

CPB Memorandum

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Reducing the administrative burden in the European Union

1 Introduction

The Netherlands wants to reduce the administrative burden for businesses between 2003 and 2007 with a quarter. With the aid of the so called Standard Cost Model (IPAL, 2003), the burden is estimated to amount to 16.4 billion euro in 2002 (IPAL, 2004). This is about 3.6 % of the Dutch gross domestic product (GDP).¹ However, a significant part of the administrative burden, over 40% of the total, is the direct result of international, mainly European legislation. This makes the reduction of the administrative burden a European issue. Besides, a reduction in one member state may affect the economies in other member states.

This memorandum considers the direct and indirect effects of reducing the administrative burden on firms. Reducing the burden is expected among other things to boost investment, adding to the increase in production and labour productivity. For an individual country a unilateral reduction probably has different effects than a reduction that is part of a co-ordinated, European effort to scale down the administrative burden of government regulations.

To assess the indirect effects, within the economy of the European Union and between European economies, we employ the CPB's general-equilibrium model WorldScan, which simultaneously takes account of the different product and factor markets in the world economy and which models many European economies in detail. The Netherlands is one of the very few countries, which currently has detailed information on the administrative burden of government regulations. Therefore, we assume that the key figures for the Netherlands also hold for the other member states of the European Union. This assumption implies that for the whole European Union an administrative burden exists of 340 billion euro in 2002. Better data for other member states are needed to arrive at a complete assessment of direct and indirect effects.

To start, we discuss the assumptions and limitations of the analysis, including the relevant properties of the model. After that, the basic results are presented. Two questions are then considered. First, what is the difference between a EU-25 co-ordinated versus a unilateral reduction, using Germany as an example? Second, what are the differences in impact on sectors? Conclusions are drawn at the end of this memorandum.

¹ The CPB (2004) has already employed the macro-economic model JADE to assess the impacts for the Dutch economy of reducing the administrative burden by 25%.

2 Instruments and assumptions

The indirect effects of reducing the administrative burden for the EU-25 are assessed by simulating the global economy with the WorldScan model (CPB, 1999). This model incorporates many sectors and many world regions. The version that we use for the simulations, also distinguishes many (large) European countries. WorldScan is a general-equilibrium model, in which product and factor markets clear instantaneously and, for example, unemployment from transitions in the economies is ignored. The simulation results therefore show structural effects in the long run and not the changes along a transition path. More details on the WorldScan model are given in Appendix A.²

We assume that the administrative costs are largely made up of wages for workers that firms need to hire to comply with government regulations and to provide the government information. Reducing the administrative burden implies that some these workers can contribute directly to production. It therefore takes the form of an increase in labour efficiency: fewer workers are needed, while production is not affected directly. We assume further that the cost reduction is achieved by making the administrative process more efficient; it does not undermine government regulations.³

The Netherlands is the only country where the administrative costs have been reliably quantified. The key figures for the Netherlands are assumed to apply to the other member states of the European Union. For 2002, the administrative burden is equivalent to 3.6% of GDP and is projected to fall with 25%. According to the WorldScan model, this amounts to an increase of labour efficiency with 1.6%. In the basic simulations, the increase in labour efficiency is the same for all countries and sectors in the European Union. Later we will reconsider the assumption of equal increases across sectors.

² We have chosen the so called Strong Europe scenario (de Mooij and Tang, 2003) as the economic point of departure for the policy shock. This scenario assumes a balance between an equitable distribution of welfare and improving economic efficiency. Furthermore, the European Union becomes a success, and integration advances - geographically, economically and politically. For more information on this scenario, we refer to the underlying publication. Changes resulting from the policy shock are reported relative to the Strong Europe scenario.

³ So, other implications for welfare or production than the change in labour efficiency do not exist.

3 Basic results

- *The initial, partial impact on real GDP of a reduction in the administrative burden with 25 % for the whole EU-25 amounts to 1.0 %.*
- *Through extra investment the long- term effect on real GDP is larger than the initial effect and amounts to 1.4 %.*
- *When taking R&D spillovers into account, the long-term effect on real GDP rises to 1.7 %.*
- *As a result of terms-of-trade losses, the welfare gains for the EU-25 are lower than the growth in real GDP, but the difference is small.*

This section discusses the outcomes of two simulations. In both simulations the labour efficiency jumps with 1.6 % for all sectors and EU-25 countries in 2005. The difference between the two simulations concerns the assumption about R&D spillovers: in one they are assumed to be absent, whereas in the other they are included. This allows us to decompose the indirect effects into two components: extra capital accumulation and extra R&D investment. We will report in this section only the results for the EU-25. The effects for individual EU-25 countries follow similar patterns, and the results for a few major EU-25 regions are given in Appendix B.

The initial, partial impact on real GDP from reducing the administrative costs with 25 % is around $1.6 * 0.638 = 1.0$ % (where 0.638 is the mean labour-income share for the EU-25). The first column in the table 1 shows that the first-year effect according to the model is slightly larger than that: 1.1% rather than 1.0%. This follows from a (modest) influx of capital.⁴ The higher labour efficiency leads to a higher return on investment, inducing investors to reallocate funds towards the European Union.

The second column shows that the long-term effect is even larger. A higher income implies higher savings, more investment and extra capital. The extra savings lead to a fall in the user costs of capital, almost back to their original level. The long-term increase of real GDP is 1.4%. For various reasons this is less than the 1.6% increase in labour efficiency.⁵

In the WorldScan model domestic and foreign products are imperfect substitutes. The extra production is partly sold abroad, but this requires a fall in price. Export prices will decrease

⁴ Even though mobility of financial capital is high, the mobility of real capital is limited. The main reason is that the increase in production leads to terms-of-trade losses, which depresses the return on capital.

⁵ There are at least three reasons: terms-of-trade losses, fixed production factors (i.e. land) and a shift towards labour-intensive services.

relative to import prices, resulting in a modest terms-of-trade loss of 0.1%. As a result of this loss, the increase in consumption – and in economic welfare in terms of income – is slightly less than the increase in GDP. In the next section, we will look deeper into the terms-of-trade effect.

The third column in table 1 shows the effect when the link between R&D (spillovers) and productivity is also taken into account. This link works in the following way. A rise in production results in more spending on R&D in each sector. The increase in R&D expenditure has an external (unintentional) effect on productivity, not only in the sector itself but also in the sectors that buy intermediates from this sector. The extra, positive effect on productivity leads to an additional increase in real GDP. With R&D spillovers the total long-term effect on real GDP is 1.7 % for the EU-25, rather than 1.4% without spillovers.

Table 1 Effects for the EU-25 of reducing the administrative burden for all its members by 25 %

	First-year effect	Long-term effect Without R&D spillovers	Long-term effect With R&D spillovers
Changes in % relative to the baseline			
Production and inputs			
Gross domestic product	1.1	1.4	1.7
Unemployment rate	0.0	0.0	0.0
Real average wage	1.0	1.3	1.7
Domestic capital (volume)	0.3	1.0	1.3
Net exported capital ^a	-0.3	-0.1	-0.1
User costs of capital	0.6	0.1	0.2
Final demand (volumes)			
Consumption	1.0	1.3	1.7
Investment	1.0	1.4	1.7
Exports	1.2	1.3	1.7
Imports	0.8	1.2	1.5
Prices			
Consumption	-0.2	-0.2	-0.2
Real export prices	0.0	-0.0	-0.1
Real import price	0.1	0.1	0.0
Terms of trade	-0.1	-0.1	-0.1
Welfare			
Consumption per capita	1.0	1.3	1.7

^a changes as an absolute differences to the baseline

4 EU-25 coordination versus unilateral reduction

- *With Germany as an example, the simulations show that an EU-25 co-ordinated reduction of the administrative burden improves the terms-of-trade (with 0.1 %), compared to a unilateral reduction.*
- *The GDP increase from a EU-25 co-ordinated reduction is 0.15% higher than the increase from unilateral reduction, mainly through extra R&D spillovers.*

There are in principle two reasons for co-ordinated action within the European Union to bring back the costs of administrative procedures. First, 40% of the costs follow directly from international, mainly European requirements. An individual EU member state is therefore only able to reduce the administrative burden with a quarter in the context of an EU-25 co-ordinated effort. Second, a unilateral reduction by one member state has a positive effect on the economies of the member states. Higher production does not fully translate in higher income as a result of benefit leakage to other countries. Part of the increase is lost through lower export prices. The trading partners benefit: they see their import prices fall. Moreover, higher production leads to higher investment in R&D. This has a positive, external effect on productivity, not only in the country itself but also in the country's trading partners.

How important are the spillovers through terms-of-trade changes and through R&D? To establish that, we show the effects for one country from a unilateral and co-ordinated reduction in administrative costs. Germany is taken as an example. It is a large economy that can potentially generate important spillovers within Europe.

Table 2 shows that a unilateral reduction in Germany leads to a term-of-trade loss. Germany has to increase its exports without expanding export markets and wants to raise its imports without additional production in other EU-countries. Therefore, the German export prices decrease with 0.26 % relative to the import prices. As a consequence, the increase in consumption is less than the increase in GDP. This logically corresponds to falling import prices and rising export prices for the other European Union members. The terms-of-trade loss for Germany thus has its counterpart in terms-of-trade gains for the other EU-25 countries, although the influence is small (0.02%). In the case of a co-ordinated reduction, the German terms-of-trade loss is smaller, -0.17% instead of -0.26%. In this case the German export markets expand and the production of its imports increases as well.

Table 2 Long-term effects of reducing the administrative burden for Germany: unilateral versus EU-25 co-ordination

Long-term effect	unilateral action in Germany		co-ordinated action
	Germany	EU-25 excl. Germany	Germany
Changes in %, relative to the baseline			
Production: gross domestic product	1.61	0.04	1.75
Terms of trade	-0.26	0.02	-0.17
Welfare: consumption per capita	1.48	0.05	1.66

Furthermore, for Germany, the boost in production is larger with co-ordinated rather than unilateral reduction in administrative costs. The increase in GDP is 1.75% rather than 1.61 %. The increase in consumption is even slightly larger, 1.66% rather than 1.48%. The reason is not only limited terms-of-trade losses but also gains from higher R&D expenditure in other EU member states.

A EU-25 co-ordinated action is important to reduce the administrative burden with 25 % in an individual country. An estimated over 40% of the administrative burden follows international regulations (for a large part from the European Union) that a country cannot change on its own. Moreover, the simulations show that the gains from this co-ordinated reduction are somewhat larger than from a unilateral reduction. The main reason is not terms-of-trade effects but mainly spillovers from extra R&D investment.

5 Sectoral structure

- *Using information on the sectoral distribution of the administrative burden in the Netherlands, the sectoral pattern is found to shift towards agriculture and services.*
- *Assuming a different sectoral distribution of the administrative burden does not have a substantial effect on the macroeconomic results for the European Union.*

In the basic simulations the administrative burden is evenly distributed across sector, i.e. all sectors in the EU-25 see labour efficiency increase with 1.6 %. However, for the Netherlands data on the sectoral distribution are available (see EIM, 2004) and they do not support the assumption of an even distribution. Therefore, we ran a simulation with a different, uneven sectoral distribution, where the data for the Netherlands have been applied to the other EU countries. Note that the reduction rate (i.e. 25%) is still assumed to be the same across sectors.

The results in table 3 show the same macroeconomic outcome as before, giving some confidence in the robustness of our analysis. However, some interesting differences arise. In the benchmark simulations the sectors Agriculture (1.0%) and Raw Materials (1.0%) show a

smaller increase in real value added than the other sectors. These broadly defined sectors use a fixed factor (land, natural resources) in the production, restraining the increase in value added. Industry sees the highest growth in real value added, since R&D activities are concentrated in this sector.

Table 3	Long term consequences of the administrative burden distribution for sectors in the EU-25	
	Even sectoral distribution	Sectoral distribution EIM
	Changes in %, relative to the baseline	
Value added by broad sectors		
Agriculture	1.0	3.0
Raw materials	1.0	0.6
Industry	1.8	1.5
Services	1.7	1.9
Macroeconomic results		
Gross domestic product	1.7	1.8
Terms-of-trade	-0.1	-0.0
Consumption per capita	1.7	1.7

Instead, according to the EIM data the administrative burden on the sectors Agriculture and Services is relatively high, resulting in a relative higher labour productivity growth in these sectors. The burden on industry is relatively low, and the increase in productivity is thus also relatively low.

6 Conclusions

Based on Dutch data, reducing the administrative burden with 25% leads to a 1.7% increase in real GDP for the European Union. The long-term effect is higher than the initial impact, since the reduction induces extra capital accumulation and brings spillovers from extra R&D. The production growth is not fully translated into welfare gains. The gap between the two follows from a loss in terms-of-trade, but is generally small. For individual EU-25 member states the effects are broadly similar.

The simulations show that the gains from a co-ordinated reduction are somewhat larger than from a unilateral reduction. The main reason is not terms-of-trade effects but rather spillovers from extra R&D investment. The macro-economic results do not change when an alternative, uneven distribution of the administrative burden on sectors is assumed. With this alternative distribution agriculture and services see the largest gains in production.

7 References

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Appendix A: WorldScan

WorldScan is a multi-sector, multi-region Computable General Equilibrium (CGE) model. It is developed to study long-term global issues, such as globalization and climate change policy. The model builds upon neoclassical theory, has strong micro-foundations and solves for the equilibrium that maximizes welfare across the entire economy, subject to technological constraints, greenhouse gas limitations, etc. A strong feature of general-equilibrium models is that they take into account the interdependencies among the separate markets for different goods and productive factors. Typically, the markets are assumed to clear, so that each of the productive factors is fully employed. In addition, the primary factors can reallocate across sectors instantaneously.

The model is calibrated on input-output tables and trade data from the GTAP5 database (Dimaranan and McDougall, 2002). The base year for the model is 1997. Production sectors use capital, labor, natural resources and intermediate inputs (including energy) to produce output. Production technologies are described by nested constant elasticity of substitution (CES) functions.

The model version used in this study distinguishes 16 sectors and 16 regions, among which 11 European countries or regions. These are listed in the table below. The model thus contains considerable detail at the European level

Table A: Sectors and regions in WorldScan

Sectors	Regions
Agriculture	Germany
Coal, gas and gas distribution, petrol products and electricity	France
Oil and minerals nec ^a	United Kingdom
Consumer goods, excl. food products	The Netherlands
Food products	Belgium and Luxembourg
Paper products and publishing	Italy
Chemical, rubber and plastic products	Spain
Ferrous and other basic metals	Rest of European Union
Capital goods and durables	Eastern Europe
Transport	Former Soviet Union
Construction	Turkey
Trade	United states
Communication	Rest OECD
Financial services and insurance	Latin America and Mexico
Business services nec ^a	Middle East and Northern Africa
Water distribution and other services	Rest of world

^a nec: not elsewhere classified.

Appendix B: Simulation results for some major EU-countries

As shown by the results reported in table B1 (without R&D spillovers) and table B2 (with R&D spillovers), no substantial differences across EU regions were found in the effects of reducing the administrative burden with 25 %.

Table B1: Long term effects of reducing the administrative burden for the whole EU with 25 % without R&D spillovers

	EU-25	Germany	United Kingdom	France
	changes in % relative to the baseline			
Production and inputs				
Gross domestic product	1.4	1.4	1.4	1.5
Unemployment rate	0.0	0.0	0.0	0.0
Real average wage	1.3	1.3	1.3	1.4
Domestic capital (volume)	1.0	1.1	1.0	1.1
Net exported capital ^a	-0.1	-0.1	-0.1	-0.1
User costs of capital	0.1	0.1	0.2	0.1
Final demand (volumes)				
Consumption	1.3	1.4	1.3	1.4
Investment	1.4	1.4	1.4	1.3
Exports	1.3	1.4	1.3	1.3
Imports	1.2	1.2	1.2	1.1
Prices				
Consumption	-0.2	-0.2	-0.2	-0.2
Real export prices	-0.0	-0.1	-0.0	0.0
Real import price	0.1	0.1	0.1	0.1
Terms of trade	-0.1	-0.2	-0.1	-0.1
Welfare				
Consumption per capita	1.3	1.4	1.3	1.4

^a changes as an absolute difference to the baseline

Table B2: Long term effects of reducing the administrative burden for the whole EU with 25 % with R&D spillovers

	EU-25	Germany	United Kingdom	France
	changes in % relative to the baseline			
Production and inputs				
Gross domestic product	1.7	1.8	1.8	1.7
Unemployment rate	0.0	0.0	0.0	0.0
Real average wage	1.7	1.7	1.7	1.6
Domestic capital (volume)	1.3	1.3	1.3	1.3
Net exported capital ^a	-0.1	-0.1	-0.1	-0.1
User costs of capital	0.2	0.2	0.2	0.2
Final demand (volumes)				
Consumption	1.7	1.7	1.7	1.7
Investment	1.7	1.8	1.7	1.7
Exports	1.7	1.7	1.7	1.7
Imports	1.5	1.5	1.5	1.5
Prices				
Consumption	-0.2	-0.2	-0.2	-0.2
Real export prices	-0.1	-0.1	-0.1	-0.1
Real import price	0.0	0.0	0.1	0.0
Terms of trade	-0.1	-0.2	-0.1	-0.1
Welfare				
Consumption per capita	1.7	1.7	1.7	1.6

^a changes as an absolute difference to the baseline