 | 0,0 | 0,0 |
| Germany | 38,0 | 38,0 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 3,8 | 3,8 | 0,0 | 0,0 |
| Rest of the EU | 29,5 | 29,5 | 28,0 | 28,0 | 28,0 | 28,0 | 28,0 | 28,0 | 2,9 | 2,9 | 0,0 | 0,0 |
| USA | 38,0 | 38,0 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 36,1 | 3,8 | 3,8 | 0,0 | 0,0 |
| Japan | 23,0 | 23,0 | 21,9 | 21,9 | 21,9 | 21,9 | 21,9 | 21,9 | 2,3 | 2,3 | 0,0 | 0,0 |
| Australia and New Zealan | 19,0 | 19,0 | 18,1 | 18,1 | 18,1 | 18,1 | 18,1 | 18,1 | 1,9 | 1,9 | 0,0 | 0,0 |
| Rest of the OECD | 30,3 | 30,3 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 28,7 | 3,0 | 3,0 | 0,0 | 0,0 |
| China | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |
| India | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |
| High income Asia | 38,0 | 38,0 | 36,1 | 36,1 | 37,1 | 37,1 | 38,0 | 38,0 | 38,0 | 38,0 | 0,0 | 0,0 |
| Other Asia-Pacific | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |
| Latin America | 30,3 | 30,3 | 28,8 | 28,8 | 29,6 | 29,6 | 30,3 | 30,3 | 30,3 | 30,3 | 0,0 | 0,0 |
| Africa | 33,8 | 33,8 | 32,1 | 32,1 | 32,9 | 32,9 | 33,8 | 33,8 | 33,8 | 33,8 | 0,0 | 0,0 |

**Price increasing barriers to transport services (percentage change)**

| | Baseline | | Global liberalisation according to EU's offer | | Differentiated libera-lisation according to EU's offer | | Developing countries exempted from further liberalisation | | Best case scenario | | Full liberalisation of trade in services | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Denmark | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Sweden | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Germany | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Rest of the EU | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| USA | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Japan | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Australia and New Zealan | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| Rest of the OECD | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,9 | 0,9 | 0,0 | 0,0 |
| China | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| India | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| High income Asia | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| Other Asia-Pacific | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| Latin America | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |
| Africa | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 8,7 | 0,0 | 0,0 |

## Annex VII: Original Tax equivalents

## Tax equivalents for engineering services

| | cost increasing | | price increasing | | | | | |
|---|---|---|---|---|---|---|---|---|
| | establishment | | establishment | | going concern | | total | |
| | domestic | foreign | domestic | foreign | domestic | foreign | domestic | foreign |
| Australia | 2,1 | | | 2,1 | | 0,7 | | 2,8 |
| Austria | 6,8 | | | 11,1 | | 3,5 | | 14,5 |
| Belgium | 0,7 | | | 0,3 | | 0,2 | | 0,5 |
| Canada | 2,7 | | | 3,1 | | 2,2 | | 5,3 |
| Denmark | 0,7 | | | 0,3 | | 0,8 | | 1,1 |
| Finland | 0,7 | | | 1,8 | | 0,5 | | 2,3 |
| France | 0,7 | | | 0,3 | | 0,6 | | 0,9 |
| Germany | 2,9 | | | 4,7 | | 5,5 | | 10,2 |
| Hong Kong | 2,3 | | | 3,6 | | 1,5 | | 5,1 |
| Indonesia | 3,2 | | | 9,9 | | 0,3 | | 10,2 |
| Japan | 2,2 | | | 3,1 | | 3,4 | | 6,6 |
| Mexico | 1,9 | | | 13,9 | | 0,2 | | 14,2 |
| Malaysia | 5,3 | | | 11,3 | | 0,7 | | 12 |
| Netherlands | 5,2 | | | 3,5 | | 0,2 | | 3,7 |
| Singapore | 0,8 | | | 4,9 | | 0,2 | | 5 |
| South Africa | 0,7 | | | 3,5 | | 0,2 | | 3,7 |
| Spain | 3,9 | | | 5,1 | | 3,7 | | 8,7 |
| Sweden | 0,7 | | | 5,9 | | 0,9 | | 6,8 |
| UK | 1,4 | | | 2,3 | | 0,2 | | 2,5 |
| USA | 3,8 | | | 5,1 | | 2,2 | | 7,4 |

Kilde: Nguyen-Hong (2000)

## Tax equivalents for bank services

| | price increasing | |
|---|---|---|
| | domestic | foreign |
| Argentina | 0 | 5,34 |
| Australia | 0 | 9,3 |
| Canada | 0 | 5,34 |
| Chile | 23,67 | 34 |
| Colombia | 3,73 | 18,35 |
| EU | 0 | 5,32 |
| Hong Kong | 2,97 | 6,91 |
| Indonesia | 5,26 | 49,32 |
| Japan | 9,99 | 15,26 |
| Malaysia | 21,86 | 60,61 |
| Philippines | 10,79 | 47,36 |
| Singapore | 8,39 | 31,45 |
| South Korea | 14,93 | 36,72 |
| Switzerland | 0 | 5,95 |
| Thailand | 0 | 33,06 |

Kalirajan, McGuire, Nguyen-Hong og Schuele (2000)

## Tax equivalents for distributive trade

| | cost increasing | |
|---|---|---|
| | domestic | foreign |
| Australia | 0 | 0,57 |
| Belgium | 6,69 | 4,87 |
| Canada | 0,98 | 3,09 |
| Chile | 1,92 | 1,32 |
| France | 7,1 | 5,16 |
| Greece | 0 | 0,25 |
| Hong Kong | 0 | 0,06 |
| Indonesia | 0 | 3,66 |
| Ireland | 0 | 2,7 |
| Japan | 6,79 | 2,26 |
| Malaysia | 3,97 | 8,23 |
| Netherlands | 0 | 2,73 |
| New Zealand | 0 | 0,77 |
| Singapore | 0 | 0,03 |
| South Africa | 0 | 0,47 |
| Switzerland | 8,32 | 5,24 |
| UK | 0 | 2,76 |
| USA | 0 | 2,26 |

Source: Kalirajan (2000)

# Tax equivalents for telecommunication

| | price increasing |
|---|---|
| Australia | 19 |
| Austria | 20 |
| Belgium | 52 |
| Canada | 27 |
| Denmark | 39 |
| Finland | 22 |
| France | 34 |
| Germany | 38 |
| Greece | 27 |
| Island | 54 |
| Ireland | 22 |
| Italia | 21 |
| Japan | 23 |
| Luxembourg | 59 |
| Netherlands | 23 |
| New Zealand | 21 |
| Norway | 31 |
| Portugal | 15 |
| Spain | 18 |
| Sweden | |
| Switzerland | 40 |
| Turkey | |
| UK | 47 |
| USA | 38 |
| Czech Republic | 22 |
| Hungary | 38 |
| South Korea | 14 |
| Mexico | 40 |
| Poland | 17 |
| Argentine | 45 |
| Brazil | 23 |
| Chile | 32 |
| China | |
| Colombia | 25 |
| Hong Kong | 43 |
| India | |
| Indonesia | 46 |
| Malaysia | 24 |
| Peru | 24 |
| Philippines | 23 |
| Russia | |
| Singapore | 44 |
| South Africa | |
| Taiwan | 32 |
| Thailand | 42 |
| Uruguay | 33 |
| Vietnam | |

Source: Doove et al (2001)

## Tax equivalents for maritime transport

| | price increasing |
|---|---|
| USA | 8,66 |
| Source: | Fink, Mattoo and Neagu (2002) |