CPB Memorandum

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In focus: The metal-electro industry in the Netherlands 2002-2004[1]

2002

For the Dutch metal-electro industry 2002 was a year of disaster. Production dropped almost 5½%. The fall in production of the electronic industry was the largest of all (–10%). Employment decreased dramatically as well by 14 thousand employees. However, this fall was not enough to maintain productivity levels. The wage rate rose strongly. The results were: a strong increase in labour costs per unit of output, a worsening of the competitive power, a fall of foreign market-shares, decreased exports, much lower profits (–25%), and structural loss of production due to the move of production capacity to lower- wage countries.

2003-2004

The projection is based on a short war in Iraq followed by a recovery of international confidence. Then production of the Dutch metal-electro industry may recover from the low point at the beginning of this year. An hesitating upward trend will set in, which is just strong enough to prevent a further fall of average production in 2003. This zero average growth may be followed by growth of 2¼% (volume of value added) in 2004. This development is mainly determinated by exports. However, the rate of export growth will stay behind the rate of growth of relevant world trade due to loss of market shares for two reasons. Firstly, the aftermath of the deteriorated competitive power of this industry during last year. Secondly, a further move of production capacity from the Netherlands to lower-wage countries. Production is not stimulated by domestic demand, as the latter hardly expands.

Also productivity will recover, mainly due to reorganisations. This leads to a further drop in personnel of about 13000 employees in 2003 and about 8000 employees in 2004. In spite of higher productivity, the capital income ratio will not yet rise in 2003. High wage rises and competitive pressures on prices prevent this. Only in 2004 some improvement of the capital income ratio is foreseen.

[1] The outlook in this Focus is valid until CPB publishes new macro-economic forecasts.

Why an "Industry in focus"?

This "Industry in focus" is related to the "Centraal Economisch Plan" (CEP), which yearly presents an economic forecast for the Dutch economy for the current year and the year to come. The CEP itself does not include an outlook for specific industries. Therefore these are published separately as an Industry-in-focus (in electronic form).

Definition of the metal-electro industry

Statistical definition: Statistics Netherlands, Standaard BedrijfsIndeling 1993, industry numbers 27-35. For further information, link www.cbs.nl, search 'Standaarden', next 'SBI-indeling.

The main line of reasoning

The reasoning of the chemical industry's outlook is roughly as follows.

1. To the industry, its international and Dutch environment are given. The elaborated argumentation for changes in this environment is published in the April issue of CPB Report (link: www.cpb.nl/eng/cpbreport).
2. The response of the metal-electro industry to the changes in its environments is assumed to be the same as in the past. Additional information from e.g. newspapers is processed as autonomous changes. Starting point of the forecast are the amounts of the items on the industry's statement of income in the previous year. The model is recursive for each industry. Mutual relations between industries follow the process chain, and this chain determines the sequence of computation of the industries' prospects.

The precise argumentation is published in Dutch as a CPB Memorandum (nr. III/2003/09, April 2003): 'De industrie in 2003-2004: De economie achter het scenario' (link: www.cpb.nl/nl/pub/memorandum).

Gauging the value of the projections

This "Industry in focus" sounds more definite than is justified by the uncertainties in future projections. The reason is that this clarifies the text. The figures do not pretend to prove with certainty what future brings. They give rather an indication of how we think about future developments on the basis of our current knowledge and explicit reasoning. This means that the projections can be brought under discussion, and this exactly indicates their value. One who finds the arguments plausible, can anticipate with policy on the basis of the projections.

Key figures for the metal-electro industry in the Netherlands [a]

	2000	2001	2002	2003	2004
	in billion euros				
Nominal value					
Sales	68.8	68.0	66.1	64.7	67.5
Cash flow	6.1	4.6	4.1	4.1	4.5
Investments	3.3	2.9	2.5	2.6	2.7
	x 1000 FTE				
Employment	385	383	369	356	347
	annual percentage changes				
In volume					
Sales	5.7	−2.3	−3.9	−½	3 ¾
Prices					
Sales	3.0	1.1	1.1	−1 ½	½
Unit operating costs	2.9	3.5	1.7	−1 ¾	0

[a] For an explanation of the used terms, see in the back of this 'Focus'.

The Dutch metal-electro industry in 2002

Sales on foreign markets

In 2002, the exports of the Dutch metal-electro industry decreased by 4%, with exports of electronics as outlier (–16%).

This dramatic fall was due to the following two reasons. Firstly, the industry has severely suffered from the radical deterioration of its international economic environment in the last two years, highlighted by ICT-malaise, the "11 September"-attack and the glooming Iraq-crisis. For the metal-electro industry it is especially important that international demand fell for investment equipment, such as machines, transport equipment and ICT-products (like cables, mobile telephones, computers and parts, chips, and chip-making machinery). The geographical pattern of demand also depressed demand for the metal-electro industry, as demand by its main customer, Germany, hardly rose.

The second reason for the drop in exports is that the Dutch metal-electro producers have lost foreign market shares. The main reason is that their attempts to pass on the rather high rise of wage costs were at the cost of acquiring orders, while customers had lower priced alternatives. The Dutch wage rate rose more strongly than that of competitors abroad due to the aftereffect of the tight labour market for metalworkers until recently. The loss of foreign market shares was also due to a structural loss of export capacity, as some firms have moved (part of) their production to lower-wage countries in Eastern Europe and China. For them, labour costs became too high to produce profitably in the Netherlands. Usually these firms make labour-intensive products with little growth potential, like light bulbs, bulk chips, some household appliances and computer assembly.

Sales on Dutch markets

Domestic sales of the Dutch metal-electro industry dropped by 4½%. Sales of investment goods decreased as did the demand for stocks of metal products, while the Dutch consumer markets and deliveries to other Dutch industries left limited room for growth. The consumer-markets for durables and new cars were still growing, but at a rather low rate.

Demand by the construction sector, an important buyer of metal parts and components, hardly rose because of low growth of production of dwellings and buildings.

Production

In sum total sales of the Dutch metal-electro industry dropped (–4%) as a consequence of the decreased exports and domestic sales. And even more did production in terms of value added volume (–5¼%), because trends to outsource non-core activities continued. The electronic industry showed the largest fall (–10%) due to worldwide ICT-malaise and by moving some production to lower wage countries. Production cuts in other metal-electro branches (basic metals, metal products, mechanical machinery and means of transport) varied between –1% and –4%.

Steel war paradox?

Only the Dutch iron and steel industry, a part of the basic metal industry, performed relatively well. This branch could maintain its production level as did the European steel industry as a whole. This is remarkable, because in spring last year this industry was faced with the imposition of the US-tariffs on most EU-steel imports. Apparently, the impact of these US-measures did not have left very visible marks on Dutch and European steel production and on international steel prices . Actually, compared with 2001, production levels in the first half of 2002 were lower, but in the second half, after the US-measures, these levels were just higher accompanied with suddenly rising international steel prices.

Employment, productivity and profitability

Up to 2001 employment had been growing, while production was already falling that year. At that time labour hoarding was common practice because of the tight labour market for metal workers. While wages rose by 5% such as in 2001, in 2002 labour hoarding was no longer an option. Labour costs pressures became too high and the hope for "better times" faded away. So employment fell sharply by 14000 jobs.

However, this fall in employment was not enough to prevent labour productivity from falling even deeper by 1½%, after the fall in 2001 (–2 %).

Since 2000 the profitability of the metal-electro industry has been heavily affected as reflected in the decrease of the capital-income ratio. This ratio fell from 18% in 2000 to about 6% last year for the following two reasons. Firstly, unit labour costs rose 14% in this period, because labour cost per man rose 10%, while the level of productivity decreased by more than 3½%. Secondly, the higher labour costs per unit were at the cost of profit margins, as Dutch producers could not fully pass on these costs into product prices without pricing themselves out of the market.

Outlook for the Dutch metal-electro industry in 2003-2004

Export markets

The unfavourable conditions described above and the highly uncertain international situation make the prospects for this year and 2004 rather gloomy. After the second Gulf war (which, as is assumed at this moment, will take only a short time) is ended, some indicators give rise to better international economic perspectives. Then it is expected that from the second quarter this year onwards into 2004 accruing confidence will lead to an accelerating growth rate of the international economy and of the world trade volume.

Table 1 Key figures of the environment [a]

	2000	2001	2002	2003	2004
	annual percentage changes				
International environment					
In volume					
Relevant world trade [b]	10.4	1.6	1.9	5¼	7¾
Foreign prices (euro)					
Import price of metal-electro products	4.4	–0.1	–1.2	–3¼	¼
Steel	19.0	–9.9	1.9	–1¼	5
Euro exchange ratio ($/euro)	0.92	0.90	0.94	1.08	1.08
Dutch environment					
In volume					
Gross domestic product	3.3	1.3	0.3	¾	1¾
Production construction sector	4.1	2.5	–0.3	1½	¾
Consumption of durables	6.8	-2.3	0.3	– ¾	4
Prices in euros					
Wages in the Netherlands	4.9	5.1	5.0	4	2½

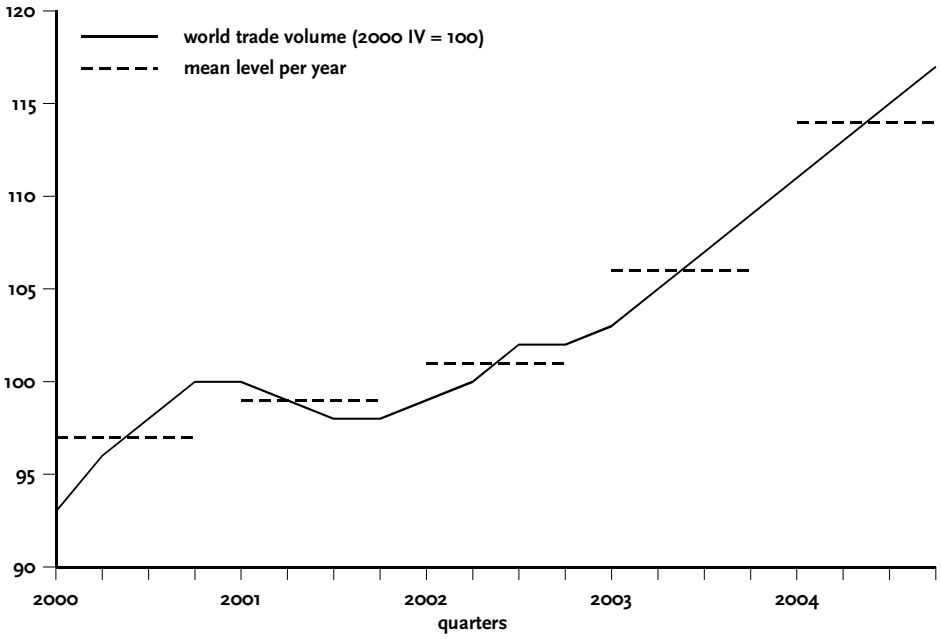
[a] For an explanation of the used terms, see in the back of this 'Focus'.

[b] "Relevant" world trade: foreign demand for *all* Dutch manufacturing products at *all* geographical markets which are important to Dutch manufacturing *as a whole*.

This recovery will be supported by strong monetary and fiscal responses, as well as by declining price increases. Inflation in the industrial world is clearly receding. Besides oil

prices, other world market prices will remain weak for a while, and low capacity utilisation and increasing unemployment will help to keep moderate wage and price developments [2]. Figure 1 illustrates these expected developments of the relevant world trade volume. After the drop in 2001 world trade started to grow again during 2002 and after a little hesitation in the beginning of this year it will accelerate as a take-off to the expected much faster growth in 2004 (7¾ % on an annual basis).

Figure 1 World trade volume



It is especially important for the electronic industry and Dutch re-exports, that world trade growth will be supported by the already fast recovery of the international demand for semiconductors, in advance of expected growing international demand for ICT-hardware.

Dutch markets

Domestic markets give little support to a fast recovery. The demand for computers, machinery and transport equipment will lag behind, because firms will firstly raise production by using their excess capacity to improve utilisation rates and profitability. It is expected that investment demand of most industries will decrease further in 2003 and will recover not sooner than in 2004. With respect to the Dutch demand for passenger

[2] see for more details: Central Economic Plan 2003 (www.cpb.nl/eng/cepmev/cep)

cars two aspects have to be mentioned. In the first quarter of 2003 sales of passenger cars will be negatively affected by the large purchases at the end of 2002 in anticipation abolishing environment subsidies for "clean" cars in 2003. If in the first quarter of 2004 sales return back to normal levels, these sales give a positive impulse for total sales in 2004.
Demand for other durables, such as television sets, DVD-players, computers and refrigerators, will grow very moderately because consumer purchasing power and consumer confidence hardly grow this year. In 2004 more significant expansions of this markets are expected.

Export, domestic sales and production
The improving international environment is only partly reflected in the current projection of the Dutch exports of metal-electro products. Dutch producers will be faced with further losses of market-shares. These will stem mostly from the aftereffects of the deteriorated price competitiveness during the last two years. Also the process of moving unprofitable production to lower-wage countries (in Eastern Europe and China) will probably continue.
Also the domestic markets will be not very promising this year. In sum, total sales (including building-up of stocks) of the metal-electro industry will not yet grow this year (-½ %). However, the better prospects for 2004 provide a more substantial growth of sales by 3¾%.
The stagnation of sales this year will be also reflected in the growth of production in terms of real value added. However, in 2004, the latter growth will be lower than that of the sales. The accelerating growth of sales of the metal-electro industry in 2004 will partly be realised by hiring personnel first, creating value added to employment agencies. Also outsourcing of some activities to specialists will be picked up again, as in the past.

Table 2 Key figures for the Dutch metal-electro industry [a]

	2000	2001	2002	2003	2004
	in billion euros				
Nominal value					
Sales	68.8	68	66.1	64.7	67.5
Purchased goods and services	48.6	48.5	46.9	45.6	47.9
Wages	14 .1	14.9	15	15.1	15.1
Cash flow	6.1	4.6	4.1	4.1	4.5
Investments	3.3	2.9	2.4	2.5	2.7
	annual percentage changes				
In volume					
Sales	5.7	−2.3	−3.9	−½	4¼
of which in foreign markets	15.7	−3.7	−4.0	−1¼	4½
in the Dutch market	3.1	−1.7	−4.4	−¼	3½
Value added	8.1	−1.4	−5.2	−¼	3
Labour productivity	6.9	−2.1	−1.6	3 ¾	4 ¾
Prices					
Sales	3	1.2	1.2	−1 ½	½
Unit operating costs	2.9	3.5	1.7	−1 ½	0
Purchased goods and services	4.7	2.4	0.1	−2 ¼	¾
Unit labour costs	−0.2	8.2	5.3	¾	−3 ½
Number of employees (level, thousand FTE)	368	370	356	343	335
Labour share in income (%)	82.1	90.5	93.7	94	92¾

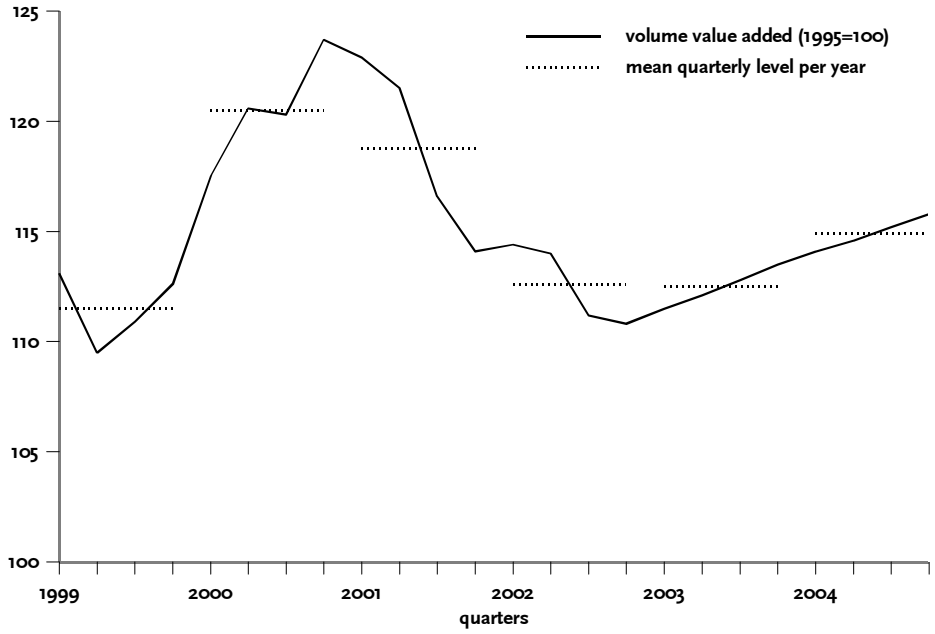
[a] For an explanation of the used terms, see in the back of this 'Focus'.

Table 3 Sales of the Dutch metal-electro industry

	2001
	%
In foreign markets	57
In the Dutch market,	
of which Intermediates	33
Consumption goods	1
Machines, computers and vehicles	9
Total	100

Figure 2 shows these expected production developments (in terms of real value added).

Figure 2 Quarterly production metal-electro industry: 1999-2004



Source: CBS-Statline 1999-2001 seasonally adjusted production.

Employment, productivity and profitability.

In 2003 and 2004 entrepreneurs will reorganise their production to achieve more efficiency at the cost of employment. After the rise in employment up to 2001, the downturn since the second half of that year will continue its negative course: –13000 employees in 2003 and about –8000 employees in 2004. Including the loss of 14000 jobs in 2002, since 2000 the metal-electro industry will have lost 35000 jobs in 2004.

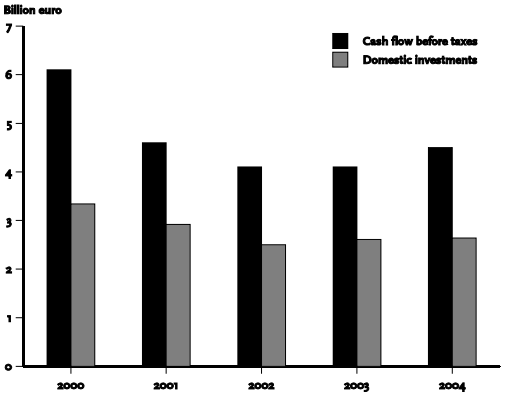
This year and next year productivity will return to a positive and substantial growth (3¾% in 2003 and 4¾% in 2004), compensating the productivity slowdown of the last two years. But in 2003 this improvement will not be strong enough to prevent labour cost per unit from rising. The wage-drift, which is in 2003 still high (4¼%), is the malefactor. The resulting rise of labour costs per unit of output prevent a recovery of profit-margins in output prices. The most important reason is the continuing strong price competition, reinforced by a lowering dollar rate. Most metal-electro producers are even forced to lower their prices in 2003. Therefore, competitive arguments hamper passing on the higher labour costs fully in output prices without losing market shares. So this year profit-

margins will stay under pressure and thereby profitability, measured as capital-income ratio.

In 2004 profitability may be better for the following reasons. Firstly, in 2004 wage rise will be tempered to 2½% and labour cost per unit may decrease because of higher productivity growth. Also less pressure of price competition offers entrepreneurs more opportunities to improve their profit-margins without losing much of their competitive positions. In these circumstances capital-income ratio may rise, but this ratio will still stay behind the rather low level in 2001.

Investments.
Metal-electro firms will invest more in 2003: about 5%. This expected recovery, however, is very moderate compared with the fall of about 17% in 2002. This investment growth is partly autonomous because of restructuring a part of the Dutch car industry, partly it is the result of picking up already earlier planned investments. In 2004 the investment level is expected to be about the same as in 2003.

Figure 3 Cash flow and investments



Branches of the metal-electro industry

Production of the Dutch *electronic* industry will fall again (-2%) this year, but not as strongly as in 2002. As supplier of electronic components this industry can not yet take enough advantage of the expansion of the ICT-product markets (computers, mobile phones and expanding UMTS-networks) to overcome the deep fall of production in 2002. Also the aftereffects of ending unprofitable production during 2002 and some further structural loss of production contribute to this fall. Not earlier than in 2004 a positive growth is expected, supported by more substantial telecom investments in the construction of UMTS-networks. These investments will also give some new impulses to sales and production of the new generation of mobile phones.

Metal products and machinery industries will recover more significantly. Domestic sales will contribute substantially to this recovery. This is because demand for semi-products increases. The improving market growth abroad enlarges further opportunities to grow, but the weakened competitive power may prevent to take them all.

The Dutch *automotive* industry as a whole will probably show no much expansion in 2003, but perspectives for 2004 are more favourable. Within this industry the outlook for the truck industry differs from that of the passenger car industry. The Dutch truck industry can improve the production already in 2003, because the expanding world market needs more national and international transport capacity. Besides, some expansion of market share for the Dutch truck industry is expected because of the rather strong competitive position on the EU- market, mostly based on quality of products.
The Dutch car production will be hampered by the transformation of the production line from the production of Volvo's to that of Smarts in 2003. This transformation gives an autonomous impulse for Dutch passenger car industry in 2004.

The Dutch *shipbuilders* feel to an increasing extent the effects of subsidised competition abroad (especially Korea and Spain). Since the fourth quarter of 2002 some subsidising support is permitted in the EU as a reaction on Korean subsidised production. Other EU-members (Germany, France and Italy) have used this possibility immediately. For 2003 also the Dutch government has promised some support
(60 mln euro), because Dutch shipbuilders could hardly maintain their position. This subsidy will help Dutch shipbuilders to survive in competition.

Finally, *maintenance of planes* (Fokker/Stork) is confronted with the uncertainty on the aviation market. In this situation too many Fokkers remain unemployed on the ground.

The described scenario above is summarized and detailed for branches reflected in main figures in the table 4.

Markets and some typical products of the metal-electro industry

Markets for:	Products
Intermediate products:	steel sheets, aluminum bars, metal construction materials and frames, machine components, semiconductors, containers, maintenance services, (parts of) engines.
Consumer durables:	household appliances and machinery, do-it-yourself machines, television sets, (mobile) phones, electronic games, shaving apparatus, passenger cars, bicycles.
Investment goods:	machines, computers, (motor) vehicles, vessels.

Table 4 Key figures for metal-electro industries

	2000	2001	2002	2003	2004
	annual percentage changes				
Sales volume					
Basic metals	2.8	–1.7	-0.1	2¼	3¼
Metal products	3.7	–0.7	-2.4	¼	1¾
Non-electronic machinery	11.4	–1.4	-1.8	2¾	4¼
Electronics	7.5	–2.9	-10.0	-3¾	5
Automotive vehicles	-0.7	–5.8	1.1	- ¾	4¼
Shipbuilding	–0.9	–1.7	-3.2	-5¼	1½
Number of employees (*1000)					
Basic metals	25.7	25.2	24.3	23.3	22.5
Metal products	97.8	98.8	96.9	93.1	91.2
Non-electronic machinery	85.2	85.9	84.7	83.1	82.2
Electronics	98.8	100.2	93.8	89.5	86.8
Automotive vehicles	29.4	28.5	26.2	24.9	24.5
Shipbuilding	15.9	16	15.8	15.0	14.3
Sales prices					
Basic metals	16.5	-4.5	-1.3	-2½	4¼
Metal products	2.6	1.9	1.2	-1	¾
Non-electronic machinery	1.2	2.0	1.5	-1½	- ¼
Electronics	1.4	2.2	0.9	-1½	0
Automotive vehicles	2.4	-0.4	1.8	-2¼	- ½
Shipbuilding	1.5	1.5	3.1	-1¾	- ¼
Unit operating costs					
Basic metals	7.4	5.4	-1.0	-2¾	1
Metal products	5.8	2.4	2.5	-1¼	1¼
Non-electronic machinery	0.8	3.5	2.6	-1½	0
Electronics	0.5	4.0	1.7	-1¼	-1
Automotive vehicles	4.7	2.6	0.5	-2¼	¼
Shipbuilding	3.1	3.8	2.5	-1¼	- ¾
Unit labour costs					
Basic metals	3.6	6.2	1.7	-2¾	-4¼
Metal products	2.6	6.8	5.7	- ¼	-1½
Non-electronic machinery	-6.3	7.7	5.7	- ½	-2¾
Electronics	-1.4	9.1	9.2	3½	-5½
Automotive vehicles	3.9	8.4	-4.2	- ¼	-3¼
Shipbuilding	3.2	8.8	7.0	4¾	-4¼