

CPB IN FOCUS



(ill.: Lewis Carroll, 1872, *Through the Looking Glass*)

Report from the CPB Review Committee 2003 (preliminary draft)

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CPB Review Committee 2003
Secretary Dr Bart van Riel
Social and Economic Council
The Hague
b.van.riel@ser.nl

Contents

1	Executive summary	9
1.1	<i>General observations and recommendations</i>	9
1.1.1	<i>CPB's position</i>	9
1.1.2	<i>Broadening questions and methods, reallocating resources</i>	9
1.1.3	<i>Strengthening links with academic research</i>	10
1.1.4	<i>Organization structure</i>	10
1.1.5	<i>Human resource management</i>	10
1.2	<i>Recommendations related to specific themes</i>	11
1.2.1	<i>World economy and European integration</i>	11
1.2.2	<i>Domestic economy: meso and macro</i>	11
1.2.3	<i>Technology, education and research, innovation and productivity</i>	11
1.2.4	<i>Industrial economics</i>	11
1.2.5	<i>Welfare state and the labour market</i>	12
1.2.6	<i>Physical and regional aspects</i>	12
2	Introduction	13
	<i>The terms of reference: questions to the Review Committee</i>	13
	<i>The procedure</i>	13
	<i>The structure of this report</i>	14
3	General observations	15
3.1	CPB's position	15
	<i>CPB as an indispensable provider of common language</i>	15
	<i>Accepting the quasi-monopoly position of CPB</i>	15
	<i>CPB's quasi-monopoly position demands external demands and controls</i>	15
	<i>Contributing to the debates on structural reform</i>	15
	<i>Accelerating the shift in CPB's orientation</i>	16
3.2	Recommendations for strengthening CPB's position	16
3.2.1	Broadening questions and methods, reallocating resources	16
3.2.2	Strengthening the link with academic research	18
3.3	The functioning of the Bureau	20
3.3.1	Organisation structure	20
3.3.2	Human resource management	20
4	Recommendations related to specific themes	23

4.1	World economy and European integration	23
	<i>High quality research on systemic issues</i>	23
	<i>Reallocating resources</i>	23
	<i>WorldScan model</i>	23
4.2	Domestic economy: macro and meso	23
	<i>Strengths and weaknesses of CPB's macromodels</i>	23
	<i>The need for model extension</i>	24
	<i>The need for incorporating forward-looking behaviour</i>	24
	<i>The need for in-depth study of wage moderation</i>	24
4.3	Technology, education and research, innovation and productivity	25
	<i>Focus on productivity related issues is to be applauded</i>	25
	<i>Continue working on better data quality</i>	25
	<i>Systematic policy evaluation with respect to educational reforms</i>	26
4.4	Industrial economics	26
	<i>Increased emphasis on micro-economics is welcomed</i>	26
	<i>Shifting boundaries of research</i>	27
	<i>Strengths and weaknesses</i>	27
	<i>Strengthening international cooperation</i>	27
4.5	Welfare state and the labour market	28
	<i>Strengths and weaknesses of the MIMIC and GAMMA models</i>	28
	<i>CPB's new health-care model</i>	29
	<i>The need to broaden methods for estimating the effects of welfare reform</i>	29
4.6	Physical and regional aspects	29
	<i>Cost-benefit analysis as an indispensable element</i>	29
	<i>Criticism is not a proof of low quality work</i>	30
	<i>Broadening the sphere of application of cost-benefit analysis</i>	30
	<i>Avoiding unfair competition</i>	30
	<i>Potential improvements in cost-benefit analysis</i>	30
	<i>Developing a regional labour market model</i>	31
	<i>Focusing on the gas sector</i>	31
	<i>Raising academic output</i>	31
5	Conclusion	33
	Annex 1 Composition of the CPB Review Committee 2003	35
	Annex 2 Terms of reference	39
	Annex 3 Persons interviewed by the Committee	43

Preface

For the second time in the past decade, CPB has asked a group of independent economists from various countries to assess the quality of its work and to identify areas for improvement. This report summarizes the findings of the CPB Review Committee 2003.

CPB treats its external assessment very seriously. The Review Committee was very impressed by the way this event was organized and by the motivation of the CPB staff to participate in it. Having often been on both sides in various evaluation procedures, I must admit that this has been the heaviest evaluation procedure I have ever been involved with. This external assessment gave us a unique opportunity not only to understand the functioning of CPB, but also the working of Dutch politics and the economic process in the country.

CPB has a long and distinguished history. The current structure and operation of CPB are basically sound, and the contributions it makes to policymaking in the Netherlands are substantial. CPB places a high priority on objectivity, independence, and non-advocacy. The Review Committee finds that CPB has successfully maintained its reputation in pursuing this worthy and essential objective. This perspective permeates the entire CPB staff. The Review Committee was also impressed by the recent attempt of CPB to strengthen its human resources management.

In this report, we recommend that CPB should intensify its links with academic institutions by seeking strategic partnerships and focus more on structural reform issues by shifting away resources from macro forecasting to microeconomic modelling. We are confident that CPB, with its highly qualified and strongly motivated staff, can successfully continue to make important contributions to the policy debate in areas such as education, health care, pensions, labour markets, housing, energy, transport, and infrastructure.

This evaluation process was only possible due to the strong support of the staff and the leadership of CPB, especially Wim Hulsman. Of invaluable help were also the many individuals from outside the Bureau, who were willing to discuss with us the work of CPB, including members of the civil service, policymakers, journalists, independent scientists and research partners. The discussions inside the Review Committee were always constructive, intensive, and driven by a unique spirit. Special thanks are due to the Secretary of the Review Committee, Bart van Riel, for his competent and endless support in drafting reports and creating structure in all our activities.

Klaus F. Zimmermann,
Chairman of the CPB Review Committee 2003

1 Executive summary

1.1 General observations and recommendations

1.1.1 CPB's position

- *The Committee notes that CPB has a remarkable and unique position in Dutch policy analysis and policymaking. It serves as a clearing-house for all major economic questions at all political levels. The Committee was impressed by the respect shown by its clients to the work and contributions of CPB.*
- *While in general the Committee supports competition among analytic/research institutes it does not recommend a break-up of the quasi-monopoly position of CPB. Dutch society would stand to lose from such devolution.*
- *The Committee is convinced that CPB can strengthen its position in two ways. First, by broadening its research questions and research methods to issues like welfare reform and regulation. Second, by strengthening its links with the academic community.*

1.1.2 Broadening questions and methods, reallocating resources

- *The Committee advises CPB to focus more on policy analytic, microeconomic, and institutional research both in the national and international arenas.*
- *The Committee is aware that the desired shift in analysis requires a re-allocation of resources. Accordingly the Committee finds that a more efficient use of resources can be attained by a reallocation of research work away from forecasting activities and model maintenance. More specifically, the Committee:*
- *Advises the CPB leadership to work with its clients to reduce the level of demands for (budgetary) forecasts and estimates of party platforms.*
- *Questions the need for four quarterly forecast exercises, and suggests that only semi-annual forecasts be prepared.*
- *Recommends that CPB make more use of forecasts and forecasting models of other organizations (e.g., OECD, European Commission). This especially applies to forecasts of foreign variables and energy prices.*
- *Recommends that CPB leadership undertake a systematic review of the numerous econometric and simulation models, with a view to coordinating them and assessing the net benefits of each of them so as to reduce the volume of resources dedicated to the construction / maintenance of the models.*
- *Recommends that CPB carefully compares the costs and benefits of further development of its own software.*
- *The Committee also recommends that the model forecasts be presented with ranges or high/low bounds indicated, rather than point estimates. CPB reports should specify the response of model outputs to assumptions that are particularly uncertain, that are supported by an evidence base in the Netherlands that is sparse or non-existent, and that*

have the potential to greatly influence the analysis. Also, a brief statement of the assumptions on which the analysis is based, and on the analytic weaknesses of the models used to generate the estimates should accompany the presentation of the forecasts.

1.1.3 Strengthening links with academic research

- *Over time, CPB has strengthened links with academic research. However, the Committee feels that the academic research orientation can be increased, that the scientific output of its staff be raised, and that CPB should seek strategic partnerships in academia.*
- *The Committee has a number of specific suggestions for strengthening the links with academic research:*
 - *CPB should extend its support for young staff members to engage in academic research. CPB is invited to consider its internal incentives structures from this perspective.*
 - *CPB should seek more venues for international cooperation; the establishment of a visitor's programme for international scholars, including a Tinbergen Fellowship seems a productive way of accomplishing this goal.*
 - *CPB should establish a process for regular monitoring of its programme of activities, perhaps by appointing a scientific advisory committee which would review annually the Bureau's activities and progress.*
 - *CPB should consider how to make its main models fully accessible to outside researchers.*
 - *CBP should seek additional outside sources for financing research projects.*

1.1.4 Organization structure

- *The Committee suggests that CPB review its organisation structure; perhaps management functions would be more effective if they were more closely aligned with the research themes around which the CBP reports its output.*

1.1.5 Human resource management

- *The Committee is impressed by the recent attempts of CPB to strengthen human resource management. The Committee supports CPB's own analysis that these initiatives need to be more rigorously executed. This is especially important for further education and training: stronger incentives should be given to staff members and department heads to invest more in their human capital.*
- *The Committee advises CPB to recruit more of its staff internationally. CPB should also consider setting up an exchange programme for staff with comparable institutions abroad.*

1.2 Recommendations related to specific themes

1.2.1 World economy and European integration

- *The Committee recommends that fewer resources should be spent on producing in-house forecasts of foreign variables that are easily available from a variety of international sources. Examples would be macroeconomic data from trading partners, e.g. real growth, inflation, or global variables such as oil prices, etc.) In contrast, more resources should be allocated to activities concerned with systematic issues at the European and world level. The work done so far on these systematic issues (e.g. on enlargement) is of very high quality; with more resources its scope could be much expanded.*
- *The Committee has doubts regarding the productivity of resources devoted to the maintenance and extension of the WorldScan model.*

1.2.2 Domestic economy: meso and macro

- *The Committee advises CPB to continue efforts to extend its models to include forward-looking behaviour, the financial sector and intertemporal budget constraints. This should be done in cooperation with experts from universities and client organizations, which should assist in setting priorities for model extension.*
- *The Committee urges CPB to make a more systematic study of the long-run effects of wage moderation, taking into account general equilibrium effects.*

1.2.3 Technology, education and research, innovation and productivity

- *The Committee strongly encourages CPB to continue working on improving the quality of sector- and firm-specific data on productivity growth, innovation efforts and the private and public capital stock.*
- *The Committee also strongly encourages CPB to continue its work on analyzing the effects of educational reforms. There is a general need in the Netherlands in developing and applying policy-evaluation techniques to this sector. The Committee recommends that CPB allocates more resources to this field.*

1.2.4 Industrial economics

- *In view of the challenges to raise the empirical content of this research from its current low (but non-zero) level, the Committee advises CPB to hire staff with more empirical skills in this field.*
- *The Committee advises CPB to increase the political-economic analysis of reform to inform policy, e.g. about reforms of the Common Agricultural Policy and in other sectors where distributional outcomes are diverse.*
- *The Committee advises CPB to improve synergies with activities and staff involved in industrial economics and macro-modelling and forecasting.*

1.2.5 Welfare state and the labour market

- *The Committee recommends an updating and extension of the MIMIC and GAMMA models. The CPB staff recognizes the weaknesses of the wage equation and labour market segment of the MIMIC model, and efforts are being made to improve this aspect; that is to be applauded*
- *The effort of building a health-care model is supported, but at the same time the inherent difficulty to reliably model this intractable sector must be recognized. The Committee recommends more microeconomic analysis of the health-care market focusing on problems like moral hazard, adverse selection, market failure, government failure, benchmarking, yardstick competition, etc. Of course the macroeconomic implications of the health sector remain important to study.*
- *In general, the Committee advises CPB to make far greater use in this field of other analytical methods and data, including the use of microeconometric techniques to estimate important behavioural relationships, and social experimentation (or quasi-experimentation) to pursue the ex post evaluation of policies that have been implemented.*

1.2.6 Physical and regional aspects

- *The Committee supports the ambition within this group to broaden the sphere of applications of cost-benefit analysis also to topics outside this theme such as health care, agricultural policies, housing and education and research and development.*
- *In order to avoid unfair competition, CPB is advised to be selective in the choice of cost-benefit studies that it will carry out. CPB should focus on cost-benefit studies that require innovative approaches.*
- *The Committee agrees with CPB's own diagnosis that improved analytic techniques for estimating the effects of policy changes are necessary in at least four areas: public safety, quality of transport systems, quality of the environment and indirect effects.*
- *The Committee recommends CPB to improve studies on: programme evaluation designed to assess the net benefits or the cost effectiveness of policies actually undertaken, valuation of external effects, and indirect effects in cost-benefit analysis. CPB could either carry out such studies itself, or encourage others to do this*
- *.CPB is advised to carry out its plans with regard to developing a regional labour market model in close cooperation with related partners.*
- *Finally, the Committee advises CPB to focus more on the natural gas sector. It notes that a substantial amount of the work by CPB on the electricity sector is replicated in other institutions.*

2 Introduction

The terms of reference: questions to the Review Committee

To prepare for the work of the Review Committee (see Annex A for its composition), CPB prepared a self-assessment report *Through the Looking Glass*, which details the Bureau's work, tasks, activities and plans, and formulates a number of questions to the Review Committee¹. These questions (see Annex B) formed the point of departure for the Review Committee.

In general, the Committee was asked to judge CPB's performance over the last few years, in view of its mission to provide independent economic analyses that are relevant for Dutch policymaking. CPB seeks to be widely trusted by working independently and impartially, by reporting in a balanced and complete way, and by maintaining constant high quality². Its goal is to be the top institute for policy-relevant economic analysis in the Netherlands, and as such one of the leading institutes in the international policy research community.

The self-assessment report presents CPB's work in six themes. For each of these themes the Committee was asked to make a general assessment of the quality of research and to consider what improvements should be considered. Next, for each field some detailed questions were posed to the Committee. Due to lack of time, the Committee addressed a selection of these questions. The Committee was also asked to evaluate the allocation of CPB resources over the different themes.

Finally, the Committee was asked to assess the internal functioning of the Bureau. This comprises not only CPB's organisational structure, but also its HRM activities.

The procedure

The Review Committee visited CPB from 7 April until 11 April 2003. During this week the Committee spoke with a large number of persons both from inside CPB and from outside CPB. The talks with Bureau staff were organised around six themes: world economy and European integration; domestic economy: meso and macro; technology, education and research, innovation and productivity; welfare state and labour market; and, physical and regional aspects. After a general round, one of the Committee members usually took the lead in questioning the relevant Bureau staff members. With respect to the people outside CPB, the Committee talked to the Bureau's clients - civil servants, participants in social-economic

¹ Through the Looking Glass, A self-assessment of CPB Netherlands Bureau for Economic Policy Analysis, March 2003 (see: <http://www.CPB.nl/nl/general/selfassessment/self2003.pdf>).

² See for the vision and mission of CPB: Through the Looking Glass, op.cit., pp. 18-19.

consultations, and representatives of institutes that cooperate with CPB. Unfortunately, due to hectic political developments at the time, the Committee could not speak as planned to political leaders and members of Parliament. The Committee had also meetings with independent observers from the press and the scientific community. Annex C contains the complete list of people consulted by the Committee.

The structure of this report

This report is structured as follows. Chapter 3 contains general perceptions of the Review Committee on CPB as a whole. It addresses the position of the Bureau, and its internal functioning. In this chapter the Committee formulates its main recommendations concerning further opening the Bureau to the academic community and broadening the research questions and methods. Chapter 4 addresses the six themes identified by CPB in its self-assessment report. Chapter 5 concludes. The three annexes contain respectively: the composition of the Committee; the terms of reference as expressed in CPB's self-assessment; and finally an overview of the persons we spoke with.

3 General observations

3.1 CPB's position

CPB as an indispensable provider of common language

CPB has a remarkable and unique position in Dutch policy analysis and policymaking. While part of the Ministry of Economics, it is seen as an independent part of the government. It serves as a clearing-house for all major economic questions at all political levels. CPB aims to deliver the major policy options for the policy debate. The Committee was impressed by the respect shown by its clients to the Bureau's work and contributions. For budgetary policy CPB often provides a common language. This might be useful in many cases because it forces the body politic to accept a certain discipline and to accept the judgement of an outside referee on what policies can be financed. This is especially true in the short- and medium-term forecasting activities, in support of budget-making for the Dutch government. Both the ministries and the legislature are supportive of this work, and CPB projections have attained a pre-eminent role in Dutch policymaking.

Accepting the quasi-monopoly position of CPB

While in general the Committee supports competition among analytic/research units, the unique and respected position of CPB in this area appears to 'ground' budgetary policymaking in a way that multiple forecasts and projections could not. Moreover, an institution that deals with major economic issues needs a minimum size that is very expensive to generate for a number of institutions. Breaking up the monopoly position would also mean that CPB would lose its unique position as provider of a common language and the statistical and analytical facts. The Committee is convinced that Dutch society would be a net loser from such devolution. CPB seems to use its position with much care. It should also not become institutionally independent from the government. Being part of the government generates trust on all sides that could otherwise be easily lost.

CPB's quasi-monopoly position demands external demands and controls

While we accept the position of CPB as a natural monopoly, we stress that it is necessary to generate in-house and external demands and controls that moderate the disadvantages from the quasi-monopoly position. Outside evaluations, such as our work here, serve this purpose. The creation of a real scientific advisory committee to review on a regular basis the activities of CPB is one possibility; in addition, the agency should establish stronger links with the academic community.

Contributing to the debates on structural reform

As noted above, the Committee values the importance of the macroeconomic and budgetary forecasting activities of CPB. However, the Committee notes that the economic policy debate

has broadened from macroeconomic management to issues like regulation and welfare reform. Given its unique place in the Dutch policy debate (e.g. its reputation of independence, its expertise and access to data), the Committee thinks that CPB could make valuable contributions to the continuing debates on structural reforms. Especially, CPB could contribute to developing a more systematic approach to programme and policy evaluation, an approach that seems to be more widely practiced in other nations relative to the Netherlands. In particular we think CPB should strengthen its ability to provide cost/benefit analysis of policy options in areas like education, health-care, pensions, housing, energy, transport, and infrastructure. The Committee notes that competence for policymaking in these areas will remain at the national level, but CPB should also be in a position to provide Dutch policy makers with the lessons to be drawn from the experience of its European partners.

Accelerating the shift in CPB's orientation

Thus, the Committee is convinced that CPB can strengthen its position in two ways. The first way is to open up to the academic community; the second is to broaden further research questions and research methods, to issues like welfare reform and regulation. The Committee is aware that the previous Review Committee³ made similar recommendations. While the Committee is impressed by the progress made since then, it urges CPB to accelerate its shift in orientation. The Committee is convinced that CPB's goal to be one of the leading institutes in the international policy research community requires this acceleration. It hopes that the recommendations made in this report will contribute to it.

3.2 Recommendations for strengthening CPB's position

3.2.1 Broadening questions and methods, reallocating resources

The need to develop a broader approach...

While short- and medium-term forecasting activities form the core of CPB work, the Bureau has attempted to shift its emphasis in recent years towards more policy analytic, microeconomic, institutional analysis, in both the national and international areas. This has been accompanied by a greater use of microeconomic, policy analytic, and 'institutional' and 'comparative' methods and techniques. This evolution is supported, and the Committee suggests that it be accelerated. In general the Committee views the marginal impacts of developing other policy analytic approaches—social experiments, microeconomic estimation of important behavioural relationships, and institutional analysis—to be high. Careful policy analytic work involves the systematic setting out of policy options, the careful delineation of the nature of the

³ See: *Scanning CPB: A view from the outside*, October 1997.

benefits and costs along with the theoretical basis for thinking about them, and finally, the bringing to bear of empirical evidence on the extent of these benefits and costs.

... demands for a re-allocation of resources

The Committee is aware that the desired shift in emphasis demands a re-allocation of resources. The need for a re-allocation of resources is even more pressing considering the recommendations of the Committee for developing the theoretical content of macroeconomic models (section 4.2) and developing programme evaluation studies with respect to cost-benefit analysis (section 4.6). Although the Committee recommends that this should be done in cooperation with experts from universities and client organisations (who should assist in setting priorities for model extension), it is clear that both model extension and developing valuation techniques will demand resources, in addition to the proposed strengthening of the microeconomic and institutional analysis.

Specific proposals for the re-allocation of resources

The Committee maintains that allocating resources away from forecasting activities and model maintenance will result in a more efficient use of resources. The need for quarterly forecasts, estimates of the macroeconomic effects of party platforms, and coalition plans absorb substantial staff time, and negatively impacts the ability of CPB to improve the models and to support policy research activities that are not macroeconomic. In addition, the Committee finds these essential activities to have the least research/analytic content in CPB's portfolio, and questions the need for the great volume of resources allocated to this activity. The Committee suggests that CPB leadership work with its clients to reduce the level of these demands, to substitute substantive macromodel development for the running of these models, and to accelerate the more microeconomic/policy analytic activities that have been recently developed at the Bureau. In particular, the Committee questions the need for four quarterly forecast exercises, and suggests that only semi-annual forecasts be prepared.

The Committee is puzzled over the relationship between CPB short- and medium-term forecasts and forecasting models and those of other organisations (e.g., OECD, European Commission). The various forecasts yield very similar estimates, and the Committee wonders about the net benefits attached to the substantial resources devoted to the development and operation of CPB's own models.

The Committee is concerned with the large number of 'models' within CPB. A number of these are very costly to construct/maintain. They are also complex and difficult to 'penetrate', and hence often take on an 'unchallenged' life of their own. Finally, the work on model development often comes at the expense of alternative types of policy analysis that CPB might pursue. The Committee recommends that CPB leadership undertake a systematic review of the numerous models, assessing their net benefits, with a view to coordinating them and reducing the volume of resources dedicated to their construction and maintenance.

CPB has a long tradition in building large models. It has also developed its own software in the past to solve these models. The Committee is not convinced that in the present situation a continued involvement in the further development of general-purpose software to deal with large models is a proper use of CPB resources. Currently there are four full-time equivalents (fte) involved in the modelling software unit⁴. Other actors in the economics world have developed adequate software that can solve CPB's models (for example GAMS). The advantage of using software from outside is not only that it is less expensive, but also that it removes a barrier against the use of CPB models by outside partners. The committee recommends that CPB carefully compares the costs and benefits of further development of its own software.

The need for a careful presentation of forecasts and projections

The Committee is concerned about the apparent accuracy/certainty of the forecasts that are presented. The Committee recommends that the model forecasts be presented with ranges or high/low bounds indicated, rather than point estimates only. Forecasts should specify the response of model outputs to assumptions that are particularly uncertain, that are supported by an evidence base in the Netherlands that is sparse or non-existent, and that have the potential to greatly influence the analysis. In particular, scenarios should be chosen to reflect the possible effects of important variables whose potential impacts are little understood. Also, a brief statement of the assumptions on which the analysis is based, and on the analytic weaknesses of the models used to generate the estimates should accompany the presentation of the forecasts.

3.2.2 Strengthening the link with academic research

The need for strengthening links with academic research

The second general recommendation of the Committee is strengthening the links of CPB with academic research. Over time, CPB has already strengthened links with academic research. However, the Committee felt that the academic research orientation could be improved. CPB should seek strategic partnerships. This means that it would become more attractive for academics to do joint work with CPB, for example because it can offer access to certain data more easily. Of course, this presupposes a willingness by CPB to share these data with outsiders.

Feedback to and discussion from the academic community regarding CPB's work are essential for safeguarding high quality standards, especially given its quasi-monopoly position. Policy-orientation needs a strong and fresh scientific basis. As noted before, cooperation with academics visiting CPB might be helpful, for example, in extending CPB macroeconomic

⁴ Through the Looking Glass, op.cit., pp. 46 and 47.

models, developing policy evaluation methods and techniques and in developing valuation methods for cost-benefit analyses.

From the perspective of scientific output, the average productivity of CPB staff must be considered as low. The committee is aware that writing scientific papers and books is not an official aim of CPB. Nevertheless, it is somewhat surprising that the CPB staff members, many of whom are quite competent researchers, is relatively passive in this respect. CPB must avoid the impression that it is not a good employer for economists that want to combine policy orientation with an academic level of research. For the future recruitment of CPB it must be clear that it is a good place to work for economists that want to combine these two elements. CPB is invited to consider its internal incentive structures from this perspective. In addition, links with academic research should be reinforced.

Specific proposals for strengthening the links with academic research

The Committee has a number of specific suggestions for strengthening the links with academic research:

- CPB should continue and extend its support for young staff members to engage in academic research. CPB is invited to consider its internal incentives structures from this perspective. The case for encouraging more publication in good journals is that it demonstrates that CPB is at the research frontier, it encourages collaboration with academics, and draws attention to new problems that will attract university-based research with benefits to the supply of recruits, colleagues and new ideas. It needs to be more actively encouraged; as such work currently is the first victim of any pressure on resources and staff time.
- CPB should seek more venues for international cooperation; the establishment of a visitor's programme for international scholars, including a Tinbergen Fellowship seems a productive way of accomplishing this goal.
- CPB should establish a process for regular monitoring of its programme of activities, perhaps by appointing a real scientific advisory committee which would review annually the Bureau's activities and progress.
- CPB should consider how to make its main models fully accessible to outside researchers. This could stimulate a more critical discussion on key behavioural assumptions, elasticities, parameters etc. in the various models, and lead to continuous monitoring and improvements of these models.
- The CBP should seek additional sources for financing projects. Outside financing for research projects (it should be obvious that the Committee does not think CPB should engage in any commercial consulting activities) has a number of advantages: it draws CPB into international research networks and provides continuous feedback on the quality of the research. Participation in collaborative research projects financed under the EU framework

programmes should be particularly encouraged. But CPB should not be limited to seeking financing for research from, EU sources.

3.3 The functioning of the Bureau

3.3.1 Organisation structure

CPB's self-assessment presents its work around six research themes. These themes are discussed in chapter 4 of this report. The Committee notes that CPB's organisational structure follows a different logic. The Committee believes that management functions would be more effective if they were more closely aligned with the research themes around which CPB reports its output. Therefore, the Committee suggests that CPB review its organisational structure. A more centralised leadership at the level of the themes would facilitate the move into the direction of strengthening links with academic research and long-term issues. Organising Bureau activities more closely around the research themes would also help to improve the transparency of the functioning of the agency.

3.3.2 Human resource management

Recent attempts to strengthen HRM are impressive

The Committee is impressed by CPB's recent attempts to strengthen human resource management. Regular evaluation talks on all levels are important to create a productive environment. The Committee supports CPB's own analysis that these initiatives need to be more rigorously executed. This is especially important for further education and training: stronger incentives should be given to staff members and department heads to invest more in their human capital. In general, there seems to be a strong identification of the staff with the Bureau, and young staff members seem to obtain attention and support. Appointment of an individual senior mentor for each young staff member could foster this policy. The general climate in the Bureau appears to be social, harmonious and productive.

Recent recruits to managerial positions have greatly strengthened CPB over the past six years, and brought in the necessary skills to reorient the work and culture of CPB. The Committee notes the pressing need for hiring/retaining the best/brightest young staff, and applauds CPB's efforts to broaden staff interests and talents through the young professional programme (YYP). The YPP is an excellent way to attract good staff with the necessary versatility and potential to tackle the wider range of problems now addressed. They are mentored and this valuable activity could usefully be extended more widely, particularly whenever a new member joins a unit.

More international recruitment of staff

The Committee notes that CPB recruits almost its entire staff in the Netherlands. This unnecessarily restricts the pool of talents from which CPB can draw. The capacity of CPB to deal with research and questions on the EU and global level and in doing comparative research on institutions, regulation and welfare reform would be enhanced if CPB recruited more of its staff internationally and participated even more actively in international projects and networks. In this regard, CPB should also consider setting up an exchange programme for staff with similar institutions abroad.

4 Recommendations related to specific themes

4.1 World economy and European integration

High quality research on systemic issues

The Committee notes that this theme consists of two disjointed elements: One part provides basically a set of numbers used for macroeconomic modelling estimates (namely, six variables that summarise the influence of the world economy on the Dutch economy). The other part deals with important systemic issues at the European and world level (e.g. structural funds, wage coordination, climate change). We find the work of the units undertaking systemic research on the world economy and European integration to be well implemented, both in terms of quality and in terms of the topics chosen. However, the general comment that high quality research should also find its way to refereed journals applies here as well.

Reallocating resources

In terms of resource allocation, the Committee believes that fewer resources should be allocated to the production of in-house forecasts of foreign variables (oil price, exchange rates, interest rates, global trade) that are easily available from a variety of international sources. With respect to forecasting domestic variables, CPB should consider more intensive cooperation with the OECD and the European Commission. If consolidation that takes into account this reduction is accomplished, up to 2 or 3 fte's might be released from the unit dealing with international business cyclical analysis. These resources could then be allocated to the units dealing with the systemic issues at the European and world level.

WorldScan model

The Committee also has doubts regarding the productivity of resources devoted to the maintenance and extension of the WorldScan model, especially given the existence of other models with a similar structure and purpose (e.g., the GTAP model), and encourages CPB leadership to review the justification for continued work on the WorldScan model.

4.2 Domestic economy: macro and meso

Strengths and weaknesses of CPB's macromodels

The Committee observes that work in this theme is mainly 'demand driven.' Tradition has imposed a demanding sequence of requests for model-based forecasts and short/medium term projections. Many CPB staff members are devoted to providing these estimates, developing inputs to the model forecasts, and maintaining, updating and extending the SAFE and JADE models, which serve as CPB's forecasting 'workhorses'. These models are very rich in institutional detail. However, despite the fact that these models incorporate some recent insights from modern macroeconomics, the Committee considers the models still to be weak with

respect to certain behavioural assumptions and in taking into account long-run governmental budget constraints.

The need for model extension

For budgetary policy CPB often provides a common language. As noted in section 2, this might be useful in many cases because it forces the body politic to accept a certain discipline and the judgement of an outside referee on what policies can be financed. However, this monopoly position of CPB also has its dangers: providing a focal point for Dutch policy discussion should not lead to short-sightedness or a narrow vision on possible policy options and alternatives. Therefore, CPB should continue its efforts to extend its models to include behavioural responses and inter-temporal budget constraints. This should be done in cooperation with experts from universities and client organisations, which should assist in setting priorities for model extension.

In this regard, the Committee is astonished how often CPB is asked to offer a Solomon's Verdict. This is a pity, since economic models are then used as a 'black box', slowing down model innovation. Furthermore it hinders a debate in society on economic principles. The Committee notes that one of the advantages of the recent move to industrial economics (see section 4.4) is that it does not suffer from this drawback. However, macro analysis of fundamental issues such as wage moderation (see further below) would also benefit from such a discussion of principles rather than 'black box' verdicts.

The need for incorporating forward-looking behaviour

With respect to behavioural assumptions the Committee notes the rather rudimentary incorporation of expectations and forward-looking behaviour. This means that these models are not well suited for analysing the consequences of systemic changes. For example, for most cases anticipation effects of policy reforms can be neglected. However, an announced and convincing programme of long term expenditure cuts could have a quite different impact even in the short term. Such a systemic policy change would presumably change expectations about future taxes and hence future productivity growth. Once households and firms expect these future developments they might already start today to change their consumption and investment decisions. This type of effect would hardly show up in the models used by CPB.

The need for in-depth study of wage moderation

Another example of the danger of too much reliance on a certain type of model concerns the wage moderation dogma. A certain period of wage moderation is likely to lead to more employment as Dutch labour and Dutch products become relatively cheaper and investment is stimulated. However, a very long period of wage restraint might have different effects because of the general equilibrium effects of such a policy if sustained indefinitely. While CPB has also longer term models that could take these effects into account, it is typically much more time

consuming to think them through so that the policy discussions are often de facto dominated by the more mechanical short-run effects. The Committee therefore urges CPB to make a more systematic study of the long-run effects of wage moderation. Again, this should be done in cooperation with experts from universities and visiting fellows. This requires general-equilibrium research beyond the current models of CPB. It may be relevant to allow for different (lower) productivity growth in the non-traded services sectors such as education, health, safety and culture than in the trade market sectors. It may be necessary to assess the possible importance of Baumol-Bowen and Balassa-Samuelson effects and to recognise that many of the non-traded services are publicly financed. Is wage moderation essential to contain the costs of publicly financed non-traded services and to avoid the adverse effects of higher taxes on employment? CPB should offer insight on whether wage moderation implies wage compression and whether this impedes longer term allocation of labour across sectors and harms growth. The analysis should also explore whether wage moderation discourages schooling and other efforts to improve one's productivity. Finally, the question should be addressed whether wage moderation and compression harm Schumpeterian innovations and growth. Obviously, a simulation of one of CPB's models cannot answer the array of questions that arise from the dogma of wage moderation. Careful analysis and assessment of the data are required.

4.3 Technology, education and research, innovation and productivity

Focus on productivity related issues is to be applauded

The Committee applauds CPB's decision to focus more of its work on productivity related issues and its desire to become an international centre of excellence in this field. More empirical knowledge on the determinants of productivity growth and innovation is essential for addressing big questions such as whether wage moderation is helpful for productivity growth, and how to stimulate the knowledge economy. If CPB is successful, there is a natural link with macro policy analysis in that the medium and long-run models should capture the effects of policy on productivity related variables and hence feed back into the short to medium-run policy analysis. The difficulty of this link is that of analysing the structural determinants of the rate of technical progress, and other longer-run behavioural responses in a way that can be fed into the longer run models.

Continue working on better data quality

The Committee thinks that CPB has a comparative advantage in that it can work with Statistics Netherlands more easily on confidential data, and hence access individual firm records. It strongly encourages CPB to continue working on improving the quality of sector and firm specific data on productivity growth, innovation efforts and the private and public capital stock. CPB does follow best practice from abroad, but is hampered by the lack of suitable micro-data for the Netherlands. Given CPB's comparative advantage in having access to detailed micro-

data on the one hand, and the strong development of micro-econometrics in some universities on the other hand, the Committee thinks that there are clear opportunities for forming strategic alliances with outside academics in this field.

Systematic policy evaluation with respect to educational reforms

The Committee also strongly encourages CPB to continue its work on analysing the effects of educational reforms. There is a general need in the Netherlands to develop and apply policy-evaluation techniques to this sector. This especially applies to educational policy where, despite the frequency of major reforms over recent decades, there seems to be no adequate infrastructure for systematic policy evaluation. The Committee is convinced that CPB is an obvious candidate for filling this gap. The Committee therefore recommends that CPB allocates more resources to this field.

4.4 Industrial economics

Increased emphasis on micro-economics is welcomed

Since the time of the last review there has been an increased emphasis in CPB's work on micro-economics and in particular on modern industrial organisation and institutional analysis. The use of the concepts of principal-agent theory, contract and market analysis, and the attempts to study issues of regulation, semi-market institutions, and network industries are a favourable development.

The theme builds links between older institutional capabilities and modern industrial organisation to address questions in health, housing, banking, where there are market distortions, market power, and extensive subsidies or regulations whose full effects are not obvious and where reforms may have complex effects. As the service sector grows in importance, so the impact of e.g. information and communication technology (ICT) on productivity in this sector will become important, although in the past almost all the emphasis on innovation and ICT policy was on the industrial sector.

The future strategy of the division is to build up its expertise in network industries and semi-public enterprises. This seems sensible given the hub position of the Netherlands in various networks (gas, electricity, transport) and the salience of semi-public enterprises in the economy. One incidental benefit might be the reorientation of the energy component of CPB away from modelling future prices and towards structural issues (merger analysis, network and interconnected investment, security of supply, gas restructuring, etc).

Shifting boundaries of research

One highly salient project examined the incentive effects of the new performance contracts for police, where existing expertise to analyse this issue was lacking in the Netherlands, but where principal-agent theory combined with some institutional analysis and an awareness of the measurability (or not) of outputs, was able to shed some light. One might argue that the study of the police (or health) is not an area in which CPB could claim a comparative advantage and might appear to distract from a more strategic view of where the units should establish competence, but the counter-argument is that institutes that study these issues like the Social Cultural Planning Bureau have sufficient expertise. In addition, the tools of modern industrial economics allow accepting new challenges outside obvious areas of experience, and the demands for such policies are pressing and logically directed at CPB.

Strengths and weaknesses

The strength of CPB is that these efforts have been reasonably successful despite the Bureau's rapid growth in attracting press coverage, political interest and academic respect. The weaknesses or challenges are to raise the empirical content of their research from its current low (but non-zero) level, by hiring staff with more empirical skills. Certainly some recent hires reflect this intention. There is a need to improve synergies with staff and activities involved in macro-modelling and forecasting, and this is recognised as an important but difficult task. Essentially the longer-run impact of important policies that are studied by the units dealing with industrial economics will need to inform the longer run equilibrium of the macro and long-run models

There is a case for increasing the political-economic analysis of reform to inform policy (e.g. for reform of the Common Agricultural Policy and in other sectors where distributional outcomes are diverse).

Strengthening international cooperation

The theme is clearly appealing to academics, and CPB has been able to recruit good young professionals in a tight job market; these recruits clearly enjoy the challenges, the policy involvement and the working style of CPB.

In terms of improving the performance of the units, it is clear that there are mutual benefits in co-operating with academics and foreign research institutes with expertise in particular areas (housing, health, competition, etc). Particularly where international benchmarking or comparative work is important, each institute benefits from sharing its data and insights with its partner. In this regard, it might be worth considering jointly hosting an international meeting (e.g. EARIE⁵) with local universities, and similarly smaller industrial organisation workshops.

⁵ The European Association for Research in Industrial Economics.

The staff already holds thrice-yearly meetings on competition in the Netherlands, so this model has already been tried with benefits on a local small scale.

4.5 Welfare state and the labour market

A centrally important component in CPB's portfolio

The research and policy analysis performed in this theme forms a centrally important component in CPB's portfolio. A number of important CPB studies have come out of this theme, including reviews of major proposals for structural reform (e.g., proposals for change in the disability benefits system) and analyses of longer run general equilibrium effects of changes in tax rates and programme benefit replacement rates. The staff members working on these issues are of high quality, and an appropriate balance between demand-driven analysis and supply-driven own studies exists.

Strengths and weaknesses of the MIMIC and GAMMA models

There are two central models with important behavioural or general equilibrium solution characteristics that have been developed in this area, and which are currently being maintained—the MIMIC and GAMMA models. Both of these models are impressive in their structure and both have been used in direct policy analysis. The MIMIC model has been recognised in the international economics literature, while the GAMMA model provides improvements on similar models done in other countries that have also served as the basis for publications in recognised economics journals. Both of these models, however, need updating and extension. CPB staff recognises the weaknesses of the wage equation and labour market segment of the MIMIC model, and efforts are being made to improve this aspect, which is to be applauded.

However, there are important issues that are central to the consideration of major structural reform proposals that are not handled well in these models. These include such things as regulatory changes or the imposition of direct constraints/mandates on individuals or decision makers. For such intractable issues, analysts are left to rely on often-sketchy information regarding experiences in other times and places, and typically there is little reliable information that can be learned from these sources. CPB should review its procedures for analysing the economic effects of these sorts of policy measures, and should give more weight to simply “playing through” the implications of various alternative scenarios regarding implementation and effectiveness, emphasising the likely direction of the impacts rather than seeking precise quantitative estimates.

Rationalising the number of models and calculation programmes

Besides these models, a number of other calculation programmes exist and are maintained in this programme, including a static micro data simulation model (for analysing the distributional

effects of changes in tax/transfer policy). Taken individually, all of these models and computing procedures serve a purpose and each of them have certain “gross benefits”. However, when considered as a whole, the total volume of resources required is very large. Perhaps CPB should undertake a net benefits-based analysis designed to rationalize these models, and to reduce the total volume of resources devoted to them.

CPB's new health-care model

A health-care model has also been developed that includes a few of the relevant behavioural relationships for this sector. This effort is to be supported, but at the same time the inherent difficulty of reliably modelling this intractable sector must be recognised. When confronted with a sector that is so afflicted with market imperfections and peculiar behavioural patterns (e.g., adverse selection, supply-induced demand), it may be more appropriate and effective to base policy appraisal on more conventional microeconomic estimation/policy analytic techniques.

The need to broaden methods for estimating the effects of welfare reform

The outcome of this review would hopefully free up resources that would enable the units included in this area to strengthen their research capability in a number of dimensions. Policy analysis research organisations in other nations make far greater use of other analytical methods and data, including the use of microeconomic techniques to estimate important behavioural relationships, and social experimentation (or quasi-experimentation) to pursue the ex post evaluation of policies that have been implemented. A shift of resources in these directions would place CPB research/policy analysis in this area more in line with activities and methods employed in other recognised research/analytic organisations in other nations. The possibilities for additional collaboration and contacts with these other concentrations of policy studies of welfare and labour market policy are important, and could leaven the analysis capabilities of CPB in this area. Such realignment would require the addition of analysts with quite different skills and interests than those currently working in this area.

4.6 Physical and regional aspects

Cost-benefit analysis as an indispensable element

This theme concerns ‘physical aspects’, which appears to be short for ‘economic aspects of the spatial and physical environment’. Cost-benefit analysis is an important part of the activities within this theme. This is a relatively new activity for CPB that has become prominent during the last decade. The involvement in cost-benefit analysis and related welfare economic approaches is an indispensable element of CPB’s policy to be the ‘Netherlands Bureau for Economic Policy Analysis’.

Criticism is not a proof of low quality work

The Committee considers the cost-benefit analyses -and second opinions of cost-benefit analyses carried out by other research institutes- to be an important output of CPB. A striking difference with the short-term predictions produced by CPB is that the latter are usually well received, whereas the cost-benefit analyses of CPB are often received with criticism (e.g. its analysis of the expansion of the Rotterdam harbour). According to the judgement of the Committee this is not proof of low quality work, but rather an immediate consequence of the conflicting nature of the projects covered and issues addressed by CPB.

Broadening the sphere of application of cost-benefit analysis

The Committee supports the ambition within this group to broaden the sphere of applications of cost-benefit analysis also to topics outside this theme such as health care, agricultural policies, housing and education and research and development. There is a possibility of mutual benefits for the respective groups and the researchers in this theme given the importance of the issue of market imperfections in many of these sectors - which has interesting implications for the outcome of cost-benefit analysis.

Avoiding unfair competition

CPB is not the only institute in the Netherlands that is involved in cost-benefit analysis; other institutes in the private and public sectors also carry out such analyses. In that case CPB may be asked to carry out a second opinion of cost-benefit analyses carried out by other institutes. In order to avoid unfair competition, CPB is advised to be selective in the choice of cost-benefit analyses that it will carry out. CPB should focus on cost-benefit studies where innovative approaches are needed.

Potential improvements in cost-benefit analysis

The Committee agrees with the diagnosis that improved analytic techniques for estimating the effects of policy changes are necessary in at least four areas: public safety, quality of transport systems, quality of the environment and indirect effects. The Committee supports CPB's close collaboration with other partners, such as the Ministry of Transport in realising these improvements. CPB lacks the resources to do all this work on its own. The choice to focus on the evaluation of quality of transport systems is a natural one for CPB. CPB should approach its strategic partners, such as RIVM⁶ and RPB⁷, to fuel their interest in making progress on some of the remaining issues. Researchers in the Netherlands have not been very active in programme evaluation studies designed to assess the net benefits or the cost effectiveness of policies actually undertaken. Valuation of external effects and indirect effects in cost-benefit analysis

⁶ The Dutch National Institute for Public Health and the Environment.

⁷ The Netherlands Institute for Spatial Research.

has not received much attention in the Netherlands. CPB should use its position to improve this, either by carrying out such studies itself, or by encouraging others to do this.

Developing a regional labour market model

The regional economics and spatial development unit has decided to develop a regional labour market model. CPB is advised to carry out its modelling activities in close cooperation with related partners, particularly AVV⁸, and possibly also RPB and RIVM. Overlaps with model developments commissioned by AVV should if possible be avoided. The present division of tasks, where AVV takes the lead in detailed transport network models, and CPB provides forecasts for regional economic activity, makes sense. The present multi-regional labour market model that is under development should be embedded as much as possible in the current literature on spatial economic modelling and labour economics.

Focusing on the gas sector

Within this theme, the energy group is quite large, and energy modelling as such absorbs considerable effort, replicated in many other institutions in the Netherlands (DTe, TenneT)⁹ and elsewhere. It might be desirable to ask strategic questions about where the main effort should be applied. The Netherlands is a major gas producer and is positioned at an important potential trading hub. Gasunie is 50% government-owned, an important source of rent revenue, and subject to evolving energy directives and regulatory scrutiny. Gas is one of the more opaque industries where producer capture is prevalent. An independent source of industrial expertise would seem desirable, although whether CPB currently possesses the expertise is unclear. It is worth considering whether CPB should strengthen its capacity in this area. Electricity in contrast is less salient macroeconomically and is currently under scrutiny in DTe. It would be worth discussing with DTe how to divide resources and attention to best maximise the value added of work in this area.

Raising academic output

Judging from the reported outputs this is an active group that is heavily involved in highly important policy topics. However, the academic output of the group is low. The pressure of the ever ongoing demands for policy advice may be high, but to achieve a sufficient level of innovation within the activities and for the reputation of the group, it is advisable that members of the group get sufficient opportunity to do research of such a level that it can be published in

⁸ The AVV Transport Research Centre is one of the specialist services of the Ministry of Transport, Public Works and Water Management in the Netherlands.

⁹ The Office for Energy Regulation (DTe) is a chamber within the Netherlands Competition Authority (NMa). Transmission System Operator TenneT is manager of the Netherlands high-voltage grid (380 and 220 kV).

good journals. A related policy to improve the quality of the outputs would be to intensify participation in international networks and to pursue strategic cooperation with partners inside or outside the Netherlands.

5 Conclusion

The Committee is much impressed by CPB's performance. With its highly motivated staff and able leadership, CPB has achieved a central role in the Dutch policymaking process and enjoys a high reputation due to its sound work. It has also successfully begun to shift its research activities to the new challenging fields of structural reforms and microeconomic analysis. In this process, CPB has intensified its relationships with academic research.

While preserving its dominant position in the Netherlands, CPB attempts to position itself as one of the leading institutes in the international policy research community. In order to realise its ambition, CPB should accelerate its shift in orientation towards more structural reform issues and should further strengthen its links with academic research. Moreover, CPB needs to continue its efforts to keep its macro- and long-term models up to the latest academic standards and insights. This will require a re-allocation of resources. The Committee is confident that CPB will accomplish its goals by making full use of the recommendations outlined in this report.

Annex 1 Composition of the CPB Review Committee 2003

Members:

Prof. Dr. Klaus F. Zimmermann (Chairman)

Prof. Dr. Daniel Gros

Prof. Dr. Robert H. Haveman

Prof. Dr. David Newbery

Prof. Dr. Rick van der Ploeg

Prof. Dr. Piet Rietveld

Secretary:

Dr. Bart van Riel (staff Social and Economic Council, the Netherlands)

Curriculum vitae of the members of the Committee

Klaus F. Zimmermann is a Full Professor of Economics at Bonn University and a Honorary Professor of Economics at the Free University of Berlin. He is the Director of the Institute for the Study of Labour (IZA) in Bonn, a renowned research institute supported by Deutsche Post World Net. He is also the President of the German Institute for Economic Research (DIW Berlin), the largest German think-tank in economics. Moreover, he holds numerous prestigious academic positions including the post of Editor-in-Chief of the Journal of Population Economics. He is also a fellow at the Centre for Economic Policy Research (CEPR), London, an associate research fellow of the Centre for European Policy Studies (CEPS), Brussels, a research associate of the Center for Comparative Immigration Studies at the University of California-San Diego and a member of the advisory “Group of Economic Analysis” (GEA) to the President of the EU Commission. In 1998, he received the prestigious John G. Diefenbaker Award of the Canada Council for the Arts. His main research fields include labour and population economics, migration, industrial organization, and econometrics. He is a frequent adviser of the German and international governments and the EU commission and is regularly sought after by the media and the press.

Daniel Gros is the Director of the Centre for European Policy Studies, the leading think-tank on European affairs. He has served on the staff of the IMF, as an adviser at the European Commission, and as visiting professor at the Catholic University of Leuven and the University of Frankfurt. He advised the governments of Russia, Ukraine and other Central and Eastern European countries on trade and exchange rate matters and their relations with the EU. He is currently adviser to the European Parliament and since 2001 he is a member of the advisory council of the French Prime Minister, the Conseil d’Analyse Economique. He has published widely in international academic and policy oriented journals. He authored numerous monographs and books on the economic transition in Central and Eastern Europe, European monetary integration, EMU and Capital Markets and on European central banking.

Robert H. Haveman is John Bascom Professor of Economics and Public Policy, Department of Economics and Robert M. La Follette Institute of Public Affairs, and Research Affiliate, Institute for Research on Poverty at the University of Wisconsin-Madison. He received his B.A. degree from Calvin College in 1958, and his Ph.D. in economics from Vanderbilt University in 1963. Prior to 1970, he was Professor of Economics at Grinnell College, Senior Economist at the Joint Economic Committee, U.S. Congress, and Research Professor at the Brookings Institution. From 1970-1975, he was Director of the Institute for Research on Poverty. In 1975-76, Professor Haveman was a Fellow at the Netherlands Institute for Advanced Study, and in 1984-85 he served as Tinbergen Professor at Erasmus University, The Netherlands. From 1988 to 1991, he was Director of the Robert M. LaFollette Institute of Public Affairs, and from 1993-1996 served as Chair of the Department of Economics. He was co-editor of the *American Economic Review* from 1985 to 1991.

Professor Haveman's primary fields of interest are public finance, the economics of poverty and social policy (including disability policy). Professor Haveman has published in the *American Economic Review*, the *Review of Economics and Statistics*, and the *Quarterly Journal of Economics*. He has published numerous books on public policy.

David M. G. Newbery is Professor of Applied Economics and Director of Department of Applied Economics, Cambridge, UK; Professorial Fellow, Churchill College, Cambridge, UK. He spent two years as Division Chief, Public Economics, World Bank, and has been a visiting Professor at Berkeley, Princeton, Stanford and Yale. He is a fellow of the Centre for Economic Policy Research, a fellow of the Econometric Society and a Fellow of the British Academy. He was President of the European Economic Association in 1996 and was awarded the Frisch Medal of the Econometric Society and the Harry Johnson Prize of the Canadian Economic Association. He has been an economic adviser to Ofgem, Ofwat, and to the Office of Rail Regulation, a member of the Competition Commission and is a member of the academic panel of environmental economists, formerly at the Department of Transport and the Environment, now with DEFRA. He is chairman of the Dutch Electricity Market Surveillance Committee. He has managed a series of research projects on electricity and telecoms privatisation and regulation, and on road congestion, funded mostly by the UK Research Council since 1988. He pursues research in public policy, regulation, energy, environment, road pricing and finance, taxation, the economic transformation of Eastern Europe, and industrial organisation. He has taken part in World Bank missions to Hungary, the Czech Republic, Romania and Bulgaria to advise on energy sector reforms and preparedness for EU accession. He has written reports on electricity reform and regulation in a variety of developing and transitional countries.

Rick van der Ploeg is Professor of Economics at the European University Institute, Florence and the University of Amsterdam, research fellow of CESifo, Munich and columnist for 'Het Financieele Dagblad'. He is co-author of the recent graduate textbook 'Foundations of Modern

Macroeconomics', Oxford University Press. Formerly at Cambridge University (1977-83), London School of Economics (1983-88) and CentER, Tilburg University (1988-1991), Chief Financial Spokesperson of the Dutch Labour Party in the House of Representatives (1994-1998) and State Secretary for Education, Culture and Sciences (1998-2002).

Piet Rietveld is Professor in Transport Economics at the Faculty of Economics, Vrije Universiteit, Amsterdam. He studied econometrics at Erasmus University, Rotterdam (cum laude degree) and received his PhD in economics at Free University, Amsterdam. He worked at the International Institute of Applied Systems Analysis (Austria) and was research coordinator at Universitas Kristen Satya Wacana in Salatiga, Indonesia.

Since 1990 he has been a fellow at the Tinbergen Institute.

Over the past fifteen years he has worked on various topics in the field of transport economics and regional economics. This research has been extensively reported in authored and edited books, and in numerous papers published in scientific journals or as contributions to books.

Internationally Piet Rietveld is active as coordinator of the cluster of transportation and communication networks of NECTAR and as coordinator of numerous sessions of the European Congresses of the Regional Science Association. He is on the editorial board of several scientific journals in the field of transport and regional development.

In 1999 he was awarded the Dr Hendrik Muller prize by the Royal Dutch Academy of Sciences (KNAW) for his scientific work in the field of the spatial sciences. In 2001 he was elected as the chairman of NECTAR, a European association of researchers in transport and communication.

Annex 2 Terms of reference

(Source: Through the Looking Glass, op. cit., chapter 6, Questions to the Review Committee)

General questions

- In general, the Committee is asked to judge the performance of CPB over the last few years, in view of its task to provide independent economic analyses that are relevant for Dutch policymaking. Given the six fields (themes) distinguished in this report, what is the Committee's assessment of performance of each field? What improvements should be considered? What fields or subfields are missing?
- How does the Committee evaluate the allocation of labour over the different themes?
- How can CPB better inform its clients and the general public about the uncertainty in its outcomes? Should CPB invest more in this area?

Position and tasks of CPB

- What is the Committee's view on CPB's organisational structure and work plan procedures?
- How does the Committee evaluate the balance between ambition and realism in the current vision and mission of CPB?
- Which strategies does the Committee recommend with respect to the mission?
- What comments does the Committee have on CPB's culture, both actual and desired?
- How does the Committee assess the key principles with respect to professional conduct CPB has laid down?

Quality strategy

- How does the Committee assess CPB's quality strategy and what additional elements should be considered?
- New measures have been adopted to strengthen HRM. Are these sufficient, are other initiatives called for?
- What is the Committee's view on (actions to be taken with respect to) internal and external labour mobility for various staff categories?
- How can CPB strengthen its labour market position and move towards an 'employer of choice' position?
- How does the Committee assess the line-organisation structure with relatively small units?

- How does the Committee look at the experiments with project organisation, in which product and personnel management are separated?
- What is the viewpoint of the Committee on designating the general public as a target group for CPB and serving this group with tailor-made information via the website?

Questions related to the six themes

World economy and European integration

- What role can and should international networks play in the short-term international analysis of CPB?
- Should we aim to provide our expertise on international trade to network partners in Europe? If so, how?
- Should we expand our analysis and assessment of monetary and fiscal policy in the euro area?
- For simulation purposes a comprehensive international economic model is occasionally missed.
- What would be the consequences, for example, of a 10% dollar depreciation? How should we deal with this?
- How do you view the optimal balance between a sufficiently broad scope of topics and a sufficiently in-depth analysis?
- How can CPB increase its impact in the international arena?
- What is the way to improve CPB's network with people in Brussels?

Domestic economy: macro and meso

- How does the Committee weigh the pro's and con's of two operational macro models (the quarterly model SAFE for short-term analysis and the yearly model JADE for medium-term policy analysis)?
- How does the Committee assess the present low-key approach to learning and expectations formation of economic agents in CPB's short- and medium-term macro econometric models (either exogenous or a distributed lag of the actual development)?
- What is the Committee's position on using detailed sectoral information as a corrective device for macroeconomic forecasts and projections? What investments in this area would be worthwhile?
- Technical progress is largely exogenous in CPB's models. With respect to these models, which approach should be taken for incorporating endogenous growth, if any?
- CPB spends a considerable amount of its resources on the development and maintenance of its large-scale econometric models. The academic status of this type of models is

rather low nowadays. Does CPB strike a right balance? Or should CPB devote more time to medium- and long-term analyses based on small stylized ad hoc models, combining firm theoretical underpinnings with a rather crude empirical content?

- CPB's models exhibit non-zero terms-of-trade effects at all time horizons. For the short- and medium term this seems to be OK, but is it appropriate to have non vanishing terms-of trade effects in the long run as well?

Technology, education and research, innovation and productivity

- How does the Committee assess the comparative advantage of CPB in the areas of technology, education and research, innovation and productivity, given that so many institutions have this theme on their research agenda?
- Empirical research on this theme is fraught with data problems. CPB's response includes the following: base research agenda on data available, develop own database, cooperate with international organisations. How does the Committee assess these and other possible options?
- How does the Committee assess a possible trade-off between policy relevance and researchability (that is, research on the most policy-relevant topics vs. research with the highest possibility of obtaining concrete outcomes)?

Industrial and institutional economics

- What is the Committee's advice on the trade-off between policy work and publishing in refereed journals?
- What is the Committee's advice on the specialization of the modern industrial economics subtheme in network industries and semi-public services?
- One can invest in data collection to become a sectoral specialist, or one can collect data when a policy issue requires it. What is the Committee's view regarding how CPB should divide its time between both variants of data collection?
- How does the Committee evaluate the time that CPB spends (will spend) on this theme in comparison with other themes? Is the labour spent on this theme sufficient to create a critical mass?

Welfare, labour market and ageing issues

- Contrary to wage formation CPB has not invested in micro data analysis of price formation; research in this area has been restricted to the estimation of aggregate price equations for CPB's macroeconomic models. What could we learn from

microeconomic research in the area of pricing. What policy issues can perhaps better be addressed this way?

- Does CPB cover the ageing issue in a sufficient way? What suggestions does the Committee have for additional work in this area?
- When analysing policy proposals, CPB often calculates purchasing power effects both for a limited number of fictitious “representative” households (minimum wage, average wage earner), and for a large representative sample of real households. What method, one of these or yet another one, would the Committee prefer to report the effects of policy on the income distribution?
- What suggestions does the Committee have for broadening the scope of CPB’s research in the area of welfare and ageing to the international (i.e. European) level? How does such a broadening fit into the main focus of CPB which is, and should be, serving the *Dutch* policy arena?

Physical and regional aspects

- How does the Committee assess CPB’s role in further improving the methodology of cost-benefit analysis in the Netherlands (e.g. quantifying the difference between general and partial equilibrium effects, introducing the real options technique)? What is the scope for using CBA in fields of public policy other than investments in infrastructure?
- In the Committee’s view, what is the importance of the construction of a regional applied general equilibrium model?
- How does the Committee assess the series of new energy models built to analyse energy markets after European liberalization - from the point of view of both forecasting and policy analysis and long-term scenarios?
- How does the Committee assess the shift in attention towards issues of public safety?
- Which themes in the field of spatial and transport economics deserve more attention, given the limited capacity? What tools are required?

Annex 3 Persons interviewed by the Committee

A. *Persons from outside CPB*

Representatives of the civil service

Bernard ter Haar, Ministry of Finance
Theo Langejan, Ministry of Social Affairs and Employment
Gertjan Lankhorst, Ministry of Economic Affairs
Theo Roelandt, Ministry of Economic Affairs
Jos van Wesemael, Ministry of Health, Welfare and Sport

Participants in social economic consultation

Henk Brouwer, Dutch central bank
Chris Driessen, FNV, trade union federation
Steven Duursma, Social and Economic Council
Jan Klaver, VNO-NCW, employers' organisation

Politicians

Tineke Netelenbos, former Minister, member Dutch Labour Party

Independent observers: scientific community

Bart van Ark, University of Groningen
Leo van der Geest, NYFER Institute for Economic Research
Hugo Keuzenkamp, SEO Amsterdam Economics
Coen Teulings, Erasmus University Rotterdam
Jan Willem Velthuisen, PWC
Sweder van Wijnbergen, University of Amsterdam

Independent observers: press

Mathijs Bouman, FEM Business
Giselle van Cann, Het Financieele Dagblad
Ferry Haan, De Volkskrant

Other research institutes, partners in common projects

Klaas van Egmond, National Institute for Public Health and the Environment (RIVM)
Houko Luikens, AVV Transport Research Centre of the Ministry of Transport, Public Works and Watermanagement
Carlo van Praag, Social and Cultural Planning Bureau (SCP)
Henk van Tuinen, Statistics Netherlands (CBS)
Nol Verster, ECORYS-NEI

B. *Persons from inside CPB*

Henk Don, director CPB

World economy and European integration

Casper van Ewijk, deputy director

Joeri Gorter, economist, unit European comparative analysis

Wim Suyker, head unit International cyclical analysis

Paul Tang, head unit International economic analysis

Domestic economy: macro and meso

Rocus van Opstal, head department Short-term analysis and fiscal affairs

Peter Kooiman, head department Models, labour and income

Albert van der Horst, economist unit Macroeconomic modelling

Cees Jansen, head unit Public finance

Bert Smid, project leader Sectoral modelling

Johan Verbruggen, head unit Cyclical analysis

Technology, education and research, innovation and productivity

Marcel Canoy, head department Institutional analysis

Maarten Cornet, project leader Innovation

Bert Minne, head unit Technology and manufacturing

Dinand Webbink, head unit Education and science

Henry van der Wiel, project leader ICT and labour productivity

Industrial economics

Marcel Canoy, head department Institutional analysis

Marja Appelman, head unit Market services

Martin Koning, head unit Construction

Richard Nahuis, head unit Competition and regulation

Maarten van 't Riet, economist unit Food and agriculture

Welfare state and labour market

Peter Kooiman, head department Models, labour and income

Marcel Lever, head unit Income and prices

Esther Mot, head unit Health care

Hans Roodenburg, head unit Labour market

Frans Suijker, head unit Social security

Ed Westerhout, head unit Applied general equilibrium modelling

Physical and regional aspects

Ruud Okker, head department Physical aspects

Paul Besseling, head unit Transport economics and cost-benefit analysis

Carel Eijgenraam, head unit Regional economics and spatial analysis

Martin Koning, head unit Construction

Machiel Mulder, head unit Energy and raw materials

Herman Stolwijk, head unit Food and agriculture

CPB staff concerned with organisation, human resources and communication

Taco van Hoek, deputy director

Bertha Brouwer, head Internal affairs, including library

Claudia Presenti, head Personnel

Jacqueline Timmerhuis, head External affairs

Young professionals and young professionals avant la lettre

Nicole Bosch, economist unit Income and prices

Willemien Kets, economist unit International economic analysis

Mark Lijesen, economist unit Energy and raw materials

Hans Stegeman, economist unit Income and prices

Daniel Waagmeester, economist unit Public finance

Representatives of CPB's works council

Erwin Zijleman, chairman

Peter Dekker, second secretary

Eugène Verkade, deputy chairman