OECD Review of the Belgian Federal Planning Bureau

AN ASSESSMENT OF INSTITUTIONAL, OPERATIONAL AND ANALYTICAL CAPACITY

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Foreword

Independent fiscal institutions (IFIs) are public bodies that provide non-partisan oversight and analysis of fiscal policy. They have become a cornerstone of fiscal oversight in nearly all OECD countries. Strong and well-functioning IFIs promote sound fiscal policy and sustainable public finances.

The Federal Planning Bureau of Belgium was among the first OECD IFIs, established in 1959 as the Bureau for Economic Programming. The Bureau evolved along with Belgium's economy and institutional changes to become the Federal Planning Bureau (FPB). Recent years have seen the Federal Planning Bureau receive new mandates and responsibilities, such as estimating the costs of election platforms put forward by political parties and analysing the effects of investments and reforms in Belgium's post-COVID Recovery and Resilience Plan.

This review assesses the FPB's institutional, operational and analytical performance as an IFI. As the FPB's responsibilities have grown, the review provides insights into the extent to which the institution continues to serve the needs of its stakeholders effectively.

The report is divided into three parts. The first part reviews the institutional framework and operations of the Bureau as it relates to fulfilling its mandate, particularly its responsibilities as one of Belgium's IFIs. The second reviews the Bureau's analytical capacity to assess the quality of its work, particularly the models related to the *ex ante* assessment of reforms envisaged by the federal government in areas such as pensions, taxation, the labour market, energy, and investment, and policy changes linked, among others, to country specific recommendations from the Council of the European Union. The third reviews the Bureau's performance related to its mandate to undertake election budgetary costings and impact assessment. The review sets out a series of actions to strengthen the effective functioning of the FPB, drawing on the *OECD Principles for Independent Fiscal Institutions*, as well as international best practice.

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Executive summary

In 1959, the national government of Belgium placed much of the economic policy expertise normally found in ministries under one institution that would eventually become the Federal Planning Bureau (FPB, or the Bureau). Over its 60 years of history, the Bureau has firmly established its reputation as an independent analytical institution. Stakeholders praise the quality of the FPB's work and its non-partisanship. Its analysts are at the top of the modelling field.

The close historical relationship of the FPB to the government as a provider of advice sets it apart from institutions created more recently in other European countries to fulfil obligations under the euro area's enhanced budget co-ordination and surveillance framework. While the Bureau provides impartial analysis and macroeconomic forecasts for the budget, it also plays a technical support role for the government. Indeed, it is known as the "government's calculator", performing an analytical function for the public service in several important policy areas. In assessing the Bureau and its set-up relative to international standards and peers, Belgium's particular institutional context must be considered.

The first part of this review assesses the institutional framework and operations of the Bureau, particularly as one of Belgium's independent fiscal institutions (IFIs). The FPB is seen as a locally owned and independent institution that is non-partisan and is transparent about its methods and models. This has resulted in the institution having considerable influence and impact as a fiscal watchdog. For example, it provides information on the federal government's exposure to the costs of population ageing through its work with the independent Study Committee on Ageing, whose reports have prompted the government to change course on several pension reforms in favour of a more sustainable direction.

The review nonetheless identified four areas where the institutional framework and operations of the Bureau could be improved.

1. Strengthening the Bureau's impact on the public and parliamentary debate.
2. Ensuring that new tasks do not compromise the Bureau's ability to perform existing functions and undertake work at its own initiative, important for its independence. This can be achieved through:
    - Providing medium-term funding guarantees reflecting the full range of responsibilities at the start of each political term.
    - Ensuring that the Bureau is consulted in relation to new roles and responsibilities and that these are fully resourced.
    - Improving prioritisation within the FPB, with management reviewing the Bureau's priorities and strategic plans more frequently.
3. Creating an attractive work environment for young professionals to help make the Bureau's workforce more diverse and dynamic, important for institutional resilience as well as innovation and analytical improvement over time.
4. Raising the Bureau's operational transparency to the standard of its analytical transparency, e.g. through publishing an annual corporate activities report including financial statements to strengthen public trust in the institution.

The review also assessed the Bureau's analytical capacity, particularly the models it uses in areas such as pensions, taxation, the labour market, energy, and investment. The FPB has a diverse range of responsibilities and has developed a comprehensive suite of models to fulfil them. It also has a unique and effective system for integrating its data resources, inputs, and outputs across models, teams, and projects.

The review found that the Bureau's individual models are appropriate for delivering its mandate. They compare well to models used internationally within peer fiscal institutions, central ministries and line departments. Indeed, the Bureau has been at the forefront of model development initiatives collectively at the EU level and individually in influencing and supporting peers in building domestic capacity in other countries.

Where resources allow, the FPB could further strengthen its modelling effort in areas underserved according to the Bureau's modelling needs or in comparison to other IFIs with similar mandates and resources. For example, developments in nowcasting and increasing its range of estimates of potential output and the output gap could help the Bureau assess the current economic environment. Investments in models that adjust the cost of policies for behavioural responses, help assess structural reforms, evaluate the impact of wealth taxes and estimate the carbon impact of government policies will be particularly helpful for the FPB's new mandate to undertake election budgetary costings and impact assessment.

The final part of this review assesses the Bureau's performance related to this new election costings mandate. The FPB's mandate was expanded in 2014 to include the "costing" of the policy proposals contained in electoral platforms for political parties represented in the federal parliament. This includes both the estimate of a proposal's initial cost to public finances and the quantitative assessment of the measure's impact on a range of socioeconomic indicators (such as employment, purchasing power of various income groups, and the environment). The role was refined in 2018 and the Bureau's first costing exercise was undertaken for the 2019 federal and regional elections.

Overall, the 2019 exercise met its legislative mandate and intended policy objectives. There is a consensus among stakeholders that the FPB's election platform costing exercise should be made permanent and can be built upon to improve its impact. The exercise improved transparency around the impact of political proposals, created political consequences for specious election commitments, helped bolster political credibility during the election campaign, informed coalition negotiations after the elections, helped political parties develop more robust proposals and, ultimately, better public policy, and enhanced the Bureau's perceived independence.

Notwithstanding the overall success of the 2019 costing exercise, efforts to improve the effectiveness of the exercise for the 2024 election and beyond should focus on:

1. Promoting greater public awareness of independent election platform costings by the FPB.
2. Improving the comparability of political platforms.
3. Expanding technical capacity to capture the impacts of a broader range of policies.
4. Presenting regional impacts of priorities and measures.
5. Providing clearer and more comprehensive administrative guidance.

These changes can help make Belgian federal elections more impactful, informed, open and inclusive. In this way, the FPB can help increase citizen understanding of the economic, social and environmental consequences of different voting choices, shaping citizens trust in the legitimacy and functioning of the election process as a whole.

1 Institutional and operational review of the Federal Planning Bureau

This chapter reviews the institutional framework and operations of the Federal Planning Bureau as it relates to fulfilling its mandate, particularly its responsibilities as one of Belgium's independent fiscal institutions (IFIs).

1.1. Introduction

IFIs are publicly funded bodies that provide non-partisan oversight and analysis of fiscal policy. They have become a cornerstone of strong fiscal frameworks, helping highlight issues relating to fiscal sustainability in nearly all OECD countries.

The Federal Planning Bureau (FPB, or Bureau) of Belgium was among the first. It was established in 1959 as the Bureau for Economic Programming to house the economic policy expertise that would be directed toward industrial planning such as managing wages and prices and fostering domestic industries. The Bureau evolved alongside Belgium's economy and institutional changes to become the FPB. It would continue to provide the type of analysis to government that is normally supplied by public servants within ministries, but at arm's length with an open publishing model. With the help of the Bureau, Belgium's policy is formed in a transparent dialogue between stakeholders.

Recent years have seen the FPB receive new mandates and responsibilities, such as estimating election platform costs and analysing the effects of investments and reforms in Belgium's post-COVID Recovery and Resilience Plan. As its responsibilities have grown, the Bureau's leadership wanted to undertake an external review to ensure that they continue to serve the needs of their stakeholders effectively.

1.2. Adherence to OECD Principles

Key findings

The Federal Planning Bureau predates the prevalent model of IFIs created following the global financial crisis. It was established to serve the government with technical analysis as an arm's length body of the public service, rather than a truly separate fiscal council serving the public interest. It was afterward given an explicit IFI role in the European Union (EU) fiscal governance framework of providing independent forecasts for the budget.

Considering this context and the recognition of the OECD Principles that different institutional arrangements can work for different countries, the FPB performs particularly well in areas such as local ownership and the aspects of independence and non-partisanship that are relevant to its role in Belgium's analytical landscape. It leverages its close relationship to government to achieve considerable influence over policy, often prompting the government to shift its policies in a new direction, achieving better policy outcomes for Belgians and raising the debate. It does so more than many of the institutions the OECD has reviewed that were designed to be entirely independent from government.

The Bureau publishes almost all its analytical research, albeit in some cases on a delay where specific scenarios have been provided to governments before public decisions have been announced. In rare circumstances the Bureau has provided confidential analysis to government, but in general it places its duty for transparency as a public interest body at the fore of its technical support.

The assessment nonetheless finds several areas that could be strengthened. In particular:

- Legislative guarantees in relation to the independence of the leadership appointment process and the qualifications of the Commissioner.
- Improved awareness of the FPB's work and greater impact on the parliamentary debate.
- The operational independence that the Bureau has in relation to its own work programme and the time it has for work at its own initiative.
- Protection of the Bureau's funding from potential political interference.
- Operational transparency in relation to the Bureau's activities and financial statements.

The remaining chapters explore the strengths of the Bureau within the OECD framework in greater detail and provide recommendations to address these areas.

This review of the FPB is anchored in the *OECD Principles for Independent Fiscal Institutions* (hereafter "OECD Principles"), which seek to reinforce the core values of IFIs to promote greater fiscal transparency and accountability and to raise the quality of public debate on fiscal policy (OECD, 2014[1]). The review uses an evaluation framework created in consultation with the OECD Working Party of Parliamentary Budget Officials and Independent Fiscal Institutions.

The evaluation framework considers a country's local needs and institutional environment and recognises that alternative arrangements may serve some countries well. The FPB is one such alternative arrangement, predating the fiscal councils created to fulfil obligations under the euro area's enhanced budget co-ordination and surveillance framework, which now make up the majority of OECD Working Party members and have come to typify European IFIs.

The FPB was established by royal decree in 1959 as the *Bureau de Programmation Économique* to create investment plans and define economic policy objectives for employment, prices, and wages. The Bureau has evolved with Belgium's economic and political system. The most significant recent reforms were implemented in the *Law of 21 December 1994 on social and miscellaneous provisions,* which categorised the Bureau as an arm's length "body of public interest" to support federalism by reassuring regions and communities that the federal government was being administered responsibly and by naming it one of the co-ordinators of the inter-federal system of national statistical accounts.

Those who set up the FPB intended for it to supply technical analysis directly to the government. The Bureau became known as the "government's calculator", filling an analytical role typically found in government ministries in other countries. For example:

- Much of the FPB's research agenda is set in response to demands from government ministries (the Federal Planning Bureau receives direction from the Council of Ministers).
- Several analyst positions are funded directly via the Ministry of Social Security (FPS Social Security) to deliver assignments related to the pension system.
- An annual work plan is decided with the Ministry of Transport (FPS Mobility and Transport).

Despite this close relationship with the government, the FPB's analytical autonomy made it a natural choice to fulfil the requirement under the euro area's enhanced budget co-ordination and surveillance framework to have an independent body either produce or endorse the macroeconomic forecasts for the budget. Indeed, it was already playing that role well ahead of EU requirements for national budgetary frameworks. Belgium has a long history of independent budget assumptions, closely mirroring the development and role of the CPB Netherlands Bureau for Economic Policy Analysis. The FPB now fulfils Belgium's IFI function jointly with the High Council of Finance Public Borrowing Requirement Section, which fulfils the euro area's requirements for independent monitoring of compliance with fiscal rules (see Box 1.1 for more details).

Box 1.1. Independent fiscal institutions in Belgium

There are two independent fiscal institutions in Belgium, namely the High Council of Finance Public Borrowing Requirement Section (Section) and the FPB. These institutions jointly fulfil the formal IFI tasks required as part of the EU fiscal governance framework. Interestingly, both institutions existed before the euro area's budget co-ordination and surveillance framework specified roles and tasks for national IFIs.

The Section publishes two annual reports. The first report, published in March, contains an opinion regarding the budget trajectory of the General Government over the next three years and the distribution of the budgetary objectives across different levels of government. This report is prepared as part of the Belgian Stability Programme. The second report, published in June/July, evaluates compliance with the

budget objectives across different levels of government. It also includes an evaluation of the execution of the Belgian Stability Programme over the course of the previous year.

The FPB, on the other hand, publishes inputs that support the Section in preparing its reports. This includes the official macro-economic forecast underlying the budget and medium and long-term public finance projections based on a no-policy change scenario.

The FPB's alignment to the OECD Principles must therefore be assessed with special attention to the Belgian institutional context and the Bureau's role within it. The FPB should be regarded as an analytically independent body that undertakes IFI duties (the provision of macroeconomic forecasts for the budget) but also has the function of supplying non-partisan technical analysis to policymakers in government (a function typically performed by the public service in other countries). In this latter role, the Bureau serves at the direction of government and – while it maintains independence related to its methods and presentation of results – this serves to curb its overall operation independence. However, this institutional design brings a high degree of transparency and accountability to the policy formulation process compared to other OECD countries where the advice guiding policymakers often remains internal to government.

With this context in mind, the following observations are made in evaluating the Bureau's compliance with the OECD Principles.

On **local ownership**, IFIs should arise from local needs and should not be imposed or copied from abroad. The Bureau was not established as part of conditions of externally reforms. Rather, in its modern form it was created to be the cornerstone in federal relations, paving the way as an innovator of independent budget assumptions, rather than having them imposed after a crisis or as terms of an international agreement.

The Bureau is seen by stakeholders as a uniquely Belgian institution fitting Belgium's unique political system and culture. Policymakers are eager to include the FPB in laws that require monitoring or technical support, and the provisions are adopted without question and embraced by government, the legislature, and public alike.

On **independence and non-partisanship**, stakeholders reported that the Bureau does not present its analysis from a political perspective and serves all parties equally; a sentiment confirmed by the review team.

The legislature does not play a role in approving the commissioner's appointment – it is formally made by the Council of Ministers after a decision by the Cabinet of the Deputy Prime Minister and Minister of Economy. Appointed commissioners have often had party connections and stakeholders recognise that the appointment process as political. That said, stakeholders were unanimous in insisting that political allegiances, if any, were dropped at the door and that they had no concerns of political ties once commissioners were in position. Further, this practice is common across appointed positions in Belgian independent institutions.

Commissioner appointments are for nine years, as is the case for permanently appointed civil servants at the Bureau, known as "members" (a class of permanent scientific staff, specific to the FPB). The nine-year appointments of both Commissioners and these civil servants are renewable. There are no special dismissal criteria defined in legislation; the Commissioner may be fired under the same performance-based protections as any public servant. The Commissioner is full time and remunerated. They have complete control to hire and dismiss FPB staff within budget constraints, while adhering to the labour laws for civil servants.

On **mandate**, most of the FPB's activities and responsibilities are defined in legislation, including many of its reports, for example, its input to the annual report of the Study Committee on Ageing and its *ex ante* and *ex post* monitoring report for the Interdepartmental Commission for Sustainable Development. Other

studies are carried out at the request of the government and social partners, which together with the legislature are authorised in law to do so (although the legislature has rarely exercised this ability).

The FPB has the scope to produce reports and analysis at its own initiative. However, in practice it rarely has the free time and resources to pursue work at its own initiative, as analytical requests from government fill its calendar.

The Bureau's work has been clearly linked to the budget process, as it provides macroeconomic forecasts for the budget along fixed timelines in the fiscal year, both historically and following Regulation (EU) No 473/2013 of the "Two Pack" of reforms in 2013 under the euro area's enhanced budget co-ordination and surveillance framework.

On **resources**, the OECD Principles recommend that an IFI's resources should be commensurate with their mandate, be provided in the same manner as other independent bodies and be protected by multiannual funding commitments. The FPB is well-resourced compared to many OECD IFIs; however, its responsibilities far exceed typical IFIs, including diverse areas such as statistical compilation and dissemination. In comparison to its peers with broad mandates such as the CPB Netherlands Bureau for Economic Policy Analysis and the Danish Economic Councils, the situation is less favourable. Additional tasks are frequently assigned without a commensurate or any increase in resources.

The FPB receives its funding directly from the Ministry of Economy, similar to the social partners such as the Central Council on the Economy. However, the Court of Audit receives its funding directly from parliament. The Bureau's appropriations are published only at a high level. The Bureau does not have a multiannual budget guarantee laid out; it is subject to the same annual linear adjustments as other government bodies. However, its resources have often been protected from nominal cuts in the past. The Bureau is currently facing a situation where it is expected to undergo real cuts along with broader efficiency savings in the public sector.

On its **relationship with the legislature**, the Bureau almost never appears before the Federal Parliament directly to discuss its governance or performance. Instead, the Court of Audit reviews its finances and performance, and reports on these to the legislature. Some key reports the Bureau supports, such as the annual report of the Study Committee on Ageing and the Sustainable Development Indicators Report, are laid before parliament. It has, on occasion, appeared before committees to discuss its work, but the Bureau has little engagement with the budget committee, and no relationship is specified in legislation. It is clearly established in legislation that parliament can submit requests to the Bureau; however, it rarely does. There is considerable scope for strengthening the Bureau's relationship with the legislature.

The budgetary calendar provides only a brief window between the time that the FPB receives new information from the government and when it has to produce its economic outlook that underlies the budget. Additionally, parliament only has a matter of weeks to review the budgets and reports submitted to the various committees. Although the timelines are not out of line with peers, they give rise to operational challenges for the Bureau.

On **access to information**, IFIs should have free access to the data they need guaranteed in legislation, reinforced in memoranda of understanding with ministries, and with any restrictions clearly defined. The FPB is provided with general data access in legislation, for example, Article 128 of the *Law of 21 December 1994* requires the National Institute of Statistics to provide the Bureau with all the information necessary for it to be able to fulfil its mandated functions. The Bureau has also developed memoranda of understanding or internal operating procedures with some ministries. However, the FPB generally procures its data through relationships and convention. Analysts report few gaps in practice, and do not anticipate serious issues in the future. That said, the Bureau does not have a grievance mechanism to fall back upon in the event of non-compliance. Restrictions on access to government information are not clearly defined in legislation, leaving the government to decide the limits. The Bureau is also subject to data privacy and

security laws, such as the General Data Protection Regulation (GDPR), which is growing more restrictive for microdata. This is a challenge that peer institutions also face.

On **transparency**, IFIs have a special duty to be fully transparent in their work and operations, especially toward parliament, and should release reports in their own name under formally established release dates. The Bureau publishes almost all its reports with few exceptions. Its reports are rarely laid before parliament, except for the annual report of the Study Committee on Ageing and the annual Sustainable Development Indicators Report, and only rarely are the Bureau's leaders given the opportunity to testify before parliamentary committees, although this is becoming more common. The general timing of major reports is formally established. Although stakeholders would like to see a more precise calendar with upcoming dates, many are contingent on unpredictable government timelines. The FPB releases analysis in its own name, except for those produced jointly, where its logo and name typically appear alongside other partners. The Bureau published an impressive array of technical working papers as part of its preparatory work for the costing of electoral programmes for the May 2019 elections. In contrast to most of its peer IFIs, the Bureau does not proactively publish its governance documents, such as financial statements and annual activity reports, but complies with its legal requirement to submit them to the Court of Audit.

On **communications**, IFIs should develop effective channels from the outset. The FPB media presence has historically been driven by the practices of its Commissioner, with few formal procedures and practices, either internally or externally. However, the Bureau has recently hired a communications advisor to improve practices and has developed several working groups and training programmes related to communications practices (simplifying language, visuals, social media). It is also one of a group of IFIs applying for a multi-country EU programme (Technical Support Instrument) to develop practices in data visualisations and communications. There are business risks surrounding its current website, which has been developed by one long-standing employee using an approach that does not rely on a commonly used content management system. The Bureau has a medium-term plan to address this by redeveloping and relaunching the website.

On **external evaluations**, if IFIs are to retain their autonomy, they should develop other mechanisms to ensure the quality of their work. The FPB enlisted the OECD to perform this external review in 2021, following the delivery of its newly mandated requirement in relation to election costings. The Bureau also works closely with the academic community and other external researchers in developing its models, including in finance ministries in other countries. It undergoes regular review from the Court of Audit, which reviews its operations, analysis, and other activities – for example, the Court reviews the minutes from meetings of the Study Committee on Ageing.

Table 1.1 summarises the OECD's assessment of the Bureau's adherence to each of the OECD Principles. The remainder of the chapter expands on this assessment and provides recommendations for bringing the Bureau into greater alignment with the OECD Principles and the best practices of peers in three areas:

- **Governance and mandate**. The FPB's responsibilities, organisation, and rights to information.
- **Impact on the public and parliamentary debate**. The FPB's reports and how it communicates them to stakeholders to raise awareness of issues relating to fiscal sustainability, influence fiscal management practices and foster public and parliamentary debate.
- **Financial and human resources**. How the FPB has been empowered with the budget and staff to achieve its mandate.

Table 1.1. Does the Federal Planning Bureau adhere to the OECD Principles for Independent Fiscal Institutions?

1. LOCAL OWNERSHIP	Key: ● = yes; ◖ = partially; ○ = no
1.1 Broad national ownership, commitment, and consensus across the political spectrum. Models from abroad should not be artificially copied or imposed.	●
Stakeholders universally responded that the FPB is a valued and supported institution fitting Belgium's unique context.	
1.2 Local needs and the local institutional environment should determine options for the role and structure of the IFI.	●
The Bureau has evolved with Belgium's federation. It plays a key role in inter-federal issues and supporting regions. The Bureau co-operates with the High Council of Finance, National Bank of Belgium, and Belgium's many other public bodies entrusted with supporting the economy and public finances.	
2. INDEPENDENCE AND NON-PARTISANSHIP	
2.1 Does not present its analysis from a political perspective; strives to demonstrate objectivity and professional excellence, while serving all parties. IFIs should be precluded from any normative policy-making responsibilities to avoid even the perception of partisanship.	●
Stakeholders universally responded that the Bureau's analysis is non-partisan. It does not have any policy-making responsibilities.	
2.2 The leadership of an IFI should be selected on the basis of merit and technical competence, without reference to political affiliation. The qualifications should be made explicit.	◖
The Commissioner's qualifications are not in legislation but have been set out in the job advertisement. Selection procedures have been based on open competitions and a jury consisting of academics and office holders. The ultimate decision rests with the Council of Ministers. Leaders have often been politically affiliated in the past but have been nonpartisan upon taking up duty. The process is similar to other independent institutions in Belgium.	
2.3 Term lengths and number of terms that the leadership of the IFI may serve should be clearly specified in legislation along with dismissal criteria and process.	◖
The Commissioner and heads of directorates are appointed for nine years, renewable. Dismissal criteria are not clearly defined; rather, the public service code of conduct applies.	
2.3 The leadership's term should optimally be independent of the electoral cycle.	●
The Commissioner's term is 9 years while the political cycle is 5 years.	
2.4 The position of head of the IFI should be a remunerated and preferably full-time position. Strict conflict-of-interest standards should be applied.	●
The Commissioner is full time and remunerated. Conflict of interest standards are implied through the public service code of conduct; however, there are no formal provisions applied specifically to the Commissioner.	
2.5 The leadership of the IFI should have full freedom to hire and dismiss staff in accordance with applicable labour laws.	●
Yes, the Commissioner and the Bureau's management have full freedom to hire and dismiss staff according to public service labour laws.	
2.6 Staff should be selected through open competition based on merit and technical competence, without reference to political affiliation, in line with civil service conditions.	●
Yes. Staff are hired by the FPB through open competition based on merit, without political consideration or political influence.	
3. MANDATE	
3.1 The mandate should be defined in legislation, including types of reports and analysis they are to produce, who may request them and timelines for release.	●
The FPB's general responsibilities are set in laws. The FPB has had specific responsibilities added in law (for example, to support the Study Committee on Ageing) and domestic legislation implementing the "Two Pack" of reforms in 2013. Many of the reports and analysis required through the calendar year are by convention or in memoranda which are not public.	
3.2 IFIs should have the scope to produce reports and analysis at their own initiative and autonomy to determine their own work programme within their mandate.	◖
The FPB serves at the direction of the Council of Ministers, the Economic Committee of the federal parliament and social partners. It has the scope to produce reports and analysis at its own initiative, but this work receives lower priority due to capacity issues. It has an obligation to fulfil requests from the council of ministers and the social partners (National Labour Council and the Central Economic Council) and is bound by financial agreements with departments; therefore, it does not have full autonomy to determine its work programme.	
3.3. Clear links to the budget process should be established within the mandate.	●
Yes, provides macro forecasts as part of the euro area's enhanced budget co-ordination and surveillance framework (prescribed in Regulation (EU) No 473/2013 of the "Two Pack" of reforms in 2013).	
4. RESOURCES	
4.1 The resources allocated to IFIs must be commensurate with their mandate.	◖
Additional legislated tasks are sometimes assigned without a commensurate or, sometimes any, increase in resources. Well-resourced compared to OECD IFIs; however, its responsibilities far exceed typical IFIs, including statistical compilation and dissemination and acting as the primary analytical service to the federal public service.	
4.1 The appropriations for IFIs should be published and treated in the same manner as the budgets of other independent bodies.	●
Similar autonomous bodies receive funding from the Ministry of Economy under similar arrangements. However, the Court of Audit receives funding from parliament. Appropriations are published only at a high level.	

4.1 Multiannual funding commitments may further enhance the IFI's independence and provide additional protection from political pressure. The Bureau is subject to the same linear adjustments as other government bodies; however, its resources are often protected from nominal cuts.	◖
5. RELATIONSHIP WITH LEGISLATURE	
5.1 Mechanisms should be put in place to encourage appropriate accountability to the legislature. Some key reports the Bureau supports, such as the annual report of the Study Committee on Ageing and the Sustainable Development Indicators Report, are laid before parliament. The Court of Audit audits the performance and finances of the FPB and reports to the legislature.	◖
5.1 The budgetary calendar should allow sufficient time for the IFI to carry out analysis necessary for parliamentary work. The schedule for providing the macroeconomic forecast underpinning the budget is well-established; however, the Bureau receives information from the government's budget team in mid-August to prepare its September macroeconomic forecast for the budget, which offers only a short window to incorporate the data (a pressure similarly faced by peers).	◖
5.2 The role of the IFI vis-a-vis the Parliament's budget committee (or equivalent), other committees, and individual members in terms of requests for analysis should be clearly established in legislation. The *1994 Act* provides the Bureau with the ability to fulfil requests of the Legislative Chambers; however, the Bureau has no legislated role with the budget committee and has little engagement with it or other committees and individual members.	◖
6. ACCESS TO INFORMATION	
6.1 IFIs should have full access to all relevant information in a timely manner guaranteed in legislation and reaffirmed in legislation. General data provisions are specified in legislation and the Bureau has signed memoranda in some areas, but generally data access is by convention and not an issue in practice. The Bureau reports very few gaps, except at the regional level, where solutions should be sought. There is no legislated recourse or established procedure in the event of non-compliance.	◖
6.2 Any restrictions on access to government information should be clearly defined in legislation. Not covered in legislation, although the Bureau is subject to general data privacy and security laws.	○
7. TRANSPARENCY	
7.1 The IFI should act as transparently as possible, including full transparency in their work and operations. The Bureau has limited governance reporting (financial statements, annual report on activities) but complies with its requirements vis a vis the Court of Audit.	◖
7.2 The IFI's reports and analysis (including underlying data and methodology) should be published, made freely available to all, and sent to Parliament. The Bureau puts considerable effort into publishing working papers and data; however, not all reports are published. Few of the Bureau's reports are laid before parliament, and its relationship with the legislature could be strengthened.	◖
7.3 The release dates of major reports and analysis should be formally established, especially in order to co-ordinate them with the release of relevant government reports and analysis. Generally well-established in law or memoranda.	●
7.4 IFIs should release their reports and analysis, on matters relating to their core mandate on economic and fiscal issues, in their own name. The Bureau releases its reports in its own name. It participates in some joint reports, such as for the Centre of Expertise on pensions, where its name and logo appear in recognition of its contribution.	●
8. COMMUNICATIONS	
8.1 IFIs should develop effective communication channels from the outset. The FPB's media presence has in the past been driven by the practices of its Commissioner. It has hired a communications advisor to further improve practices.	◖
9. EXTERNAL EVALUATION	
9.1 IFIs should develop a mechanism for external evaluation of their work. The FPB enlisted the OECD to perform an external review in 2021, following completion of its newly mandated requirement in relation to election costings.	●

1.3. Governance and mandate

Key findings

The FPB has some of the broadest responsibilities among OECD IFIs, including some non-traditional tasks. Stakeholders see having broad technical expertise under one roof as a benefit, and the Bureau's analysts agree that the diversity of their work creates analytical strength.

The Bureau's reputation for high quality analysis has become a blessing and curse, as policymakers are eager to attach its name to new legislation to show their commitment to responsible policy. Sometimes these new responsibilities are outside the FPB's core remit, are not accompanied by sufficient (or, sometimes, any) new resources, or are introduced without consulting the Bureau. In these cases, the new tasks come at the expense of the depth of analysis related to its core mandate – with potential consequences for its quality and reliability. The Bureau's legislation requires it to comply with direction from the government in setting its research workplan. The demands placed on the Bureau mean that it does not have the spare capacity to undertake work at its own initiative, undermining its independence.

The appointment of the Bureau's Commissioner has often been seen by stakeholders as a political process. There have been no concerns of partisanship once Commissioners have assumed the role. However, there is no guarantee that this will continue in the future.

The following actions can help increase the Bureau's independence and protect its ability to manage its own resources to fulfil its mandate:

- Ensuring that new tasks given to the Bureau do not compromise its ability to deliver existing functions and to undertake work at its own initiative.
- Improving prioritisation of the FPB's tasks, with management reviewing the Bureau's priorities and strategic plans on a more frequent basis, and – where necessary - the government and legislature amending its legal mandate.
- Enshrining the candidate selection process for the commissioner in legislation, with the final appointment approved by parliament. The commissioner's minimum qualifications should be listed, and the conditions of termination should be clarified and made explicit in law.
- Making the FPB a "Category B" public body, governed by an independent board. The existing management board consisting of the Commissioner, Deputy Commissioner, and the heads of the two legally required divisions could be formalised as this board.
- Strengthening the operational independence of the FPB by allowing it to determine the internal arrangement of its teams and removing the requirement to have "at least two and at most three general directorates" from the Law of 21 December 1994.

The OECD Principles prescribe that the institutional governance and mandate arrangements for an IFI should be provided for in legislation. Other governance documents may also set out the parameters, guardrails and protections from political influence that let it be effective in its duties.

The Bureau and its stakeholders are confident in the day-to-day workstreams and interactions with the government that run on conventions and relationships without appealing to the law. However, it is nonetheless important to ensure it has a rigorous legal framework to fall back on in the event the government becomes less co-operative. In the experience of other countries, an IFI's relationships with government can change overnight. Institutions should be designed to be resilient to these changing relationships.

1.3.1. Governance

Institutional framework

The *Law of 21 December 1994* named the bureau as a "Category A" public interest organisation, meaning the Bureau is to have a legal personality distinct from that of the public authority that created it and the appointed executives are to have management autonomy in day-to-day activities. The responsibilities provided for the Bureau in the same law and laws that came after could be seen as acting against that management autonomy. For example,

- The *Law of 21 December 1994* provides that the Bureau "receives directives concerning its activities from the Council of Ministers."
- The Bureau has also been named in several additional laws and operating agreements with ministries of the Federal Public Service that compel it to fulfil requests or perform work for branches of government (see Annex B for a full list of the legal responsibilities of the FPB).

Although the Bureau still has independence in its methods and in the presentation of its results, these responsibilities mean that the FPB is subject to the control and direction of government bodies and ministers in the discharge of its duty, spending most of its time responding to the demands of ministries, rather than setting its own workplan. It is somewhat ambiguous whether the Bureau could turn down these demands. For its part, the Bureau feels that it cannot turn down requests, although it can always defer to practical reasons they cannot complete a project, either for lack of data or time.

When compared to its peers in the OECD, the Bureau has considerably less operational independence. Examples of how this plays out in practice:

- Timetables, topics, and scenarios of reports for the Ministry of Transport must be agreed and signed by the government and the Bureau's Commissioner. The agreement even covers the specifics of events like report launches. The Ministry of Transport also has a right to see the work before publication and provide comments on drafts.
- Several staff positions at the Bureau are paid directly by ministries. This arrangement could put financial pressure and obligations to pursue the priorities of the government instead of its own.

That said, even where there is significant involvement by the government, stakeholders are clear that the Bureau's analytical independence is not questioned. Its analytical independence is reinforced by its history and context – stakeholders such as the Social Partners and other independent bodies the Bureau supports would react if output were not independent. However, this may not be enough to shelter the Bureau from a future government that is not as willing to go along with previous conventions.

The Bureau's operational independence could be strengthened by changing the *Law of 21 December 1994* to classify it as a "Category B" public interest organisation governed by a management board. Management boards are popular in the Belgian institutional framework, and in lieu of creating another independent body, the existing informal management board could serve as the formalised board.

Leadership

The Commissioner is appointed by the Cabinet of Ministers on the advice of the Cabinet of the Deputy Prime Minister and Minister of Economy. The selection process is not provided for in law and varies each time but is usually a form of open competition with a short list steered by the secretariat of the Ministry of Economy (most recently by a panel of academics and public servants) under the supervision of the Minister of Economy. The technical background or experience requirements of the Commissioner are not specified in legislation, as recommended by the OECD Principles. There is also no secondary approval process for leadership appointments, such as by the Federal Parliament.

Stakeholders have often viewed the leadership process as political, and past commissioners have often come from a politically connected background, often having been involved with party politics. However, stakeholders unanimously agree that commissioners have been qualified and that they drop any partisanship they might have had at the door. There are no concerns with politicisation once the position of Commissioner is assumed.

The Commissioner has no legislated term limits. Leaders can be renewed indefinitely following the same nine-year review cycles as all "members" of the Bureau (a class of permanent scientific staff). There are no special dismissal criteria defined in legislation, but the general consensus is that leaders could be removed under the same performance-based criteria as the public service. Commissioners are full time and remunerated. They have complete control to hire and dismiss staff within budget constraints, and while adhering to labour laws concerning civil servants.

The Bureau's management board, consisting of the Commissioner, Deputy Commissioner, and heads of the two legislated analytical branches is a not formal body but is a long-standing process of the Bureau.

The appointment process could be structured more independently by formalising existing practices in legislation and by changing the law to require parliament to give secondary approval of the appointment. This would help align it with OECD best practice, given that the legislature plays a role in the hiring and dismissal of the head of institution in 66% of national OECD IFIs (OECD, 2021[2]).

Internal organisation

The Bureau is required under *Law of 21 December 1994* to establish at "least two and no more than three divisions". This requirement could be met any way, but management has long practiced that the main divisions for purposes of the law are the ADDG (Algemene Directie / Direction Générale, or General Division) and the SDDS (Sectorale Directie / Direction sectorielle, or Sectoral Division).

On paper, the ADDG fulfils responsibilities related to economic and fiscal forecasting and analyses and the SDDS deals with sectoral research on environmental, energy, transport, sustainable development, and structural reforms. However, the two divisions overlap and contribute to each other's work, and there is little distinction. In fact, there is a general sense of confusion among internal and external stakeholders over the definitions of the two – it is simply structured this way to comply with the law. Under internal protocols the Bureau created for itself, the appointment of heads of divisions must be signed off by the management board and submitted for approval to the Minister of Economy.

The two divisions are supported by the ADSG (Algemene diensten / Services généraux, or General Services division), which provides support on human resources, the FPB's budget, information technology, legal issues, and communication, among others.

1.3.2. Mandate

The institution's mandate in its modern form was provided in 1994 during the fourth Belgian state reform which transitioned Belgium to a federal state. The Bureau's overarching motivation continues to be to support federal reforms by supporting political decision-making process, specifically stemming from *Law of 21 December 1994,* Art. 127. §1.

> *The Federal Planning Bureau is responsible for analysing and forecasting socio-economic development, the factors which determine this development and for evaluating the consequences of economic and social policy choices with a view to improving their rationality, efficiency, and transparency.*

The 1994 law and its subsequence amendment in 2014 prescribed other regional and statistical dissemination responsibilities, including.

> *§2 The Federal Planning Bureau is responsible for exchanging forecast data, in their regional, federal, and international aspects. This mission extends to the economic, social, and environmental fields.*
>
> *§3. In addition, the Federal Planning Bureau assists the National Accounts Institute in accordance with the provisions of Chapter I of this title.*

Importantly, the Law also provides for the Bureau to fulfil requests for non-government stakeholders, including the Federal Parliament:

> *"At the request of the Legislative Chambers, the Central Economic Council or the National Labour Council, it can carry out any other form of evaluation of the economic, social and ecological policies adopted by the federal authority."*

The Bureau has a long list of other responsibilities that have been laid down in subsequent laws, memorandums, or conventions. A comprehensive detailing of its patchwork of responsibilities is difficult to collate in one place, but Table 1.2 attempts to list the Bureau's main tasks.

Table 1.2. Responsibilities of the Federal Planning Bureau

Macroeconomic forecasts and medium-term economic and fiscal outlook	
Task 1: Macroeconomic forecasting	The FPB produces macroeconomic forecasts for the federal government within the framework of the preparation of the federal budget (September) and of the budget review (February), known as the 'Economic Budget'. The FPB's forecasts are discussed and scrutinised in the Scientific Committee on the Economic Budget and the ultimately accountability for them lies with the board of the Institute for National Accounts, of which the FPB is a member. The FPB produces a medium-term economic and fiscal outlook that serves as input for the High Council of Finance and for the federal government multi-annual budget framework. The FPB also produces, together with the three regional institutions, a regional outlook.
Task 2: Fiscal forecasting	
Task 3: Estimating potential GDP and the business cycle (including long-run potential GDP projections)	
Task 4: Forming a view of the cyclical and structural budget balance	
Financial and economic policy costing and analysis of taxes and transfer system	
Task 5: Costing the financial impact of polices	The FPB fulfils requests for government departments, the Social Councils, and the Legislative Chambers (although seldomly the latter) to assess specific policy proposals, both the financial costs and the economic impact. It also now has the responsibility of costing election platforms for political parties. It can also cost policies on its own initiative but seldom has available resources to do so.
Task 6: Costing the economic impact of policies	
Task 7: Preparing policy simulation and scenario analysis	
Sectoral modelling for government ministries	
Task 8: Modelling energy prices and energy distribution	The FPB has a growing workstream on sustainable development and monitoring the Sustainable Development Goals that have been integrated in the European Semester process. For example, measuring the impact of the environment, health and education on economic variables and using that in the budget process. They have also been tasked with developing indicators that go beyond GDP to examine wellbeing in the economy more generally and the inclusive economy. Stakeholders in central government emphasised to the FPB that this area must be a priority.
Task 9: Forecasting and analysis of emissions and climate change	
Task 10: Modelling transportation and freight demand	
Task 11: Monitoring the Recovery and Resilience Plan	
Long-run fiscal sustainability analysis	
Task 12: Population projections (including mortality tables)	Task 15 workstream emerges from requirements related to the Study Committee on Ageing in the *Law of 5 September 2001* and the Center of Expertise on Pensions. The FPB is secretary of these committees and must support it with long-run projections of the sustainability of health care spending and projections of national pension spending and other age-related spending.
Task 13: Projecting the long-term trajectory of public debt and assessing long-term fiscal sustainability	
Task 14: Modelling health care spending	
Task 15: Modelling the long-term sustainability of national pensions and social spending	
Statistical compilation and dissemination	
Task 16: Compiling input-output tables and environmental economic accounts	A unique mandate among IFIs, the FPB has a role in compiling and disseminating national statistics as part of the National Accounts Institute, an inter-federal public body consisting of the National Bank of Belgium, the Federal Planning Bureau, Statistics Belgium and the three regional statistical authorities and chaired by the Ministry of Economy.
Task 17: Compiling indexes to measure quality of life	

Table 1.2 shows the one of the greatest challenges faced by the FPB: the breadth of its mandate. It receives new missions regularly, and occasionally internal and stakeholders are not sure about the justification, as some areas are less directly related to the Bureau's core line of business. For example, the Bureau is required to send a representative to the pharmaceutical industry board (*Platforme Biopharma*) and has been asked to undertake studies on chemical products.

The Bureau supports a long list of clients and sits on many independent councils and committees, often serving as the secretariat. For example, the FPB has also been asked to send two appointees to the National Productivity Board and sits as its vice president.

Time spent serving on boards or providing them with research is time away from the Bureau's core mandate to analyse the nation's economy and public finances. It also means the Bureau's plans to develop capacity for emerging issues such as climate change modelling have been neglected and could be beyond their scope and resources to do properly. Furthermore, the growing responsibilities limit the Bureau's ability to undertake work at its own initiative, limiting its independence.

While some stakeholders, especially those in ministers' offices, expressed concerns that the Bureau's broad and expanding role in policy formation has hollowed out some of the analytical capacity of the public service internally to support ministries, they were quick to point out that the benefits of having the Bureau's expertise under one roof and having its reports published transparently continue to outweigh the costs.

1.4. Impact on the public and parliamentary debate

Key findings

For the Bureau's work to have influence on policymaking, its analytical findings need to have an impact on the public and parliamentary debate. In the past, the personality of the FPB's Commissioner has largely driven the approach to disseminating the Bureau's work. The Bureau has recently embarked on an ambitious programme to be more deliberate and structured by hiring a communications advisor and forming working groups to simplify language, improve data visualisations, and redesign the website, among others.

The Bureau's reports have been influential in the public debate. Decision makers reported common instances where the Bureau's analysis has changed policy. Such concrete examples are commendable. This influence can partly be attributed to the Bureau's close technical collaboration with government services and the role it plays in place of technical experts normally found in the public service who influence policy behind closed doors.

To strengthen the Bureau's influence, there are several areas related to its reports and communications that are worth developing further:

- The Bureau should strive for more regular interactions with the legislature and outreach to parliamentarians on the FPB's key reports would open opportunities for greater impact. For example, formalising more annual appearances before parliamentary committees when reports are published and offering one-on-one briefings to interested parliamentarians and their staff would increase take up of fiscal analysis. This can be done in a nonpartisan manner provided the Bureau ensures that opportunities for briefings are provided equally to parties and are transparent. The Bureau should make it clear to parliamentarians that they can submit requests for analysis directly to it, rather than going through the Council of Ministers.
- The Bureau should further assist key stakeholders such as the Public Sector Borrowing Requirement of the High Council of Finance in the weeks following the budget by providing a

post-budget update of macroeconomic assumptions including their independent fiscal outlook and impartial cost estimates of new measures. This would complement the budget analysis produced by the Court of Audit and help support a richer budget debate, e.g. by the legislature in its scrutiny of the budget.

- The FPB can take a leadership role in improving Belgium's fiscal management by increasing the depth of its regional and communities research and improving its dissemination.
- The FPB should raise its operational transparency to the standard of its analytical transparency by publishing an annual report of activities along with its financial statements. An annual report could support the Bureau's visibility by highlighting its accomplishments and contributions to the public debate throughout the year.
- The Bureau should improve its tracking of web and media activities and other performance indicators, such as mentions in parliament. To assist tracking and to ensure business continuity, the Bureau should prioritise and bring forward its medium-term plan to relaunch its website and transition to a more common content management system.
- The FPB should continue to push its agenda of formalising communications by completing and publishing its communications protocols and strategy and continuing the efforts of its working groups to modernise the FPB's writing style and the presentation of results to appeal to a broader range of stakeholders. Increased presence on newer media, favoured by younger population, could be explored to the extent it doesn't jeopardise the BFP's reputation for neutrality and objectivity.
- The Bureau should promote its open-source initiatives and build upon the awareness of its work by having regular conferences or workshops organised (or sponsored) by the Bureau and allowing economists from different institutions to share and discuss their work.

IFIs influence fiscal policy through persuasion rather than legal tools or formal levers. To be persuasive, they must produce high-quality reports and establish strong communication channels. Ensuring that their reports are easily accessible and receive widespread media coverage can help foster an informed public that can exert pressure on the government to manage fiscal matters responsibly and transparently.

The Federal Planning Bureau, like many of its peers, is now realising the importance of developing formal communications procedures and strategies. It has typically relied on its direct line to the government's ear to achieve an influence. However, as its mandate has expanded, particularly into costings policies during elections, it has recognised the importance of thinking deliberately in its communications and having expertise and protocols on hand to safeguard it from risks and to increase its reach to stakeholders.

1.4.1. Reports and their timing

Main analytical reports

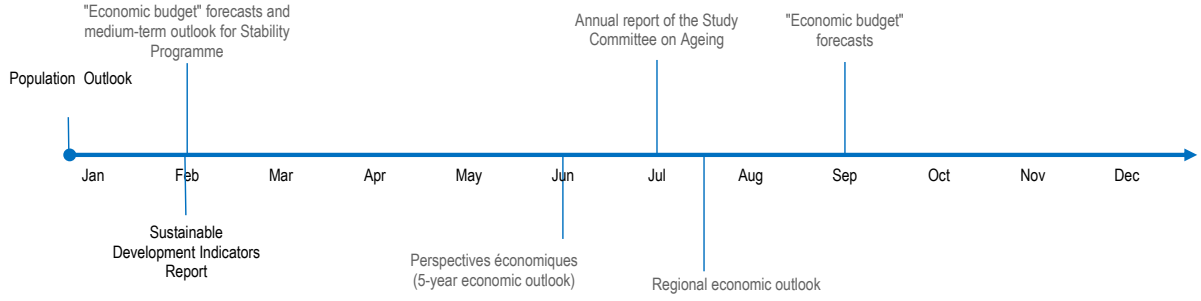
The FPB is required by the *Law of 21 December 1994* to produce two macroeconomic forecasts a year, one for the preparation of the budget in September and one for the budget review in February. The Bureau is also required to produce a national medium-term economic outlook, which it delivers in June with a preliminary version released in February. On its own initiative, it produces in July a regional economic outlook together with the three regional sister institutions. Furthermore, the Law of 14 March 2014 amended the Bureau's 1994 legislation and gives it responsibility for publishing annual Sustainable Development Indicators reports.

The FPB has been assigned or has entered agreements to supply several other reports throughout the year. For example:

- An annual report of the Study Committee on Ageing containing the Bureau's projections for the costs that the government will face from population ageing, such as in health care and pensions. The report is usually published in July and receives considerable media coverage owing to its political implications.
- A triennual publication on the anticipated demand for transport of persons and goods for the Ministry of Transport.
- Bi- to tri-annual Federal Sustainable Development Reports (as required through the *Law of 5 May 1997 relating to the co-ordination of the federal sustainable development policy)*.

A rough timeline of the Bureau's main recurring reports is given in Figure 1.1, although the schedule depends partly on the government's actions and direction and can change year to year.

Figure 1.1. Timeline of main analytical reports by the FPB



Note: Every three years the Bureau must publish a report on the transportation of persons and goods, "Prospects for transport demand in Belgium" and every two-three years the Bureau must publish the Federal Sustainable Development Report.
Source: OECD elaboration.

Overall, the number and coverage of core reports and their timelines satisfies the FPB's mandate and its supplementary agreements with stakeholders. However, the Bureau falls short in the area of undertaking work at its own initiative. This is an important tool for an IFI to call attention of important issues to the legislature and the public. If the Bureau's responsibilities toward stakeholders do not leave it with time to pursue its own work, it may fail to spot crucial issues of the government's fiscal management. Further, if a government has the authority to submit limitless mandatory requests to an IFI, the government could prevent it from undertaking unfavourable analysis simply by exhausting its resources. It is therefore important that IFIs are either protected from having their workplan overwhelmed by requests, or that they be given sufficient resources to pursue their own analysis on top of requests.

One way in which the Bureau could develop more space for work at its own initiative is through streamlining its existing workload. The regular workstream reviews by management, proposed in Chapter 2, will help with this. One change that could create space for more self-initiated work could be reducing the regularity of the Annual report of the Study Committee on Ageing. The conclusions of this report do not change significantly on an annual basis, and many peer institutions have moved similar reports from annual to biennial or triennial publications.

If the Bureau had time to pursue more of its own analysis, it could take the initiative to fill several gaps that stakeholders identified in Belgium's fiscal analysis landscape. For example, there can be a gap of four to five months following the budget where there is no independent economic or fiscal outlook updated with the government's announcements; stakeholders must rely on the government's numbers. The Bureau could provide a rapid post-budget update of macroeconomic projections including their independent fiscal outlook and impartial cost estimates of new measures in the weeks following the budget. This would also help support the legislature in its scrutiny of the budget. Stakeholders would also like to see more work by

the Bureau in improving Belgium's fiscal management by increasing the depth of its regional analytical work and improving its dissemination.

Transparency

The Bureau publishes almost all its research to its website. In rare cases it may publish on a delay, when specific scenarios have been provided to the government before decisions have been announced publicly. In limited circumstances the Bureau has provided confidential analysis to government, but in general it puts its role as a public interest body ahead of any demands for confidentiality.

Stakeholders spoke of the ease through which they could access the data underlying its reports and forecasts. The FPB usually publishes data in spreadsheets alongside its key outlooks and reports. However, some stakeholders reported that in areas such as the annual report of the Study Committee on Ageing, historical projections from previous reports are no longer made available and would appreciate if previous vintages were easily accessible.

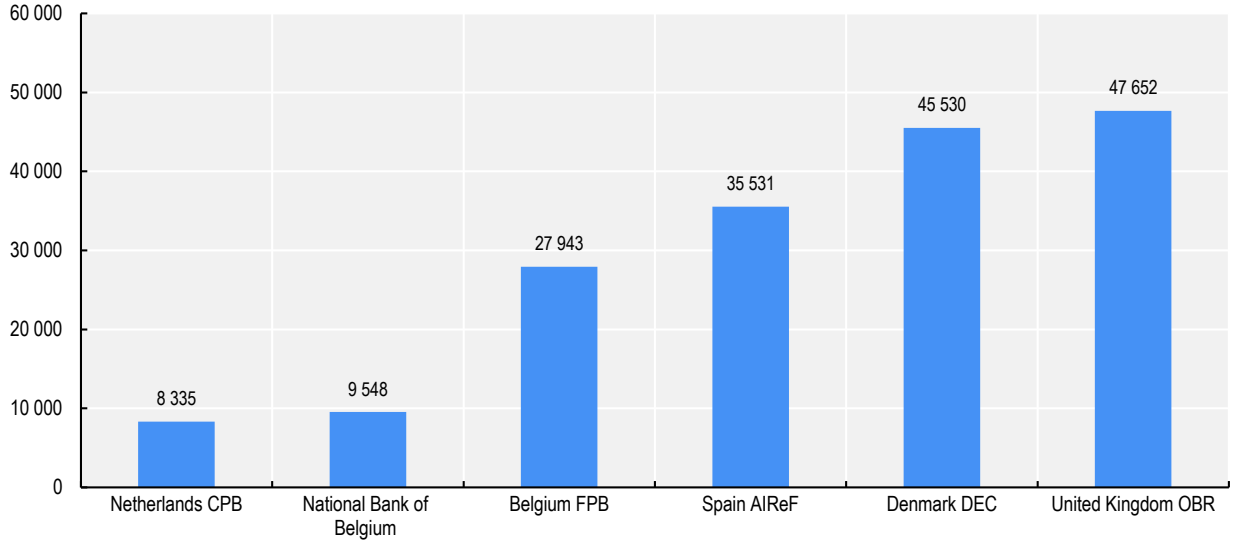
The FPB's key annual financials and activities are not published to the public. Instead, they are presented to the Court of Audit, the Bureau's key accountability mechanism. Although complying with the letter of the law, this falls short of the practice in many IFIs in the OECD Network, over 70% of which publish annual reports with their activities and financials on their website for public consumption. The FPB should raise its operational transparency to the standard of its analytical transparency by publishing an annual report of activities along with its financial statements. An annual report would have the added benefit of raising the Bureau's visibility by highlighting its accomplishments and contributions to the public debate throughout the year.

Content and accessibility

The Bureau is committed to a high quality of analysis. The bar it sets sometimes comes at the expense of timeliness. For example, stakeholders reported that occasionally when they approach the Bureau for a piece of analysis, it asks for several months or years to build the capacity to respond. IFIs and teams such as parliamentary research services in other countries that fulfil requests are often expected to have more rapid turnaround times. The Bureau prides itself in the quality of its analysis and feels that more timely analysis that compromises on quality does not fit its reputation of providing rigorous strategic technical support that can withstand the highest academic scrutiny. However, there could be an opportunity to improve turnaround times without compromising quality, through revisiting the simplicity of the models used by the Bureau.

The length of the FPB's reports is appropriate, with few stakeholders reporting this as a concern. Further, the word count compares favourably in brevity with the main reports of other IFIs with similar resources and mandates (Figure 1.2). The Bureau's main economic and fiscal outlook publication, <*Perspectives économiques*>, averages under 30 000 words, with no clear increasing trend over time. That said, many OECD IFIs are moving toward shorter reports – or publishing summary reports alongside regular reports - that more people will read. In line with peers, a working group at the Bureau is currently seeking to simplify publications and reduce their page-length.

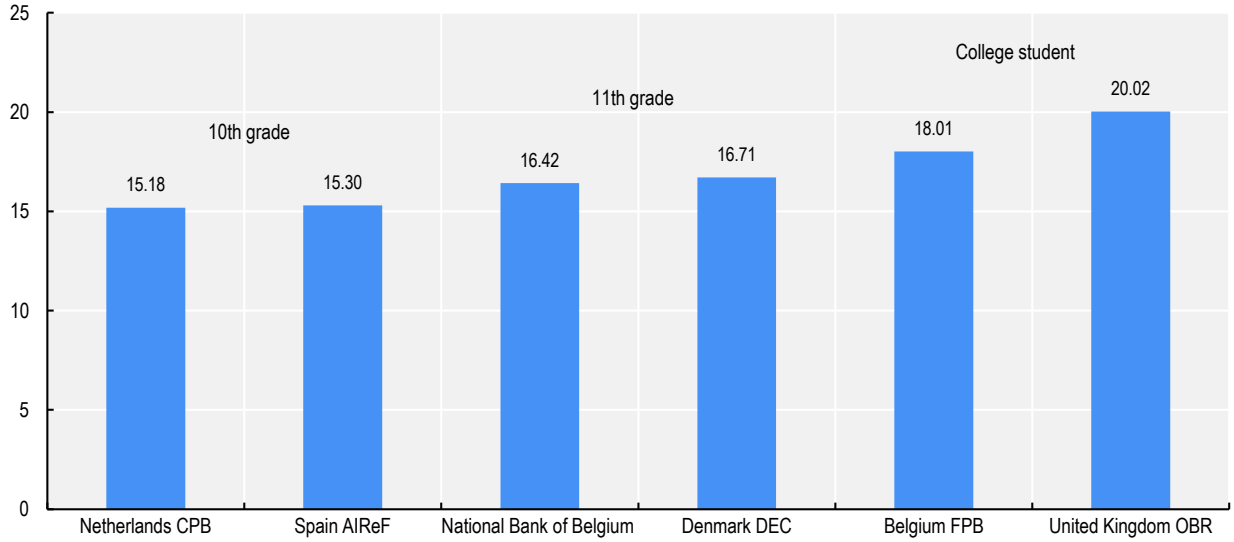
Figure 1.2. The FPB's economic and fiscal outlook is of average length compared to peers



Note: Average word count per language was controlled for with European Commission document translation averages.
Source: Main annual economic and fiscal outlooks by each IFI in the comparison.

On readability, the OECD team performed a text analysis of the Bureau's *Perspectives économiques* sampled over the last three years, compared with similar publications from institutions with comparable mandates and resources. The team used the Automated Readability Index, which considers words with more characters and longer sentences as harder to read with the functional form [4.71 × (characters/words) + 0.5×(words/sentences) - 21.43]. A higher score indicates report summaries that are more difficult to understand. The characters and words were standardised across languages using an average of EU-translated legal documents. The results are provided in Figure 1.3 below. They indicate that the Bureau's readability is at the college student level and somewhat more technical than those of its peers, except for the United Kingdom Office for Budget Responsibility. The methodology suffers from comparability issues surrounding the number of tables and figures in the reports but suggests that while the Bureau is not totally out of line with its peers it has room to simplify its language.

Figure 1.3. Readability of the FPB's economic and fiscal outlook compared to similar publications by peers



Note: Higher scores mean a more challenging level of reading difficult, corresponding to standard United States grade reading levels.
Source: A sample of the last three annual medium-term economic and fiscal outlooks by each institution.

1.5. Communications practices

The OECD Principles suggest that IFIs should develop effective communication channels from the outset, especially with the media, civil society, and other stakeholders. The Bureau was late to develop these channels. In the past it relied primarily on its commissioners to engage with the media and civil society as to their personal styles and mother tongue or let the reports speak for themselves. Social media content and press releases were written by analysts. Although the Bureau hosted press conferences, whether journalists had access to reports and covered the Bureau's work largely came down to personal relationships. There was also little systematic monitoring of media coverage to determine what worked best to disseminate the Bureau's messages to the public. The result is that media engagement and take-up varied year-to-year and from commissioner-to-commissioner, with some highly proactively engaged and eager to become the face of the office, and some more reserved.

The management board foresaw that these practices would be untenable under its new election costing mandate, where political risks were elevated, and the Bureau could face higher levels of criticisms from parties. It supported a staff initiative to create a working group on communications. This eventually led to the decision to seek out and hire a communications advisor to create a communications division consisting of ten staff members of the Bureau from different disciplines, procedures, and strategies. Once in post, the communications advisor did a consultation tour with other IFIs and some of the Bureau's stakeholder's and has implemented a change programme that is making strides.

For example, the Bureau now offers its staff media training. Guidelines have been provided to improve writing skills and external experts will be brought in to teach writing skills. Press releases aim to fit information on a single page rather than be verbatim transcriptions of lengthy executive summaries. The Bureau has also developed a formal communications procedure for how to handle issues like requests from journalists. Stakeholders have praised the new approach.

The Bureau has also formed working groups to improve the data visualisations and simplify language to increase accessibility for non-specialists. It is also participating in a Technical Support Instrument (TSI)

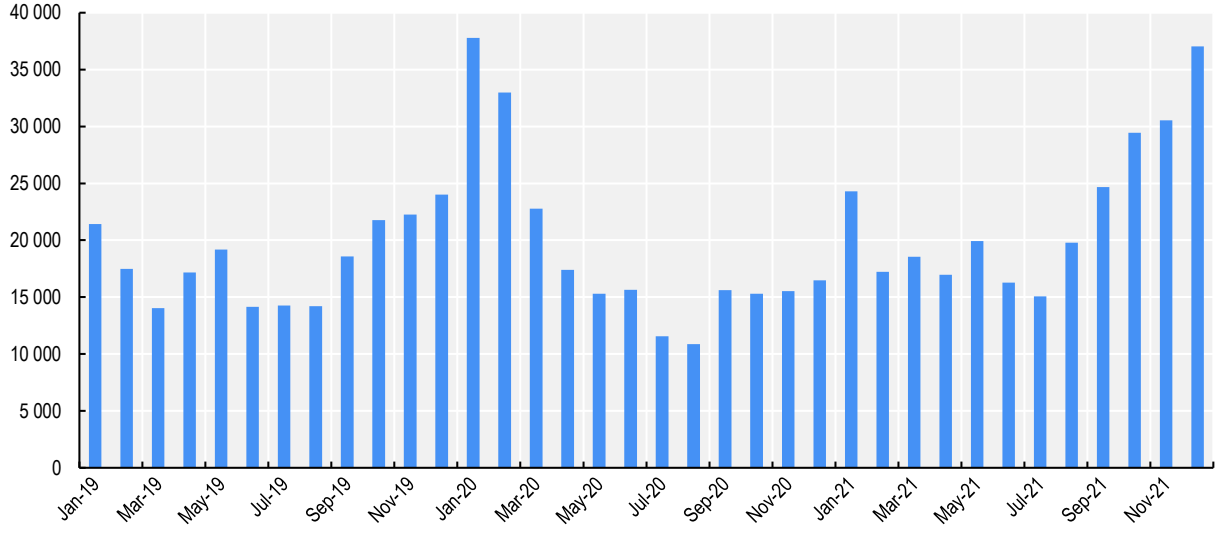
programme from the European Union with peer IFIs to develop the communications practices of analysts with similar outputs.

1.5.1. Online presence, web traffic and social media

The FPB has its own website is in its own name and its own network administration. The website has been built and maintained by a sole webmaster and is not based on a common content management system, which creates a business continuity risk. The webmaster is retiring in 5 years and the Bureau needs to plan for another web platform. The FPB has created a working group to address the issue and relaunch the website. The FPB opted for the use of a separate website for its costing results that will be reviewed in Phase 2 of this project.

The Bureau has only tracked a brief history of website traffic. It averages about 20 000 hits by new users each month and traffic roughly flows with the fiscal year, with the most interest coming at the start of the calendar, and then again picking up in September ahead of the budget (Figure 1.4). Users download an average of 2 400 reports a month. Interest flows with the budget cycle but more granular monitoring data should be collected to understand drivers in greater detail.

Figure 1.4. Monthly visits to the Bureau's home page by new users, 2019-21



Source: Federal Planning Bureau media monitoring and Google analytics.

The Federal Planning Bureau also has two Twitter accounts (one in French and one in Dutch) and a one LinkedIn account, where its communications advisor tweets and posts on fiscal policy. The accounts highlight the Bureau's reports when relevant. In Belgium there are about 1.3 million Twitter users, and the Bureau's accounts combined have about 1 700 followers. The two accounts combined saw an average of 30 new followers a month in 2021.

1.5.2. Influence on policy and raising the level of public debate

Stakeholders were clear that the FPB has improved their understanding of fiscal issues through its reports. They reported that its influence is direct, rather than through the media. This stands in contrast to peer IFIs the OECD has reviewed, who overwhelmingly achieve their influence through their presence in the media.

The FPB is a mature organisation, however it did not until recently systematically track mentions of its work with the legislature and in the media. The recent costing exercise prompted the Bureau to start monitoring its reach. The lack of long-term historical data makes it difficult to evaluate drivers and trends. Tracking is also complicated by the generic name of the Bureau and its similarity in Dutch to the CPB Netherlands Bureau for Economic Policy Analysis (*Federaal Planbureau* versus *Centraal Planbureau*). Belgium's multiple languages and the Bureau's publications in French, Dutch and English also complicate the picture. However, some key observations from the Bureau's recent tracking efforts are presented below.

Influence in government

The FPB is unique in its direct role in policy development, rather than simply a role in scrutiny. Its primary stakeholder first and foremost is government. It is an arm's length "Category A" body that serves as technical support to government ministries, ministers, committees, and decision-making bodies.[1] In doing so, stakeholders had a long list of examples where the Bureau exerts concrete influence. For example:

- The economic statement published in the government's budget is paraphrased or transcribed directly from the Bureau's economic outlook.
- The government's budget includes a chapter on the cost of ageing each year which is essentially paraphrased or inserted directly from the Bureau's work in the annual report of the Study Committee on Ageing.
- The Bureau has been helpful in improving the government's VAT forecasts, particularly in understanding the macroeconomic basis underlying it, but also in the fiscal sensitivities.
- The Bureau's analysis features in weekly briefings to the Prime Minister. Its inflation forecasts have been of particular interest recently, as they arrive before information from the National Bank of Belgium.
- The FPB's analysis of pension reforms has been critical in informing policy and has had a role in changing, or reversing, specific announcements. Political decisionmakers at the highest level of government now wait to see the FPB's analysis before proceeding.
- Stakeholders noted several specific areas where the Bureau has strengthened analysis of fiscal policy issues through its work.
- The Bureau had anticipated the shift to teleworking well ahead of the pandemic and was prepared with analysis when the pandemic hit on how it could impact transportation needs.
- The Bureau's research on taxes and incentives related to company cars have influenced policies for greening company fleets.
- The Bureau's analysis of job numbers surrounding the Recovery and Resilience Plans has caused the government to consider designing potentially more effective measures.

It is commendable to hear so many examples where the government has embraced the IFI's analysis and adjusted policy in response.

Influence in parliament

Often the most important channel through which an IFI can strengthen fiscal outcomes is by directly supporting the legislature's ability to hold the government to account – that is, by empowering the representatives of the public who have been elected to scrutinise the executive with quality information to do so. This can be accomplished by submitting reports to the legislature, participating in committee hearings, and providing background briefings to parliamentarians and their staff.

The Bureau appears before committee hearings of the Chamber of Representatives only once or twice a year and does not appear before the senate. The Bureau is mentioned in oral and written questions rarely,

ranging from as few as 6 to as high as 30 in recent years, which is low relative to peers where mentions can range in the high hundreds.

At least once a year, the Bureau's update of sustainability indicators is submitted to parliament and the Bureau presents to the Commission for Economic Affairs. The Commission for Social Affairs, Employment and Pensions invited the President of the Ageing Committee and the Bureau to present the Ageing Report for the first time last year. The FPB does not regularly provide briefings to individual parliamentarians.

Ahead of the introduction of its new costing mandate in 2018, the FPB organised several meetings with the contact persons of the thirteen political parties represented in the Chamber. The meetings resulted in concrete agreements on the procedure to be followed and on the actual content of costings. Three workshops were held in autumn 2018 with representatives of the political parties concerned, where the FPB presented the models used for costing and explained how they work.

Under the *Law of 21 December 1994*, the Federal Parliament can submit requests of the FPB to carry out any "evaluation of the economic, social and ecological policies adopted by the federal authority." However, they do so only rarely. There is a general acceptance that written questions must be submitted through the Council of Ministers. This does not seem to be grounded in the Law, and the Bureau could strengthen its relations with parliament and promote greater awareness among parliamentarians that they can approach the Bureau directly with requests. Although there is a risk that too many requests would over-burden the Bureau's already limited resources, stronger relations with the parliament will foster cross-party understanding of the Bureau's work and help protect it as an institution in the longer-term.

The Bureau should also seek further strategies to expand its engagement with parliament, such as forming agreements with committees to appear each year to discuss the conclusions of its regular reports.

Influence with the media and the public

The FPB's outreach to the media is largely through press releases to a mailing list on the day of the publication of a report. In the past, reports have been released to journalists early under embargo on a case-by-case basis, often with no general announcement. This could result in the unintentional exclusion of some media outlets. However, the communications advisor hopes to improve upon this process and make it more equitable, impartial and proactive.

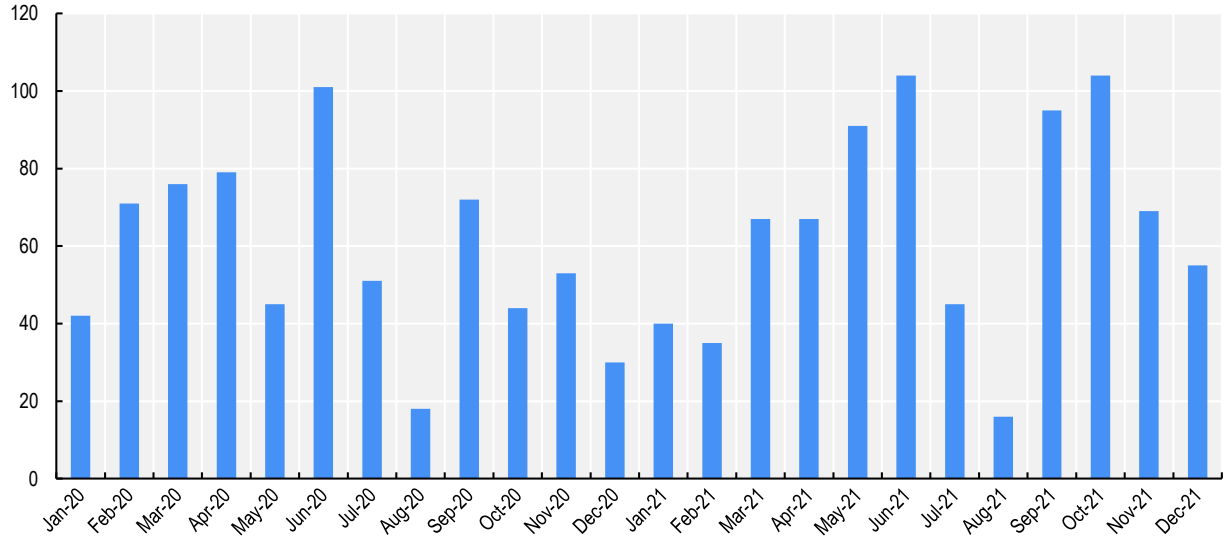
The Bureau holds around two press conferences each year and its office has new facilities to do so. They are usually attended by around 20 people, which is relatively high interest compared to peers. The Commissioner and other senior leaders have appeared on radio or television between 20 and 30 times a year. If the subject is technical, analysts may occasionally give interviews themselves.

Journalists used to contact the Bureau's leadership and analysts directly about their work. However, since the advent of the communications advisor, they have been strongly encouraged to go through him. During the election costing period this is tightened to only go through the official communications channels.

Journalists prefer embargoes (where they receive publications in advance) to lockups (where they must attend in person to review reports before release). However, some appreciate the approach of the National Bank of Belgium, that holds press conferences two days before publication for journalists to attend, ask questions, take notes, and write their articles in advance of the release two days later. Given that the Bureau provides the government with reports four days in advance of publication to write its communications releases, they could do similarly to journalists.

The Bureau only recently began systematically tracking media mentions. It averaged about 61 articles a month, with 788 in 2021 and 682 in 2020, up 15.5% (Figure 1.5). Continued media monitoring will enable the Bureau to obtain insights into aspects such as its most impactful publications and the topics of greatest interest to the public, which can help it hone its work programme.

Figure 1.5. Number of news articles covering the FPB, all languages, 2020-21



Source: OECD elaboration based on data from Federal Planning Bureau.

Another way in which the Bureau could expand its influence is through increasing the visibility of its work among peers, the media and the public. For example, the Bureau could promote its open-source initiatives and build upon the awareness of its work by having regular conferences or workshops organised (or sponsored) by the Bureau and providing a platform for economists from different institutions to share and discuss their work.

1.6. Financial and human resources

Key findings

The Bureau may appear well-resourced when compared to the average of European IFIs, but such comparison omits that its breadth of responsibilities far exceeds that of the mandate of a typical IFI. Compared to peers with similar mandates such as the CPB Netherlands Bureau for Economic Policy Analysis, the Bureau has by far fewer analysts. Compared to other countries where organisations have similar remits (such as the combined remits of France Stratégie and the Conseil d'analyse économique in France) the Bureau has an equivalent number of analysts.

Although the Bureau has often been sheltered from government-wide spending cuts, it does not have clearly defined medium-term funding commitments, as recommended by the OECD Principles.

The long history of the FPB means that it is rich in institutional capacity. Many of its staff have worked there decades, and the depth of knowledge and expertise associated with this is an asset to the institution and its analytical work. However, stakeholders and the Bureau recognise that an ageing staff leaves the Bureau exposed to business continuity risks.

The review team had the following recommendations to address risks to the Bureau's financial and human resources:

- The FPB should be provided with medium-term funding commitments either in law or in a memorandum signed with each new government.
- The FPB should create an environment that nurtures young careers through rotational programmes or flexible career paths between different teams in the bureau with annual circular feedback cycles to support professional development goals.
- The FPB should improve its attractiveness to younger professionals seeking a dynamic and modern employer by continuing its move to open-source software for which skills are in high demand by the industry. Further, moving to open-source software can tap into a global community of development support, which – in addition to saving on license fees – can release analytical resources for developing new libraries and tools.

The OECD Principles state that an IFI must have sufficient financial resources to fulfil its mandate and successfully perform its tasks and that its staff must be independently selected based on merit and must be independent in their operations.

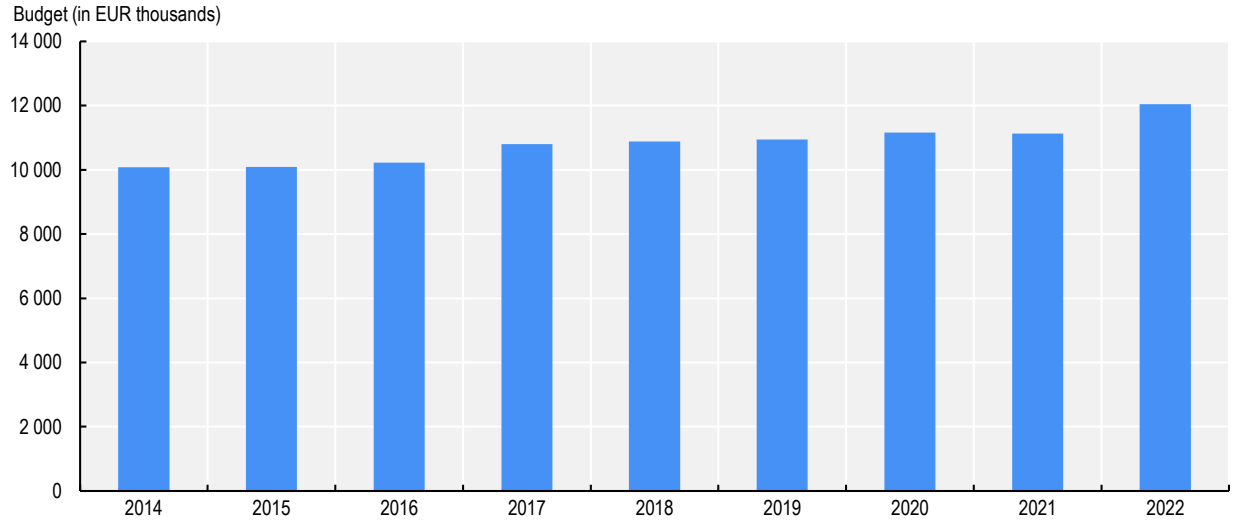
1.6.1. Financial resources

The FPB is provided with a distinct envelope of resources in the national budget with the approval of the Minister of Economy. It has full operational independence in how it uses its funds, except for large procurement purchases, which must be authorised by an assigned Inspector for Finance, in-line with the practices of other similar bodies.

The Bureau has a budget control meeting in February to confirm that it has sufficient funds for the rest of the year. Its end of year statements and performance are audited by the Court of Audit.

The Bureau's budget has remained relatively stable over time (Figure 1.6), although there have been some instances where it has received additional funding. Specifically, the Bureau received additional funding of EUR 660 000 in 2017 to fulfil its new task in relation to election costing. In addition, in 2022 the Bureau received additional funding to account for high wage inflation. The Bureau does not formally calculate the share of its budget allocated to fulfilling IFI tasks. However, it could be estimated that around half of the budget is used to deliver its IFI tasks in a narrow sense (those required as part of the EU governance framework). If a broader view is taken on IFI tasks (i.e., including broader economic and fiscal analysis) then these account for around 80% of the Bureau's budget.

Figure 1.6. Budget of the FPB, 2014-2022



Source: Federal Planning Bureau, direct communication

When the Bureau receives specific demands for new workstreams, in general it tries to meet them with external funding on top of the main envelope. For example, it financed a climate project through the national science foundation under a four-year contract with a university team studying the topic. The Bureau also has half a dozen positions funded by specific ministries such as the Ministry of Transport and the Ministry of Social Services to provide ongoing analytical services. Additionally, two positions for compiling and disseminating national statistics are funded through external financing from Eurostat and the regions.

This close financial tie to government could risk the Bureau's analytical independence; however, stakeholders are unanimous in reporting that it does not influence their autonomy in speaking truth to power. The relationships do, however, incumber the Bureau's operational independence in situations where new tasks are imposed that exceed the marginal increase in resources. This impacts the depth of its analysis in relation to existing tasks (with potential impacts on quality and reliability) and takes flexibility away from the Bureau in developing work at its own initiative.

The budget of the Bureau has often been sheltered from cross-government cuts in nominal terms; however, there has been some pressure over time in real terms. The Bureau does not have clearly defined medium-term funding commitments, as recommended by the OECD Principles, and has been warned to expect cutbacks in the coming years as all of Belgium's Federal Public Services enter a period of consolidation. Medium-term funding commitments would protect the institution from political influence.

1.6.2. Human resources

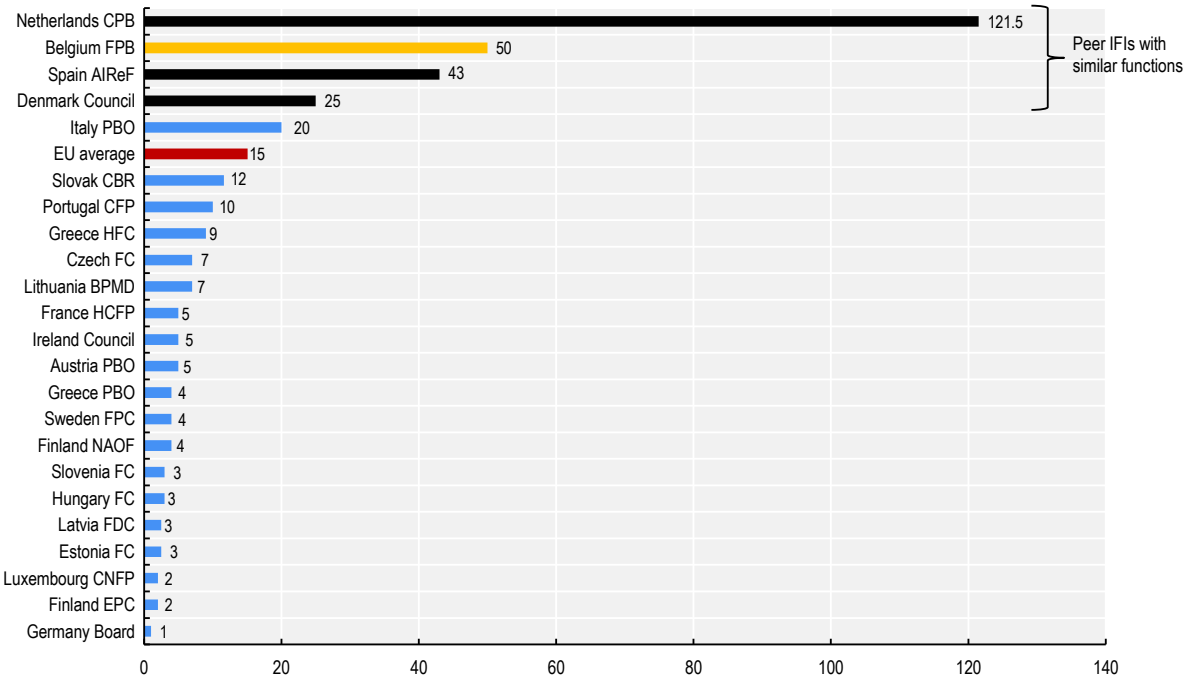
The FPB has around 85 staff overall in full-time equivalent, but after accounting for its team devoted to preparing national statistics and staff providing corporate services, a group of around 50 are devoted to economic and fiscal analysis (this goes beyond the duties strictly related to the IFI tasks of the Bureau).

When compared to European IFIs broadly, the Bureau may appear well-resourced, with more than three times the average number of analytical staff (Figure 1.7). However, its role in the budget process far exceeds most IFIs (some of whom only convene a few times a year to produce two monitoring reports or endorsement statements with the support of two or three permanent secretariat members) and then the FPB has significant other mandated responsibilities (e.g. transportation, sustainable development, specialised statistics, etc.). Compared to its European peers with similar scope of mandate – a role in the

budget process and services for economic research, regional analysis, environmental and climate change research, among others – it falls far below the CPB Netherlands Bureau for Economic Policy Analysis but is just above Spain's Independent Authority for Fiscal Responsibility and double the size of Denmark's Economic Councils.

Although not IFIs, peer institutions in France that the Bureau can potentially be benchmarked against are France Stratégie, a public think tank tracing a similar history as the FPB, and the Conseil d'analyse économique, which provides economic analysis and policy advice to an independent Council of academics. France Stratégie has been provided with around 40 permanent experts and 15 scientific advisors, and the Conseil d'analyse économique has 4 full-time analytical staff. Together, with 59 technical staff, these institutions have a similar number of analytical staff relative to the Bureau (France Stratégie, 2022[3]) (Conseil d'analyse économique, 2023[4]).

Figure 1.7. Analytical staff in other similarly mandated EU IFIs (full-time equivalent), 2021



Note: The number of analytical staff at the Belgian FPB undertaking work directly related to IFI tasks is estimated at 28 FTE. The above figure also includes staff undertaking work in relation to broader economic and fiscal analysis, such as activities around transport, sustainable development, and the labour market.
Source: OECD Database 2021.

The Bureau has monitored gender equality at different levels in the organisation over recent years. The proportion of women employed as analysts[2] has decreased, from 39% in 2010 to 33% in 2020. The Bureau is investigating the decline and developing a plan to address the trend.

The OECD Principles state that the leadership of the IFI should have full freedom to hire and dismiss staff in accordance with applicable labour laws. The Commissioner of the FPB is generally able to do so, within the confines of the public service management law. In practice this freedom also hinges on the ability of an IFI to offer competitive rates, and whether there is a good supply of skilled analysts and expertise (if there is not, it may need to look at hiring abroad or improving competitiveness).

In terms of hiring, there was mixed feedback from stakeholders on whether the Bureau offers competitive compensation. In general, staff compensation is considered similar or better than the civil service (although

they are subject to the same framework as the civil service, the Bureau can hire staff at higher grades and steps). The Bureau's main competition for talent in the public sector is with EU institutions and the National Bank of Belgium, where compensation is higher. The Bureau also faces competition from the private sector (e.g. for IT staff), where compensation is also higher.

Belgium has a relatively good supply of analysts compared to some IFIs in smaller European countries. However, the Bureau's management has noticed a shift in the graduate education and experience of candidates in the job market toward data science using big data, and away from backgrounds in macroeconomic and econometric modelling, which is beginning to manifest in recruitment challenges. Another recent challenge is the recruitment of Dutch-speaking staff, which reflects the very tight labour market in Flanders.

In terms of retention, staff turnover is on par with the public service. However, the staff profile is relatively older. The Bureau has created a working group on diversity to try and attract younger staff. Issues reported among younger staff or prospective staff include the lack of a feedback culture and professional development opportunities within the Bureau. The FPB could also improve its attractiveness to younger professionals seeking a dynamic and modern employer by continuing its move to open-source software for which skills are in high demand by the industry. Further, moving to open-source software can tap into a global community of development support, which – in addition to saving on license fees – could help release analytical resources.

References

Conseil d'analyse économique (2023), *Personal communication*. [4]

France Stratégie (2022), *À propos de France Stratégie*, https://www.strategie.gouv.fr/propos-de-france-strategie. [3]

OECD (2021), *Independent Fiscal Institutions Database (Version 2.0)*, http://www.oecd.org/gov/budgeting/OECD-Independent-Fiscal-Institutions-Database.xlsx. [2]

OECD (2014), *Recommendation of the Council on Principles for Independent Fiscal Institutions*, OECD, Paris, https://www.oecd.org/gov/budgeting/recommendation-on-principles-for-independent-fiscal-institutions.htm. [1]

Notes

[1] "Category A" bodies are the least autonomous of the public interest bodies. While they have a legal personality distinct from that of the public authority that created them and the appointed executives are to have management autonomy in day-to-day activities, they remain "under ministerial management".

[2] This records staff at "niveau A", where the majority are analysts.

2 Review of the Federal Planning Bureau's analytical models

This chapter provides a review of the Federal Planning Bureau's analytical models. It includes a technical assessment of the appropriateness and comprehensiveness of the Bureau's economic models and workflows.

2.1. Introduction

The objective of the review of analytical models is to help the FPB increase the quality of its work related to the *ex ante* assessment of reforms envisaged in the future by the federal and regional governments in areas such as pensions, taxation, the labour market, energy, and investment, particularly those linked to Country Specific Recommendations from the Council of the European Union.

The technical assessment looks at the appropriateness of the Bureau's economic models across seven academic and practical criteria that an independent fiscal institution should consider when developing tools to deliver its mandate: (1) Theory; (2) Accuracy; (3) Communication; (4) Transparency; (5) Proportionality; (6) Sustainability; and (7) Precedent.

2.2. The OECD's model assessment framework for IFIs

The review team assessed the models of the FPB according to the assessment framework for IFIs developed by the OECD's Directorate for Public Governance. That framework answers the question: Are the institution's models comprehensive and appropriate for delivering its mandate?

To answer the question, the review team identified the needs of the Bureau to deliver its mandate and the constraints it faces in fulfilling these. An assessment was then made regarding whether the suite of models that the Bureau has developed meets those needs given its constraints. Finally, each of the Bureau's current models are reviewed individually and in depth to determine their individual appropriateness according to seven academic and practical considerations summarised in Table 2.1.

Table 2.1. Model assessment criteria

Theory	Does peer-reviewed literature support (or not provide a strong argument against) this model for the analysis, given the context and available data?
Accuracy	Is this model likely to give the most accurate results (or avoid the most systematic bias) if applied to this problem?
Communication	Can the model's outputs provide a coherent and intuitive narrative to stakeholders?
Transparency	Can the model's methodology and assumptions be provided to the Bureau's stakeholders in a manner that will satisfy its requirements for transparency and accountability? Are they doing so now?
Proportionality	Is the level of effort proportional to the overall importance of the model in terms of the mandate and in the context of the Bureau's resources?
Sustainability	Does the model require a level of resources and expertise that is appropriate to expect from the IFI's analysts and hiring pool to avoid analytical disruptions from staff turnover?
Precedent	Is the approach used widely at other IFIs and public finance institutions?

Some criteria are complementary, while others conflict. For example, a structural model grounded in economic theory may score highly in its ability to provide an intuitive narrative to stakeholders but may have higher forecast errors than a simple univariate time series model that relies only on its own history. Analysts at IFIs must consider these trade-offs and strike a balance when choosing models. For this reason, it is not possible to offer a total score or pronouncement on whether a model is the best tool for the analysis.

Instead, the assessment criteria is used to form an opinion on whether the chosen tool is appropriate or inappropriate for delivering the Bureau's mandate in the country's context — that is, whether any models or analytical decisions are not currently suited to their purpose, fail to advance the Bureau's mandate, or do not adhere to the OECD Principles. If a model is assessed as appropriate but yet there are recommendations to bring it in-line with best practices, a qualified opinion may be issued (Table 2.2).

Table 2.2. Overall opinion of the review team

Appropriate	The model meets industry standards (according to benchmarks from the OECD Working Party of Parliamentary Budget Officials and Independent Fiscal Institutions) and no further action is recommended.
Appropriate, qualified opinion	The model is appropriate for delivering the IFI's mandate and meets industry standards, but there are areas in which the IFI should invest to improve it.
Adverse opinion	The model is not suited to the task and should be changed as soon as possible.

This review is not a line-by-line code audit, nor does it undertake out-of-sample validation of alternative specifications. Instead, it seeks to identify any analytical gaps or areas where the Bureau should invest in broadening or deepening models.

External model reviews are an important element of an IFI's accountability mechanisms and help reassure stakeholders of the quality of the IFI's work. However, macro-fiscal forecasting is above all a human process that relies on considerable judgment — no two analysts with the same model will produce the same results. A periodic external assessment cannot take the place of an IFI's other legislated channels of accountability. For the Bureau, this is formal scrutiny by the Federal Parliament and its ongoing dialogue with academics, peer institutions and the public.

2.3. Identifying the modelling needs and constraints of the Bureau

IFIs fall across a spectrum of roles and responsibilities. The assessment framework must be adapted for the needs of an IFI's institutional arrangements — that is, the functions defined by its primary and secondary governing legislation, memorandums with government agencies and the discretionary operating guidelines it sets for itself. The framework must also consider the constraints of the Bureau — its resources and the economic and fiscal data available to it, which will drive model selection.

2.3.1. The Bureau's modelling needs

The Bureau's main responsibilities and modelling needs are laid out in an exceptionally complex array of laws. New laws in Belgium that have a requirement for monitoring or technical expertise tend to name the Federal Planning Bureau as the institution responsible for it either directly, or by serving as the technical secretariat for another responsible body. Table 2.3 lists some of the Bureau's main responsibilities named in legislation. The Bureau also has responsibilities arising from established practices and agreements of various formality with government departments.

Table 2.3. The main responsibilities of the Federal Planning Bureau named in legislation

Law	Responsibility
Law of 21 December 1994 on social and miscellaneous provisions giving	Preparing the economic forecasts for the federal budget, drawing up the five-yearly input-output tables and other satellite accounts for Belgium, along with the overarching mandate to assess and forecast socio-economic and environmental developments with a view to improving their rationality, efficiency, and transparency.
Law of 10 April 2014 that implemented Directive 2011/85/EU requiring multi-annal budgets	Serving as the arm's length independent body responsible for producing the macroeconomic forecasts underlying the budget to comply with the enhanced budget co-ordination and surveillance framework in Regulation (EU) No 473/2013 of the "Two Pack" of reforms.
Law of 5 May 1997 relating to the coordination of the federal sustainable development policy	Preparing an *ex ante* and *ex post* monitoring report consisting of indicators and scenarios to support the newly created federal plan for sustainable development to achieve domestic, international, and European commitments, and placing a representative of the Bureau on the Interdepartmental Commission for Sustainable Development as an observer.
The Law of 5 September 2001	Serving as the secretariat of the Study Committee on Ageing, of which the Vice-Chair and one

Law	Responsibility
guaranteeing a continuous reduction of public debt and creating an Ageing Fund	member are from the Federal Planning Bureau.
The Royal Decree of 14 November 2003 implementing the law of 28 April 2003	Supplying the mortality tables and demographic studies for certain calculations related to annuity payments.
The Programme Law of 23 December 2009	Developing and maintaining a database of transport indicators and satellite statistical accounts for the Ministry of Mobility and Transport and to carry out transport simulations with impact analysis and policy analyses on request and in consultation with the Ministry of Mobility and Transport.
The Law of 8 January 2012 amending the Act of 29 April 1999 on the organisation of the electricity market	Collaborating with the Directorate General for Energy to draw up a report on the monitoring of the security of the supply of energy every two years. Note – this law is currently under review.
The Law of 25 November 2018 establishing the National Productivity Council	Nominating two of its members to the National Productivity Council and contributing to the meetings and reports on the topics of diagnosing and analysing developments in productivity and competitiveness, associated challenges, and the consequences of policy options on productivity and competitiveness.
The law of 21 May 2015 establishing a National Pensions Committee, a Centre of Expertise, and an Academic Council	Serving as the secretariat of a support committee for the Centre of Expertise and appointing a representative to sit on the committee. The Centre of Expertise on pensions is responsible for grouping all the knowledge on pensions from various administrations, public establishments, and public interest organisation.
The Law of 22 May 2014	Costing the election manifestos of political parties, amended 2018 to restrict requests to a minimum 3 and maximum 5 priorities and to political parties represented in the House of Representatives. The analysis is to include the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
The Law of 22 May 2014 amending the Civil Code	Supplying the mortality tables for calculating the value of the rights of surviving spouses to enjoy a property.
The Law of 15 May 2014 implementing the Compact for Competitiveness, Employment and Recovery	Calculating increases in wage limits and other social security contribution parameters for various stakeholder decisions and negotiations.
The Law of 14 March 2014 amending the FPB's 1994 legislation	Calculating a set of additional indicators for measuring quality of life, human development, social progress, and the sustainability of our economy.

2.3.2. Identifying the constraints of the Bureau

As illustrated previously in Figure 1.7 in Chapter 1, the Bureau has one of the largest teams of analytical staff among European IFIs. However, it also has among the most tasks and the most diverse responsibilities among IFIs.

The Bureau is generally able to attract staff with the required expertise and the pool of high-calibre analysts in Belgium is large, including a large pool of Belgian PhD economists and PhD economists from other European countries with the right to work in Belgium. That said, there are some constraints that limit the Bureau's ability to find the expertise for its modelling needs:

- There are language constraints, with the Bureau working primarily in French and Dutch.
- Competition for analysts in Brussels is fierce among the many domestic and international institutions, governments and think tanks.
- The tendency for the Bureau's analysts to remain in the same position on the same model for many years has lowered its attractiveness to graduates and early-career staff.

The Bureau has enviable access to data, both through legislation for its participation in the National Statistics Institute and membership on numerous official commissions, councils, and committees, as well as through well-established informal peer-to-peer relationships.

However, the Bureau does face some challenges relating to data access:

- GDPR compliance mean that some of the Bureau's access to data is being increasingly questioned, delayed, or even withdrawn.
- The Bureau's data sharing arrangements with regions — which retain full autonomy over agreeing to supply data in many areas — is a perennial sticking point.

2.4. Assessing the comprehensiveness of the model suite and effectiveness of its analytical workflow

2.4.1. Comprehensiveness of the FPB's model suite

The Bureau's responsibilities are summarised under five areas and mapped to its current model suite in Table 2.4. For **providing the macroeconomic forecast** for the budget, the Bureau takes its quarterly MODTRIM macroeconometric model and splines it with its medium-run annual forecasting and policy model HERMES. The Bureau uses monthly monitoring, expert judgment and smoothing to arrive at the most recent quarters for which national accounts data is not yet available and current quarters. Most peer IFIs rely either on the same quarterly macroeconometric model for the short term and medium term or extend it from a nowcasting model for the current and subsequent two quarters. The Bureau's use of an annual model for outer years of the medium-term forecast is somewhat unique.

For **financial and economic policy costing and analysis of the taxes and transfer system**, the Bureau relies primarily on HERMES and microsimulation models. The Bureau has quickly caught up to the CPB Netherlands Bureau for Economic Policy Analysis in pursuing a form of election costing that focuses on economic impact assessments — the effects of policies on employment, productivity, growth, inflation, and other macro aggregates. This reflects the Bureau's history and its staff skillsets.

For **sectoral modelling for government ministries**, the Bureau has its PLANET model to support the Federal Public Service Mobility and Transport and CRYSTAL SUPER GRID to support its work on energy modelling for various stakeholders such as the climate team within the Ministry of Health. For the Bureau's work monitoring the Recovery and Resilience Plan, it uses the Belgian-adapted QUEST III R&D model for the long term, the framework most common among EU analysts and promoted by the European Commission, and the HERMES model for the short-medium term. The structural studies team is also working on a new tool for structural reform analysis, the DynEMIte DSGE model.

For **long-run fiscal sustainability analysis**, the Bureau has developed MALTESE, a tool for projecting social expenditures over the long-run. The Bureau does not regularly publish summary statistics of sustainability such as fiscal gap calculations.[1]

For its **statistical compilation**, the Bureau relies on its partners in the statistics framework—particularly those that comprise the National Accounts Institute—to procure the data it needs, which is then processed (mainly) in its Python-LArray platform. Stakeholders are satisfied with the largely mechanical compilation and dissemination of statistics that the Bureau offers as a service provider.

Overall, the Bureau has a broad and diverse range of tools at its disposal to cover an area of vast swath of policy analysis both broadly and in-depth. While there is a risk that in defining an institution's scope too broadly it loses focus, the Bureau's stakeholders universally praised the advantages of having all the Bureau's diverse modelling expertise under one roof. The review team noted some areas of the overall workflow that set the Bureau's model suite apart from its peers:

- The Bureau's models are generally more sophisticated than those of peers. This partially reflects the age of the Bureau and the experience of its analysts, many of whom have been there since the modern Bureau's formative years. However, sophistication is not always better. Models are a tool

to help think through a problem and tell a story. When the development and deployment of sophisticated models becomes the goal unto itself, it may distract from timely and responsive analysis that may not be as elaborate but could better fulfil the Bureau's purpose of informing stakeholders when it matters most during the policy process. Although stakeholders are not looking for quick and dirty analysis when they approach the Bureau with a question, there is a balance to be found between providing a timely answer and providing an answer based on sophisticated modelling.

- The Bureau has considerably more resources devoted to microsimulation than its peers. This is largely because they can: they have far better access to administration data than peers and Belgium has a wealth of interesting public microdata sets. However, the availability of microsimulation options can be a crutch and come at the expense of analytical options that have a weaker footing in administrative micro-data but may sometimes be more informative.

Table 2.4. Models and methodologies corresponding to mandated responsibilities

Macroeconomic forecasts and medium-term economic and fiscal outlook	m = missing u = underserved ✓ = comprehensive	
Task 1: Macroeconomic forecasting	MODTRIM, HERMES, HERMREG	u
Task 2: Fiscal forecasting	HERMES, PROMES	✓
Task 3: Estimating potential GDP and the business cycle (including long-run potential GDP projections)	Output gap module (EC method), HERMES, SBS3 (long-run potential GDP)	u
Task 4: Forming a view of the cyclical and structural budget balance	HERMES	✓
Financial and economic policy costing and analysis of taxes and transfer system		
Task 5: Costing the first-round financial impact of polices[1]	Ad hoc models, EXPEDITION, PROMES	✓
Task 6: Costing the second- round budgetary and economic impact of policies	HERMES, HERMREG,	✓
Task 7: Preparing policy simulation and scenario analysis	HERMES, HERMREG, EXPEDITION (distributional impact of policies)	✓
Sectoral modelling for government ministries		
Task 8: Modelling energy prices and energy distribution	CRYSTAL SUPER GRID	✓
Task 9: Forecasting and analysis of emissions and climate change	PLANET	u
Task 10: Modelling transportation and freight demand	PLANET	u
Task 11: Monitoring the Recovery and Resilience Plan	QUEST III R&D, DynEMIte	u
Long-run fiscal sustainability analysis		
Task 12: Population projections (including mortality tables)	DEMO	✓
Task 13: Projecting the long-term trajectory of public debt and assessing long-term fiscal sustainability	MALTESE	✓
Task 14: Modelling health care spending	Module (without specific name) included in MALTESE	✓
Task 15: Modelling the long-term sustainability of national pensions and social spending	MALTESE, MIDAS	✓
Statistical compilation and dissemination		
Task 16: Compiling input-output tables and environmental economic accounts	Statistical compilation tool (without specific name)	✓
Task 17: Compiling indexes to measure quality of life	Statistical compilation tool (without specific name)	✓

1. Note – this is not the core business of the Bureau and is instead usually done by government ministries. The exception is in relation to election platform costing.

Potential gaps in the model suite

The review team indicated several areas in Table 2.4 as underserved according to their modelling needs or in comparison to the practices of other peer IFIs with similar mandates. Not all underserved areas can be addressed (for example, if missing data is irresolvable).

Task 1: Macroeconomic forecasting

- **Nowcasting**. Many peer IFIs have adopted nowcasting models that use dynamic factor analysis or principal component analysis to statistically assess high-frequency data (monthly, daily, or continuous) to arrive at the recent past (to fill the lag in national accounts publication), the current quarter, and the next two quarters. For example, the Independent Authority for Fiscal Responsibility in Spain (AIReF) uses its MIPRed dynamic factor model at the monthly frequency to determine the concurrent two quarters.

Task 3: Estimating potential GDP and the business cycle (including long-run potential GDP projections)

- **Contribution to the business cycle debate**. The Bureau's analysis of the business cycle—particularly its estimates of potential output and the output gap—does not receive the same attention or carry as high a modelling priority as many of its peers. This is partly because the structural budget balance in the context of the EU Stability Programme has not yet become as heated a national debate in Belgium as elsewhere. However, it cannot be taken for granted that it will not be an issue in the future and the Bureau would be well-advised to get ahead of it.

  Other institutions have made valuable contributions to the business cycle debate using two approaches that would complement the Bureau's existing model work: (1) Preparing simple, intuitive visual heat maps that assess specific industries and regions and how they are performing relative to their trend, for example in Finland, Latvia, Estonia and others from the Baltic-Nordic network, along with Ireland; (2) Preparing several alternative projections of actual and potential GDP using different model types or specifications, either as a sense check of the primary forecasting model, or to be averaged for their published outlook in a suite modelling approach, as in the case of Ireland. The Bureau accomplishes some sense checks on the model results; however, it could be more systematic and provide greater discussion surrounding the different results and how they have been reconciled.

Task 5: Costing the financial impact of polices

- **Ad hoc financial models and satellite structural tax and transfer models**. While the Bureau does some financial cost assessments off model on an ad hoc basis, it primarily views policy costing through a macroeconomic lens—that is, working out the many ways that a policy could potentially affect the macroeconomy, such as output, inflation, wages, unemployment, household disposable income, and purchasing power. That perspective is guided by the Bureau's traditional role in economic research. However, the new costing mandate requires the Bureau to be much more focused on the financial and accounting elements of new policies. In focusing on the macroeconomic implications of policies, they may miss important financial details important in getting the budgetary impact of measures correct and making them useful for decisions makers. These include aspects such as administration costs, accruals and cash considerations for financial statements, take-up or noncompliance considerations, and base erosion and planning or evasion, which should all be incorporated in a cost estimate or presented as supplementary analysis.

  As Belgium looks to improve its public finances over the medium term, the provision of rich financial information on policies will be useful for stakeholders to undertake effectiveness evaluations, impact assessments, and *ex post* audits. Other institutions provide simple back-of-the-envelope arithmetic explanations underlying cost estimates such as the number of taxpayers affected, or the number of benefits recipients and average payment, so that stakeholders understand the moving parts underlying the results and can approximately replicate them.

- **Behavioural adjustments**. The Bureau's approach to costing means the analysis is presented without adjusting for likely behavioural responses, giving rise to systemic bias in the Bureau's results. Other institutions invest more in complementing the initial results of microsimulation models with top-down spreadsheet financial models that adjust the results for behavioural assumptions derived from the academic literature or empirical assessments of similar policy changes in their own country's past or in other jurisdictions.
- **Tools for evaluating the impact of taxes on income from wealth**. The Bureau's tools for assessing the impact of personal income tax measures commonly exclude any income from capital sources and the surrounding costs and economic implications.

Task 9: Forecasting and analysis of emissions and climate change

- **Environment and climate modelling**. The Bureau's models for monitoring efforts to reduce emissions and act on climate change have fallen behind its leading-edge approaches to evaluating macroeconomic issues and are undeveloped compared to some peer institutions like the Danish Economic Councils, the CPB Netherlands Bureau for Economic Policy Analysis, and the Parliamentary Budget Officer of Canada. They have begun on a work programme to address these gaps and are developing an environmental CGE model.

Task 10: Modelling transportation and freight demand

- **Freight transportation** modelling. The Bureau has not found a sophisticated solution to model freight transportation, as required to fulfil its transport modelling mandate. This is largely owing to data gaps.

Task 11: Monitoring the Recovery and Resilience Plan

- **Structural reform assessments**. The Bureau's solutions for assessing the Recovery and Resilience Plan remain under development. This is an issue common across institutions in the European Union and elsewhere, where there are no easy fixes. The Bureau's work programme for developing the new DynEMIte tool may make progress toward this goal.

2.4.2. The FPB's analytical workflows

The FPB has a diverse range of modelling responsibilities and uses a wide array of software packages for managing it. It is a mixture of proprietary packages like Stata, SAS, Gams, Matlab and Excel; open source languages (and their usual libraries) such as Python and R; and in-house developed software packages or libraries like IODE, LIAM2 or LArray, which are further described below.

For econometric models, the econometrics platform IODE[2] is the backbone of the Bureau's workflow to co-ordinate its data resources, inputs, and outputs across models, teams, and projects. It is a powerful software package for statistical analysis and model solving.

IODE was developed in-house by the IT Unit of the FPB. It assists analysts by streamlining activities such as (1) Automating data retrieval from databases, (2) importing and exporting series between the office's open-source and licensed software packages like Python and the LArray library, Stata, R, Excel, (3) documenting databases, (4) writing and estimating equations, (5) facilitation scenario simulations, and (6) generating graphs and tables, among other helpful functions like scripting.

While it has many benefits and is fast and efficient in keyboard navigation and processing, such an in-house software solution is unique among IFIs. It is largely a carry-over from an earlier computing workflow — it was developed as the replacement for the Bureau's mainframe computer econometric software in the 1980s.

The software is written in C and C++ and requires dedicated specialists to maintain, refine and add functionality. New techniques must be translated into IODE rather than simply being applied as imported

libraries from R or Python that outside researchers often publish alongside their results (although such files can be passed back and forth to IODE).

The look and feel of the IODE GUI divides users internally, with some having an affinity and others wanting a more modern solution. Some outside stakeholders also see it as outdated.

Overall, IODE is observed to play a crucial role in the Bureau's workflows. Nonetheless, the Bureau's ongoing commitment to IODE should be reviewed with an eye to converting it over the long-term to a more modern software solution with greater penetration in the field of economics, along with the gradual conversion of models specific to it, such as HERMES. Doing so will have several benefits:

- The ability to quickly incorporate leading-edge techniques from outside academic working papers and other researchers, that are increasingly published open-source in Python and R.
- The ability to leverage the tools coming online to assist code drafting, such as AI "co-pilot" programmes that autocomplete code based on code comments which is improving the productivity of researchers by leaps and bounds.
- The ability to participate in, and benefit from, larger modelling communities providing support for choices like Python and R.

LIAM2 is an open-source software package developed in Python to help economists develop microsimulation models. The MIDAS model is developed in LIAM2. The toolbox is made as generic as possible so that it can be used to develop almost any microsimulation model as long as it uses cross-sectional ageing, i.e. all individuals are simulated at the same time for one period, then for the next period, etc. The goal of the software is to let modellers concentrate on what is strictly specific to their model without having to worry about the technical details. It was made available for free to outside researchers to build a community to reduce the development costs of microsimulation modelling.

LArray (which stands for Labelled Array) is an open-source Python library and GUI for analysing *multi-dimensional matrices* and creating models with them. It is used for many models of the Bureau (demographic projections, MALTESE). The most important feature is to access data via meaningful labels to make models more readable and easier to maintain, but it also helps modelers automate large parts of their workflow from importing data in various formats and cleaning it to generating data reports, charts or even dashboards.

All in all, the Bureau is considered to be further ahead than many of its peers in adopting collaborative open-source software in several areas of its model suite.

2.5. Assessing the appropriateness of the Bureau's individual models

Through discussions with the Bureau the review team has identified 12 models in the Bureau's primary toolset that are currently in use and appropriate to review individually, along with three that are in development for the future.

Models in use:

HERMES	Forecasts the short- to medium-term macroeconomic outlook for gross domestic product and its components, prices and incomes, employment and unemployment, energy consumption and greenhouse gases, as well as the public finances at an annual frequency. It also calculates the macroeconomic impacts of policy measures and their effects on the budget balance and public debt.
HERMREG	Same functions as HERMES but for Belgium's regions. Two model versions: one for forecasting (top-down version), one for impact analysis (bottom-up version). Macroeconomic aggregates at the national level are constrained to HERMES in the top-down version.
QUEST III R&D	Simulate the long-term macroeconomic effects of structural reform measures, with special coverage of measures supporting research and development, market functioning and public investment, as well as tax shifts between labour income, capital income and consumption.

EXPEDITION	Calculates the direct impact of measures on the distribution of household disposable income, presented by income decile or household characteristics.
TYPECAST	Calculates the effect of measures on the financial incentive to work (the change in a worker's decision to move between unemployment and employment) arising from changes to household disposable income.
HINT	Assesses the redistributive effects of measures that affect the prices of goods and services, presented by income quartile or household composition.
MIDAS	Simulates the life spans of individuals for the years between 2012 and 20702070 to assess the adequacy of pensions, replacement ratio, inequality, and poverty risk indicators of the elderly.
MODTRIM	Forecasts the macroeconomic outlook in the short run using national accounts data in the quarterly frequency (versus HERMES at an annual frequency).
PROMES	Used to compute detailed health care expenditure in the medium term. First operational version in 2019.
MALTESE	Estimates long-term implications of budget measures, especially those related to public pensions. The model has been used to compute Belgian pension projections published in the European "Ageing Report", is used annually to compute the total social expenditure projection in the Report produced by the Study Committee on Ageing and for the budgetary impact of social benefit policy measures.
PLANET	Calculates the effects of changes in economic activity and policy reforms on demand for personal and freight transportation, including congestion, the environment and welfare.
CRYSTAL SUPER GRID	Assess the impact of different assumptions and policy reforms on the prices and distribution of the electrical system, particularly the long-run supply security, sustainability, and affordability.

Models in development:

LASER	Assesses the expected impact on labour supply of measures influencing household disposable income.
DYnaMITe	DSGE model based on QUEST III R&D, incorporating multiple industries and knowledge spillovers so that propagation of (productivity and other structural reform) shocks through the production and innovation networks can be modelled.
Environmental CGE model	Standard multi-sector recursive dynamic model, covering Belgium and its regions. Currently, special attention is paid to the interaction between energy inputs and heterogeneous labour demand, to the modelling of labour markets and to empirical underpinning. Linkage with microsimulation models is explored.

For in-depth assessments of each model, interviews were held with the relevant modelling team along with a review of work papers, specifications of equations, and in some cases the model code to scrutinise the suitability according to the framework described above. The remainder of this sections provides the results of the individual model assessments.

2.5.1. HERMES

HERMES (Harmonised Econometric Research for Modelling Economic Systems) was the outcome of a 1981 project proposed by the Commission of the European Communities (Directorate-General for Science, Research and Development) to create an econometric model that could simulate alternative assumptions about the world environment and economic and energy policies. It was motivated by the contemporary energy crisis and a realisation that energy distribution, prices, and policy would spread across borders (Donni, Valette and Zagame, 1993[1]).

The Federal Planning Bureau was a key member of the HERMES Club of 12 institutions in 12 countries (Belgium, Denmark, Spain, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Germany, and the United Kingdom) that was intended to work closely through co-ordination at the European level, although the goal was never fully realised and the "H" in HERMES is a misnomer (Donni, Valette and Zagame, 1993[1]).

The first version of the model in Belgium was finalised in the late eighties after four years of development, with the first results published on the topic of the impact of economic activity on the environment in 1989 and the use of taxes to reduce CO_2 emissions in 1990.

Since then, most other HERMES Club members have stopped supporting development of their domestic models, with a few exceptions such as Ireland. The FPB has carried the torch and Belgium's model has been regularly updated and significant improvements have been made over the years.

Table 2.5. Overview and evaluation of HERMES

Name	HERMES (Harmonised Econometric Research for Modelling Economic Systems)
Type	Large-scale macroeconometric model
Description	Developed in-house as a conventional macroeconometric model consisting of a new Keynesian final demand-driven system of equations estimated econometrically for consumption, investment, exports, imports, inventories. Private consumption consists of several stylised products, the labour market has several categories of workers, and there is a detailed public finance block reflecting the complexity of the Belgian institutional environment. Demand is linked to supply via an industrial exchange matrix and utilisation rates and corporate behavioural functions are based on installed production capacities, disaggregated into industries for sectoral analysis. The model treats energy as a special production factor introduced through an energy sub-model determining the energy demand requirements for different products for private consumption. It is developed and maintained by the General Directorate (ADDG).
Mandate justification	*Law of 21 December 1994 on social and miscellaneous provisions* giving the Bureau the responsibility of preparing the economic forecasts for the federal budget, as well as the following analytical responsibilities: Assessing the medium-term impact of legislation Calculating the macroeconomic impacts of policies Calculating the financial impact of polices on the budget balance and the public debt, of the measures. Calculating the impact of economic policy measures Calculating the impact of external shocks *Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation. *Law of 10 April 2014* that implemented Directive 2011/85/EU on requirements for multi-annal budgetary frameworks of Member States and pre-emptively complied with the enhanced budget co-ordination and surveillance framework in Regulation (EU) No 473/2013 of the "Two Pack" of reforms requiring that a Member State's budget be based on macroeconomic forecasts produced or endorsed by an independent body.
Outputs	Short- to medium-term expenditure-side forecasts of gross domestic product and its components, prices and incomes, inflation, (un)employment, energy and greenhouse gases and detailed public finance tables typically for five or six years (for example, the 2019 election platform costings show HERMES results for 2020 to 2024).
Working paper	*How the HERMES model works - Description using variants* (Bassilière, Dobbelaere and Vanhorebeek, 2018[2]) *Description and use of HERMES: Document drafted in the framework of preparing for the 2019 costing of electoral programmes* (Bassilière et al., 2018[3]) *A new version of the HERMES model – HERMES III* (Bassilière et al., 2013[4])
Major reports	The FPB uses HERMES to forecast and publish its economic outlook for Belgium over a six-year horizon once a year, typically in June. Since 2014, the Bureau has also produced a preliminary version of the outlook in February or March for the preparation of the Stability Programme and the National Reform Programme, which must be submitted to the European Commission in April. *Macroeconomic and fiscal effects of the draft National Recovery and Resilience Plan - Report to the Secretary of State for Recovery and Strategic Investments* (Federal Planning Bureau, 2021[5]) HERMES was used for the short run effects, while QUEST was used for the long run effects.
Key judgments	Technological progress is exogenous. Government measures have no direct influence on total factor productivity. Labour supply is exogenous and does not react to economic fluctuations or to economic policy measures (any increase in the demand for labour can be satisfied by the existing supply). The model does not distinguish between different types of households and so distributional effects of policy measures cannot be assessed. Cross-border purchases are not influenced by excise duties or VAT rates. Foreign investment does not respond to changes affecting the relative attractiveness of Belgium. Assumptions relating to oil prices, exchange rates and interest rates for the first two years are based on quotations on the futures markets. From the third year, the Bureau imposes assumptions for medium-term equilibrium targets.
Software	The Bureau 's econometric platform IODE (*Intégrateur d'outils de développement économétrique*).
Theory and context	Good. Macroeconometric modelling is suited to the Bureau's twin goals of capturing dynamics with enough structure to trace effects of policies and shocks. Large-scale macroeconometric models are having a resurgence in the literature following a period of falling out of favour in preference to DSGE models.
Accuracy	Good. Strong theoretical underpinnings combined with empirically estimated equations pinned on medium-run equilibrium conditions (closing of the output gap, use of levels and dynamics via error correction models, all likely to improve upon naïve statistical forecast benchmarks over the medium run).
Communication	Good. Macroeconometric modelling produces coherent, intuitive narratives in-line with economic theory. Coefficients and directions are meaningful.

Transparency	Good. Working papers provided with equations, complete with parameters and statistical test tables. Detailed data with sources. Could be replicated externally by an experienced external analyst. Judgment plays a significant role in specification and introduces some opacity. IODE is provided for public download; however, the HERMES code is not proactively shared.
Proportionality	Good. Team of six analysts, along with two analysts on HERMREG. Commensurate with the considerable weight of medium-term forecasting in the Bureau's mandate and its connections across modelling areas.
Sustainability	Fair. Once developed, experienced analysts with a degree in economics or a numerate field could support and run the model. Maintenance and development are likely to require a PhD economist or analyst with an MSc-level background and considerable experience. Implementation in IODE requires a learning curve and a modelling background specific to the Bureau.
Precedent	Good. HERMES was once developed for several countries including Spain, Ireland, Dutch, French, German, Italian as an initiative of the Commission of the European Communities (Directorate-General for Science, Research and Development). Other countries have shifted away or stopped maintaining their models; however, some institutions continue to refine and develop their domestic HERMES models, for example Ireland's Economic and Social Research Institute (ESRI).
Opinion	Appropriate. HERMES is a well-developed and well-supported staple of the macro-fiscal forecast and policy assessment framework in Belgium. The Bureau should review the theoretical basis for using futures markets quotations as short-run forecasts for oil prices, exchange rates and interest rates—a practice which is common but has a poor theoretical justification and poor forecasting performance. The current economic environment and energy crisis have created a climate akin to that during the initial HERMES initiative and the European Union has grown even more open and co-ordinated with more harmonised national accounts data. The Bureau should consider leading a movement to reboot the HERMES project with the FPB at the centre, convert to open source software like Python hosted on GITHUB, and work with other Belgian and international institutions to co-operate on the development and co-ordination of HERMES projects. To do so it could look for partners and stakeholders among the EU institutions or member states for resources.

2.5.2. HERMREG

HERMREG is the regional companion of the national model HERMES for estimating regional economic output and its components. A first top-down version (HERMREG 1) was developed to produce regional economic projections in 2006 as a collaborative and jointly-owned owned initiative of the FPB and its three regional counterparts: SV (*Statistiek Vlaanderen*), IWEPS (*Institut Wallon de l'Évaluation, de la Prospective et de la Statistique*) and IBSA (*Institut Bruxellois de Statistique et d'Analyse*). In 2015, the Bureau developed a new bottom-up structure for policy impact assessments by constructing a block of regional equations for sectoral production factors and regionalised demand (private consumption, investments by delivery sector, trade regionalised external demand) relying on interregional input-output tables.

A multi-phase model development programme has since deepened the bottom-up version by improving the household income block, integrating the public finances block of the HERMES model, and improving the link between public finances and public consumption. For 2022 to 2026, the four partners have decided to fund a sixth phase of enhancements extending and improving the short- and medium- term projections of the top-down model, improving impact assessments using the bottom-up model, and enhancing the backend database. The sixth phase will also involve broadening and deepening the regionalising of the energy component of HERMES.

Table 2.6. Overview and evaluation of HERMREG

Name	HERMREG (HERMES regional)
Type	Large-scale macroeconometric model
Description	The regional version of the national model consisting of both a top-down and bottom-up approach to estimating regional output and its components. The bottom-up version contains 16 000 equations, of which 500 are econometrically, to cover 14 areas of economic activity in the three regions. The main components of demand—household consumption, investment, international exports, and imports—are error-correction equations combining short-term dynamics and long-term equilibrium conditions. Public expenditure is initiated both federally and regionally, and consumed locally. Data comes from interregional input-output tables compiled and co-ordinated by the FPB and the regional accounts from the National Bank. The HERMREG projection process (using the top-down model) is initiated with the HERMES results in March and work runs until the middle of July. HERMREG is developed and maintained by the General Directorate (ADDG).

Mandate justification	*Law of 21 December 1994 on social and miscellaneous provisions* giving the Bureau the responsibility of preparing the economic forecasts for the federal budget, as well as the following analytical responsibilities: Assessing the medium-term impact of legislation Calculating the macroeconomic impacts of policies Calculating the financial impact of polices on the budget balance and the public debt, of the measures. Calculating the impact of economic policy measures Calculating the impact of external shocks *Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
Outputs	Somewhat less detail than the HERMES output, but for the Brussels capital region, Flanders, and Wallonia. For impact assessments tables of the percentage change in (1) nominal hourly labour costs (market activities), domestic employment, domestic employment (persons), real household disposable income, personal consumption, investment, exports, imports, GDP.
Working paper	*The HERMREG bottom-up model* (Baudewyns and Lutgen, 2022[6]). *How the HERMREG bottom-up model works: Description using variants* (Baudewyns and Lutgen, 2022[7]). *HERMREG: A regionalisation model for Belgium* (Hoorelbeke et al., 2007[8]).
Major reports	The HERMREG regional economic outlook is published annually in July. *Labour cost reduction measures: what effect on employment and public finances in the Brussels Region?* (Baudewyns, Dewatripont and Michiels, 2020[9]) Past policy impact assessments include an increase in public investments, , a general reduction in employers' social security contributions, a reduction in social security contributions targeted at low wages, a reduction in personal income tax, an increase in family allowances, a reduction in personal social security contributions, target group reductions in Flanders and the Brussels Region, and activation of unemployment benefits in Wallonia and Brussels. HERMREG was also used for an assessment of both the Recovery and Resilience Plan and Wallonia's economic recovery plan.
Key judgments	The active population in the labour market is fixed. Production equals demand. Constrained to aggregate HERMES projection (top-down version).
Software	The Bureau's econometric platform (Intégrateur d'outils de développement économétrique), C programming language.
Theory and context	Good. Structural models with dynamics in the form of ECM are suited to the twin goals of tracing the effects of policies and shocks while capturing the time series statistical behaviour to improve forecasting power. Large-scale macroeconometric models well-supported in the literature, fell out of favour, but are having a resurgence as the limitations of DSGE models are better understood.
Accuracy	Good. New version of the bottom-up model rigorously tested in fall of 2021. Strong theoretical underpinnings combined with empirically estimated equations pinned on medium-run equilibrium conditions (, use of levels and dynamics via error correction models, all likely to improve upon naïve statistical forecast benchmarks over the medium run.
Communication	Good. Macroeconometric modelling produces coherent, intuitive narratives in-line with economic theory. Coefficients and directions are meaningful.
Transparency	Good. Working papers (bottom-up model) provided with equations, complete with parameters and statistical test tables. Detailed data and sourced. Could be replicated by an experienced external analyst. Judgment plays a significant role in tuning and combining the models and introduces some opacity. IODE is provided for public download; however, the HERMREG code shared with partner institutions.
Proportionality	Good. Team of 2 analysts and the support of the three regional institutions. Suited to the weight of regional analysis in the Bureau's mandate and commitments to other organisations.
Sustainability	Fair. Once developed, experienced analysts with a degree in economics or a numerate field could support and run the models. Maintenance and development are likely to require a PhD economist or analyst with an MSc-level background and equivalent experience specific to the Belgian context and to the niche IODE and C programming environment. Some knowledge sharing procedures and documentation but still some exposure to business continuity problems if the two analysts were to leave.
Precedent	Good. As with HERMES, there is a common modelling heritage among institutions within the HERMES Club. Other countries have looked to HERMREG for inspiration in their research, including France, Estonia, Chile.
Opinion	Appropriate. The HERMREG model is well-supported financially and analytically by the Bureau and by partner institutions. It is already a leading-edge tool that will be refined and expanded with the model development programme scheduled over 2022 to 2026 and guided by considerable expertise. Regionalising the energy component of HERMES will be an important step in supporting policymakers in facing the current crisis. Sustainability of the model could be improved by converting to a more widely used software environment in the economics community.

2.5.3. QUEST III R&D

QUEST III R&D is a Dynamic Stochastic General Equilibrium (DSGE) model that the FPB uses to calculate the long-run steady state impact of some structural reforms that affect the productivity of labour and capital. For example, it was used during the 2019 election costing period to assess proposals to invest in research and development, improve market functioning and increase public investment. The QUEST III R&D model was also used to calculate the medium- to long-term impact of Belgium's draft National Recovery and Resilience Plan (only the investment part of the plan).

The model is the Belgian module of the QUEST III R&D model developed by the European Commission (DG ECFIN), that has been calibrated to Belgium's national accounts data. Researchers in other EU member countries have similarly received their country-specific module, have updated the calibration and have applied it to a wide range of country-specific policy cases.

The Bureau has begun to look at extending the model to handle more sophisticated modelling of public investments and public support for private-sector investment, among other areas. It is also developing its own in-house DSGE model, which is based on the structure of QUEST III R&D but incorporates multiple industries, intermediate consumption (with input-output linkages between industries) and labour-augmenting semi-endogenous technological growth.

Table 2.7. Overview and evaluation of QUEST III R&D

Name	QUEST III R&D
Type	Smets-Wouters Dynamic Stochastic General Equilibrium (DSGE) model.
Description	Belgium-specific DSGE model adapted from a model developed by the European Commission (DG ECFIN) to simulate the medium- to long-term impact of structural reforms (changes to a country's structural settings, for example in the labour market, product market regulation, that influence the efficiency of the supply side of the economy). There are three regions (Belgium, the euro area, and the rest of the world). The Bureau used it to simulate, e.g. the impact of deregulation of professional services through markup reductions, leading to changes in prices and productivity both in the sector itself and in downstream sectors. Data is from the most recent National Accounts and the Bureau plans to update the model annually. It is maintained by the FPB's Sectoral Directorate (SDDS).
Mandate justification	*Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation. During the 2019 election period it was used to simulate the long-term impact of reforms in the field of market functioning, research, and development (R&D), administrative burden and public investment. *The Law of 25 November 2018* establishing the National Productivity Council which prescribes that the bureau nominates two of its members to the National Productivity Council and must contribute to the meetings and reports on the topics of diagnosing and analysing developments in productivity and competitiveness, associated challenges, and the consequences of policy options on productivity and competitiveness. Monitoring the draft National Recovery and Resilience Plan.
Outputs	The long-term percentage change in a list of macroeconomic variables for the "structural" equilibrium year of 2040. Macroeconomic variables include GDP, personal consumption, government consumption, private investment excluding R&D, private investment in R&D, public investment, exports, imports, the GDP deflator, real wage cost (private sector), labour productivity, employment rate, and lump sum taxes or public debt.
Working paper	*Description of the QUEST III R&D model* (Biatour et al., 2018[10])
Major reports	*Economic impact of professional services reform in Belgium – A DSGE simulation* (Kegels and Verwerft, 2018[11]) *Public investment in Belgium – Current state and economic impact* (Biatour et al., 2017[12])
Key judgments	Only one "final" sector. One total factor productivity variable. The knowledge spillover coefficients are calibrated on the basis of patent citations. Rotemberg (1982[13]) quadratic adjustment costs.
Software	Dynare pre-processor and library for Matlab and Octave.
Theory and context	Good. In the lineage of Smets and Wouters (2003[14]), a seminary and well-scrutinised class of DSGE models that have become industry standard and are a common practical solution for structural reform questions. Industry-specific return to additional investment in R&D in the style of "Innovation networks" from Liu and Ma (2022[15]).

Accuracy	Fair. DSGE models are a device to simulate the propagation of shocks through a highly stylised and simplified theoretical and empirically validated framework, but are not intended to be used for forecasting.
Communication	Fair. DSGEs are grounded in economic theory and should be able to tell a coherent and consistent economic story of the relationships between variables of interest. However, the complexities of the model in practice make it somewhat of a black box.
Transparency	Good. Although initially in the open-source code Octave, the model was transitioned to Matlab for computational speed and the more well-developed tools for publishing and exchanging results with other model teams and colleagues. Nonetheless, the Matlab version is shareable and publishable, and Matlab is accessible with reasonable license fees. It would also be trivial for an outside researcher to convert to Octave. Dynare is freely available. The QUEST framework is available through the community. The Bureau has published several working papers and descriptions with equations.
Proportionality	Good. Two researchers committed full time. Three knowledgeable in the area and able to assist. Would like more expertise for specific issues, especially from outside consultants. Structural reform analysis will play an increasingly important role in the Bureau's work monitoring the Recovery and Resilience Plan and election platform costings.
Sustainability	Fair. Maintaining and developing DSGE models generally requires a PhD economist in the field. Once developed, experienced analysts with a degree in economics or a numerate field could run the models but would need support of colleagues or external consultants. Most central finance ministries with a DSGE model retain external academic economists for developing new capabilities. The QUEST modelling community is relatively active, and expertise could be found in Brussels institutions. Little risk to business continuity.
Precedent	Good. Smets-Wouters DSGE models are used commonly in central banks. Used across EU governments. QUEST III R&D and its forebearers are used commonly in think tanks and other fiscal institutions.
Opinion	Appropriate. DSGE models are what they are: a theory-based solution to think through problems that are difficult to estimate with econometric models. It is appropriate for this use. A number of limitations of QUEST III R&D (e.g. some lack of detail on the supply side) could be revisited as the new DSGE model (DynEMite) is developed in-house. While the new DSGE model will be a welcome tool, it is sensible to also maintain QUEST III R&D for EU policy analysis commitments and to benefit from the relatively large QUEST community.

2.5.4. EXPEDITION and TYPECAST

EXPEDITION is a static microsimulation model developed in-house for analysis of policy measures related to personal income taxation, social security, and social assistance. Its key output is the impact of measures on disposable income in nominal terms by different household categories. EXPEDITION was developed over the 18 months leading up to the 2019 election platform costing exercise and is based on the EUROMOD platform, through using administrative data in place of EU-SILC (Statistics on Income and Living Conditions), which is the default data source for EUROMOD.

The model covers six policy areas: (1) pensions; (2) allowances payable by the National Employment Office; (3) compensation for sickness and disability; (4) personal income tax, (5) personal social security contributions and deductions from allowances; and (6) social assistance allowances and family allowances.

EXPEDITION is able to assess the effects of policy changes on the full set of households represented in the administrative microdata. By contrast, the TYPECAST module uses EXPEDITION's analysis of disposable income to simulate the impact of a measure on a selection of specific standard household types that are useful for illustrating policy effects.

The Bureau has considered freezing development of EXPEDITION to switch to BELMOD, a similar project developed with other partners; however, negotiations surrounding the development and maintenance of BELMOD are ongoing and its future is currently uncertain.

Table 2.8. Overview and evaluation of EXPEDITION and TYPECAST

Name	EXPEDITION (EX-ante simulation of Policy reforms and an Evaluation of their Distributional ImpacT on Income and Other welfare Notions) TYPECAST (Type case simulaTing)
Type	Static microsimulation model
Description	EXPEDITION was developed in-house to compute the direct impact of tax and social policies on nominal household disposable income. Simulations are based on a representative sample of Belgium's entire population and allows for assessing distributional effects of policies. The model uses administrative microdata on individuals and their households from the Labour Market and Social Protection Datawarehouse of the Crossroads Bank for Social Security (a collaboration between dozens of institutions involved in social security). It adds data from tax records (IPCAL) and CENSUS (highest level of education). Households are linked together with a register of exact identifiers. Some variables like education are inferred contextually. TYPECAST extends the output of EXPEDITION to calculate the intrinsic and extrinsic impact of a measure on a selection of standard household types (composition of family and place of residence, status in the event of non-work, status in the event of full-time work). The model is developed and maintained by the General Directorate (ADDG). It must be run on-site but the Bureau is investigating a remote access option.
Mandate justification	*Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
Outputs	EXPEDITION: Change in taxes and allowances by household member. Baseline and counterfactual for the direct effects of a measure on the distribution of household disposable income, presented by income decile or household characteristics. Change in household disposable income in euros in nominal absolute terms and percentage change by income decile, socioeconomic position (employee, civil servant, pensioner, independent, social assistance recipient, etc.), and household composition. Number and percentage of gaining and losing households in terms of disposable income by decile, socioeconomic position, and household composition. TYPECAST: Baseline and counterfactual for the direct effects on the financial incentive to work, that is, the change in disposable income in the event of a transition from inactivity to full-time employment.
Working paper	*Description and use of the EXPEDITION model* (De Vil et al., 2018[16])
Major reports	EXPEDITION and TYPECAST have been used to compute the impact of measures taken during the pandemic to support disposable income in *COVID-19 Crisis: A simulation of the impact of the loss of wages for temporary unemployment in the case of force majeure and the loss of income in the case of bridging rights* (Thuy, Van Camp and Vandelannoote, 2020[17]). In addition, EXPEDITION has also been used to analyse the budgetary and distributional effects of the regional child benefit reforms (Nevejan, 2021[18]). Results of the model were presented for each party's policy proposals, where relevant, on the DC2019 election policy costing portal: https://www.dc2019.be/. For example, proposals to increase the portion of income exempt from tax, change the tax break on company cars, and reform unemployment benefits.
Key judgments	Does not capture property income of households so an incomplete picture of the distribution of disposable income. Socio-demographic characteristics of individuals are assumed to be constant. Costing of measures does not consider behavioural responses in allocation decisions of economic agents. No automated adjustment of EXPEDITION for the macroeconomic outlook. Tax year and benefit year align to calendar years, rather than legal years and implementation schedule.
Software	EXPEDITION takes its framework from EUROMOD in C+, SAS is used for data manipulation, Stata is used for data processing. TYPECAST is written in Stata.
Theory and context	Fair. Microsimulation models transcribe the tax and benefits laws into computational identities linked to survey and administration data and therefore have a direct correspondence to key concepts for assessing the fiscal impact and household impact of changes in tax rates and thresholds and social benefits amounts and qualification criteria. They allow flexible aggregation and cross-tabulation after simulation, unlike macro approaches that determine aggregation in advance. However, not modelling behavioural responses either in the model or with satellite models to refine cost estimates does not take advantage of the literature. TYPECAST is a helpful solution to bring in potential behavioural responses and some of the literature on labour supply effects of changes in taxes and benefits, albeit for stylised examples of specific cases rather than general fiscal cost estimates.
Accuracy	Fair. Microsimulation models on administration data are the gold standard for determining the non-behavioural costs of policies. The exclusion of behavioural effects will bias results but can be adjusted in satellite models for costing measures, which is being done to an extent with TYPECAST as supplementary information, albeit not incorporated as an aggregate costing. Cost estimates in years other than the benchmark year are conditioned on the accuracy of the forecast of economic cost drivers and growth factors taken from auxiliary forecast models, and the degree of model detail in microsimulation generally reduces prediction power through the accumulation of errors and biases of individual variables that are amplified (rather than smoothed as in macro approaches). Administrative data should be an improvement in

	accuracy and granularity over SILC. Satellite models that adjust the results for tax or benefit year effects could improve accuracy (particularly important for the first year of a programme that is introduced as a partial year, or if indexation factors are applied mid-year). The benchmark administration and survey year is considerably out of date and likely to significantly affect the accuracy of results, especially during a period of rapid economic fluctuations and change.
Communication	Fair. Communicating the results from microsimulation models is easy and intuitive as the model is a rote translation of the tax code and benefits legislation. The results of TYPECAST are somewhat more of a challenge to illustrate intuitively and the Bureau has struggled with presenting results in a comprehendible way to non-economists.
Transparency	Good. A detailed working paper on EXPEDITION has been published. The underlying equations are mechanical identities, and aside from weights to scale results to the population level and economic growth factors to shift the results between years, little estimation and no judgment is directly applied. TYPECAST described only briefly in broader documents but enough information is given on assumptions that a sophisticated analyst outside of the Bureau could approximately reproduce the results.
Proportionality	Good. At peak demand during the costing period, six analysts, with four working on child benefits, pensions, PIT, and social assistance; one for data; and one for labour supply. Appropriate during the costing period. Some streamlining could be done by automating the links to the macroeconomic outlook.
Sustainability	Good. Microsimulation models require considerable resources to develop and maintain; however, once the framework is built (or borrowed) it requires some expertise to operate but is within the expected tool kit of someone with an undergraduate economics degree. TYPECAST requires some additional expertise in labour market economics and more professional judgment from experience. The Bureau has the documentation in place and enough analysts familiar with the model to ensure business continuity.
Precedent	Good. EUROMOD, BELMOD, UK, others in the EU, Canada SPSD/M
Opinion	Appropriate, qualified. EXPEDITION and TYPECAST meet standard practices and are appropriate for delivering the FPB's mandate. In the opinion of the reviewers the Bureau should continue to develop EXPEDITION rather than switching to BELMOD. There are nonetheless several areas in which the IFI should invest to improve its usefulness: (1) Work with data providers to refine the co-ordination process, (2) Improve the model's mechanical link to HINT to leverage the greater detail that HINT will produce in the next election, which will take place in the context of a sustained period of significant price volatility, (3) Work with STATBEL to compare and contrast its analysis on disposable income, (4) Review construction of the weights and matching to uprate and reweight tax benefit years to bring them forward to at least 2017 or more recent years, (5) Support the main model with satellite models to adjust results for implementation date and policy year, (6) Explore how to present the results of TYPECAST in a more comprehensive and comprehendible way for a broader audience, (7) Explore a link with the LASER labour supply model, (8) Refine the model so it has the capacity to simulate policies in more detail for wealth taxes, personal income taxes, and regional policies.

2.5.5. HINT

HINT was developed for the 2019 election costing exercise to calculate the impact of policy measures on consumer prices faced by different household types (incomes and family composition). The results of the model complement the results of EXPEDITION to provide a more complete picture of the welfare effects of policies that alter the prices of specific goods or services. For example, a subsidy for public transportation may raise the real disposable income of households in lower income brackets more than wealthier households.

The model traces the effects of price changes both on the standard CPI consumer price basket faced by different households and on Belgium's "health index" indicator that excludes alcoholic beverages, tobacco, and motor fuels. The latter is used for the indexation of housing rents and certain salaries, social benefits, and pensions.

Table 2.9. Overview and evaluation of HINT

Name	HINT (Household type INflation Tool)
Type	Static accounting model
Description	Developed in-house to calculate the impact of price shocks on different household categories (income classes in quartiles and family compositions—single/couple, one child, two children, etc.). Built and maintained by the FPB's General Directorate (ADDG). Data for consumption patterns comes from the Household Budget Survey (weights of products and services per household type) which is linked to the National Consumer Price Index for 244 product groups corresponding to the 5-digit COICOP aggregation level (United Nations Classification of individual consumption by purpose), which is enriched with a breakdown of the expenditure item 'Restaurants and cafes" into 15 sub-items at the 6-digit level to exclude alcohol for calculating the impact on the health index. To go from the 292 groups of products in the Household Budget Survey to the 244 groups of the CPI, several headings are aggregated, while others are removed (drugs, prostitution, and owner-occupied housing).
Mandate justification	*Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups for social security, and of the impact on the environment and transportation.
Outputs	The direct redistributive effects of price change measures, presented as the percentage point change in the CPI basket or health index by household income quartile and family type. Results are provided separately from the EXPEDITION model's assessment of redistributive effects on disposable income.
Working paper	No standalone working paper but it is discussed in the appendix of *Description and use of the EXPEDITION model* (De Vil et al., 2018[16]).
Major reports	Results of the model were presented for each party's policy proposals, where relevant, on the DC2019 election policy costing portal: https://www.dc2019.be/. For example, proposals to reduce the VAT on lenses in eyeglasses and proposals to reduce the VAT on repair services to encourage reduction of waste.
Key judgments	The model assumes no changes in consumption behaviour in response to price changes. It is not linked mechanically to other microsimulation models. Only the price changes of goods and services in the basket of the National CPI and health subindex can be modelled. It assumes that every household pays the same price, which does not hold for important policy areas like the social tariff for gas and electricity.
Software	IODE (Intégrateur d'outils de développement économétrique)
Theory and context	Fair. The tool is appropriate as a practical accounting replica of the specific price subindices faced by different households in the Household Budget Survey. It fulfils its requirements of allowing the Bureau to change prices and compute the resulting mechanical household-level impact. However, the assumption of no changes in consumption patterns in response to price changes does not take advantage of the literature on price elasticities of demand for items in the consumption bundle.
Accuracy	Fair. The model is not intended as a forecasting tool; however, it is presented as a prediction of the changes in prices faced by households in response to a policy change. For prediction it is likely to be biased—for example, a policy that raises the costs of a good or service would always have a larger predicted impact than would materialise because households will reduce consumption or substitute for cheaper alternatives. For tracing mechanical changes in consumption pattern identities, it is accurate.
Communication	Good. Accounting models are a rote translation of the underlying relationships (in this case, survey results mapped to the equations underlying price indexes) so the results can be communicated coherently and intuitively.
Transparency	Fair. The underlying model equations are mechanical identities that are described in broad terms in an appendix to the EXPEDITION working paper and could in theory by recreated by an expert familiar with the topic. There is no role for hidden judgment. IODE is publicly available for download; however, the code for HINT is not. The software is in C and C++, which does not require licenses and has a large community but is not widely practiced among economists and policy researchers and is not as collaboration-ready as some of the Bureau's model suite in Python.
Proportionality	Good. No analysts are currently working on HINT, so it is not pulling resources from other projects. The model will be revisited before the next round of election platform costing. The mechanical identities are what they are and would not benefit from additional resource investments; however, the Bureau should invest in satellite models to estimate behavioural responses to price changes that can be introduced to complement and refine the results of HINT.
Sustainability	Good. Accounting models can require some moderate resources to develop; however, once constructed they are relatively easy to maintain and update. In theory, operating and explaining the model is well within the tool kit of someone with an undergraduate economics degree. In practice, this is done by an economist with experienced in the field of prices and inflation, who is also responsible for further development of the model.
Precedent	Good. Canada's SPSD/M commodity tax module, the Indirect Tax Tool (ITT) plug-in for EUROMOD.
Opinion	Appropriate. The model is appropriate for delivering the FPB's mandate and meets industry standards. The Bureau could explore additional links to environmental taxes, more direct interaction with EXPEDITION, and options to refine income quartiles, which are not immediately comparable to other models which present results as quintiles and deciles. The Bureau should explore satellite models that could estimate behavioural responses, including on own-price elasticities of demand and cross-price elasticities that could be used to complement or refine the results of HINT.

2.5.6. MIDAS

MIDAS is a microsimulation and projection model that the Bureau has used since 2009 to study the risk of poverty and inequality among the elderly and the long-term effects of social and economic policies on pension adequacy.

The model starts with a cross-section of the Belgian population from administration data and the national census then guesses the life path of each individual as they choose a level of education, form a family, pursue a career, and save for retirement. It then takes the projections, works out the implications for pensions, and combines the results with simulations for social benefits to form a set of indicators for income inequality and the risk of poverty in each year of the outlook.

It is distinct from EXPEDITION in that it is a longitudinal and dynamic model. Moreover, the core model focuses on pensions and it uses the LIAM2 modeling apparatus. The model is aligned as much as possible with the financial sustainability projections of MALTESE and the composition of households is aligned with the Bureau's LIPRO lifestyle projections that models the position of individuals within households.

Table 2.10. Overview and evaluation of MIDAS

Name	MIDAS (Microsimulation for the Development of Adequacy and Sustainability)
Type	Dynamic microsimulation model, with behavioural projections coming primarily from empirically estimated logistic equations.
Description	MIDAS is a collection of microsimulation models to study the lifecycle paths of family and career decisions to determine the adequacy of retirement planning, particularly the adequacy of public pensions. It consists of several modules that can be grouped into five blocks (1) the demographic characteristics, (2 labour market position and incomes (gross and net), (3) social security and pensions, (4) taxation, and (5) output. It is developed and maintained by the General Directorate (ADDG). The demographic modules use dynamic cross-sectional ageing to simulate the life spans of individuals for the years between 2012 and 2070. The demographic variables, events and developments include birth, mortality, education level, leaving the parental home, partnership and marriage, having children, and divorce or separation. The modelling of family formation has been revised and expanded to align with annual publications of the Bureau's projection of the position in the household (LIPRO position). The model also projects birth rates and migration (including the different socio-economic profile of immigrants). The labour market modules simulate eleven career stages, choices, or events, including: (1) student or pupil (including out-of-school children), (2) civil servant, (3) self-employed, (4) employee in the public sector, (5) employee in the private sector, (6) unemployed with single payment, (7) invalid (formerly self-employed), (8) invalid (formerly employee), (9) unemployed with company allowance, (10) pensioner, and (11) other inactive. The number of individuals in situations (2) to (9) is aligned (by age category and sex) to projections by MALTESE. The income modules simulate the wages and salaries of employees and civil servants, labour incomes of the self-employed, old-age and survivor's pensions and the Income Guarantee for the Elderly (IGO), unemployment benefits and career break benefits, disability benefits, the Child benefit and birth premium, the Living wage (social assistance) and the Income Replacement Allowance, and the Allowance for assistance to the elderly (THAB) and its regional equivalents. Foreign pensions are also projected, albeit to a limited extent. MIDAS is at the annual frequency, with each transition assumed to take place at the beginning of a simulation year. The basic data is for the year 2011 coming mainly from social security institutions aggregated by the Datawarehouse Labour Market and Social Protection, which is managed by the Crossroads Bank for Social Security. The data has been supplemented with tax variables from the IPCAL (database of the Ministry of Finance), and some data from the administrative Census of 2011 (for example, education and housing status). The entire sample includes 601 683 persons, stratified by region. After selecting useful cases, the sample includes 553 722 individuals. The Bureau compares the results with EU-SILC.
Mandate justification	*Law of 5 September 2001 guaranteeing a continuous reduction of public debt and creating an Ageing Fund* which named the Federal Planning Bureau as the secretariat of the Study Committee on Ageing to oversee the fund, of which one member is from the Federal Planning Bureau. The Law also created an Ageing Fund to manage additional spending between 2010 and 2030 as a result of population ageing. *Law of 21 May 2015 establishing a National Pensions Committee, a Centre of Expertise, and an Academic Council* assisted by a support committee of which the Federal Planning Bureau serves as the secretariat and also appoints a representative to sit on the committee. The Centre of Expertise on pensions is responsible for grouping all the knowledge on pensions from various administrations, public establishments, and public interest organisations.

	Law of 21 December 1994 on social and miscellaneous provisions, Art. 127. §1. The Federal Planning Bureau is responsible for analysing and forecasting socio-economic development, the factors which determine this development and for evaluating the consequences of economic and social policy choices with a view to improving their rationality, efficiency, and transparency.
Outputs	Percentage of pensioners and elderly at risk of poverty, by gender and under alternative poverty definitions. Inequality in equivalised income of pensioners (Gini coefficient and S80/S20 inter-quintile ratio). Although the working-age population and children are also modelled, only projections for pensioners and the elderly are published.
Working paper	A working paper is available at the FPB's website: *MIDAS 2.0: Revision of a dynamic microsimulation model* (Dekkers, De smet and Van den Bosch, 2023[19]). *The long-term adequacy of the Belgian public pension system: An analysis based on the MIDAS model* (Dekkers, Desmet and De Vil, 2010[20]).
Major reports	The model has been used in studies contributing to the Pension Adequacy Report of the EU, in the annual report of the Study Group on Ageing and for producing input for supplementary table 29 "Accrued-to-date pension entitlements in social insurance", a part of the European System of Accounts 2010, published by Eurostat. *2021 Pension adequacy report* (Social Protection Committee (SPC) and the European Commission (DG EMPL), 2021[21]). *2021 Annual report of the Study Committee on Ageing* (High Council of Finance, 2022[22]).
Key judgments	Each transition is assumed to take place at the beginning of a simulation year; therefore, every situation or position applies for the full year and incomes are received throughout the year. The distributions of the population (by sex and age group) over labour market positions and family types, to which the MIDAS projections are aligned, do not record how labour market positions are distributed among people in different family types (e.g. the proportion of people in work among single people). For this MIDAS aims at maintaining the distributions observed in the start data. Each person in MIDAS has only one labour market position in each simulation year. For example, combinations of employed and part-time unemployment or part-time disability are not simulated, except for career breaks.
Software	LIAM2 (a Python library and framework developed in-house).
Theory and context	Good. Microsimulation models are the gold standard for assessing the impact of policy on social benefit delivery as they have a direct correspondence to the life course and behaviour of individual economic agents. The use of logistic functions in dynamic projections is well-established in the literature and the Bureau's framework has led to the emergence of a community of researchers building similar models and implicitly reviewing the seminal research of the FPB. Microsimulation models allow flexible aggregation and cross-tabulation after simulation, unlike macro approaches that determine aggregation in advance.
Accuracy	Good. The model is for scenario analysis to aid decision-making and frame the debate and not pure projection. However, it should be expected to give accurate conditional projections of life cycle decisions given the empirically derived logistic regressions and mechanical demographic identities. No *ex ante* reason to expect results to be biased or have particularly large variance among alternatives, although the degree of model detail in microsimulation can reduce prediction power through the accumulation of errors and biases of individual variables that are amplified (rather than smoothed as in macro approaches). Out-of-sample projections for pensions generally compare favourably to data from Datawarehouse and EU-SILC (used to monitor poverty and social inclusion as part of the European Semester), albeit with some discrepancies in percentage of recipients and a smaller average proportion below the EU-SILC poverty threshold. Recent refinements of emigration and immigration have improved projections versus earlier modelling. MIDAS has also undergone a major overhaul in recent years to improve its validity, such as its treatment of the Income Guarantee for the Elderly (IGO). The MIDAS load module has been improved over time by validating it against data from the Datawarehouse and IPCAL database.
Communication	Fair. Microsimulation models capture the tax code and benefits system in a rote manner and the effect of policy simulations on real households can typically be communicated easily and intuitively. However, the complex and time-intensive dynamic framework of MIDAS means some modules are treated by analysts as a black box and interpreting the results is not always easy.
Transparency	Good. The Bureau participates in the modelling community discussing its code and providing the LIAM2 software it developed. There is no significant judgment applied that is not discussed in publications. The Bureau should continue to finalise the working paper that discusses developments since Dekkers et al. (2010[20]) and publish it.
Proportionality	Good. The Bureau currently commits two to three analysts part time to the model. This is appropriate given its legislated requirements to support the Study Committee on Ageing and the Centre of Expertise on pensions, considering that the Bureau receives additional funding specifically to do so. That said, MIDAS is a significant investment of time for its main output of a line plot in publications showing the share of pensioners at risk of poverty over the next sixty years, which could potentially be accomplished by simply reweighting the starting dataset based on the age, family and labour variables projected by MALTESE. However, the Bureau expects important research questions to emerge in the future such as the

	implications of immigrants among pensioners which could not be modelled by ad hoc adjustments to MALTESE. Further, accurate and useful simulations of future pensions require simulating the careers of future pensioners. It is therefore not enough to reproduce the correct number of people in work, unemployed, etc. for each year; the transitions between labour market situations should also be simulated. This is only possible with a dynamic microsimulation model such as MIDAS.
Sustainability	Fair. Microsimulation models in general require considerable resources to develop and maintain, but once the framework is in place, it can be run by someone with the tool kit of an undergraduate economics degree. Model development is within the expected tool kit of a graduate-level economist or an undergrad with practical programming experience. The Bureau has sufficient people trained on the model to deal with a disruption.
Precedent	Good. There is a growing community of similar modelers in other countries. For example, work in preparation for the European Commission's 2024 Pension Adequacy Report, in which projections of poverty and inequality are made for Belgium and a number of other countries, involves the use of models similar to MIDAS.
Opinion	Appropriate. The model is appropriate for delivering the IFI's mandate and meets industry standards. The Bureau could consider capturing second pillar pensions (fully discretionary group insurance schemes funded by employers), which are not currently modelled.

2.5.7. MODTRIM

MODTRIM is the Bureau's quarterly national accounts forecasting model for the short- to medium-term. It was built in 2003 but has undergone several reviews and major overhauls. It is a structural macroeconometric model that uses behavioural equations to forecast the demand components of expenditure-based GDP. Error-correction models underpin most relationships in aggregate demand, allowing for long-run equilibrium conditions with short-run correction paths to reach them following shocks. Short-run MODTRIM forecasts are combined with medium-term HERMREG modelling to feed into the Bureau's forecasts for the Economic Budget.

Table 2.11. Overview and evaluation of MODTRIM

Name	MODTRIM (*Modèle trimestriel*)
Type	Quarterly structural macroeconometric model
Description	Large-scale macroeconometric model for projecting the quarterly national accounts. Short-run neo-Keynesian and long-run neo-classical assumptions. Most components of aggregate demand are specified as error-correction equations.
Mandate justification	*Law of 21 December 1994 on social and miscellaneous provisions* giving the Bureau the responsibility of preparing the economic forecasts for the federal budget. *Law of 10 April 2014* that implemented Directive 2011/85/EU on requirements for multi-annal budgetary frameworks of Member States and pre-emptively complied with the enhanced budget co-ordination and surveillance framework in Regulation (EU) No 473/2013 of the "Two Pack" of reforms requiring that a Member State's budget be based on macroeconomic forecasts produced or endorsed by an independent body.
Outputs	Detailed expenditure-side forecasts of GDP in current and constant prices by components, typically for eight quarters. Prices (CPI, health index, export and import prices, terms of trade, GDP deflator), employment and wages (hourly wage cost, real hourly wage cost, unit labour cost, employment, value added, hourly labour productivity), income (real disposable income households including and excluding property income), household savings rate.
Working paper	*A new version of MODTRIM II* (De Ketelbutter et al., 2014[23]). *MODTRIM II: a quarterly model for the Belgium economy* (Hertveldt and Lebrun, 2003[24]).
Major reports	Annual forecasts for the budget, such as *Economic Budget – Economic forecasts 2022-23 for September 2022* (Bureau, 2022[25]).
Key judgments	Net property income and equity holdings excluded from household consumption, after shown to have no explanatory power. Business investment previously derived from Cobb-Douglas production function but dropped from latest version of model in favour of a behavioural equation in levels.
Software	IODE (Intégrateur d'outils de développement économétrique)
Theory and context	Good. Structural macroeconometric models with error correction equations are the gold standard of macroeconometric models required to balance forecasting and policy analysis. Suited to twin goals of capturing data and dynamics with

	enough structure to trace effects of policies and shocks. Large-scale macroeconometric models well-supported in the literature, fell out of favour, but are having a resurgence as the limitations of DSGE models are better understood.
Accuracy	Good. Because of its theoretical underpinnings and reliance on medium-run equilibrium conditions and use of levels and dynamics via error correction models, these models are likely to improve upon naïve forecasts for the medium run. However, empirical comparisons of model classes for the short run tend to show that purely statistical time series models outperform structural models. For the Bureau's role it must undertake risk scenarios and sensitivity analysis, as required by the new European Directive on budgetary framework, and so a structural model rather than a statistical time series forecasting model is required.
Communication	Good. Structural macroeconometric modelling can produce coherent, intuitive narratives in-line with economic theory compared to purely statistical macroeconomic forecasting models. Coefficients and directions are meaningful.
Transparency	Good. Working papers with equations provided, complete with parameters and statistical test tables. Detailed data and sourced. Could be replicated by an experienced external analyst. That said, judgment plays a significant role in tuning and combining the models and introduces some obscurity.
Proportionality	Good. Four analysts spend a small part of their time with MODTRIM, which is approximately in line with the weight of short-run forecasting in the Bureau's mandate.
Sustainability	Fair. Once developed, experienced analysts with a degree in economics or a numerate field could support and run the models. Maintenance and development are likely to require a PhD economist or an analyst with an MSc-level background and substantial experience.
Precedent	Good. The Bureau's model is in-line with the large-scale IS/LM and supply-side structural econometric models used at other IFIs and institutions such as the Parliamentary Budget Office of Canada and Portuguese Public Finance Council.
Opinion	Appropriate. Appropriate unqualified. The tool meets the standard practices of peers and is appropriate for delivering the Bureau's mandate. No further action is recommended.

2.5.8. PROMES

PROMES is a microsimulation model developed at the request of the National Institute for Health and Disability Insurance. The model was also used in 2019 for the Bureau's election platform costing mandate to compute the medium-term budgetary impact of changes to health care policy in detail. It can estimate the budget implications of measures such as a percentage reduction in user fees, an increase in coverage for sickness insurance, an increase in dentistry fees, or other measures targeted at health expenditures.

The model consists of 25 modules corresponding to major expenditure groups, for example consultations and visits, dentistry, or physiotherapy. For each expenditure group, a behavioural model was estimated to explain the use of care according to individual characteristics, living environment, and previous use of care to arrive at projected healthcare volumes and expenditures. It was developed with the assistance of the National Institute for Health and Disability Insurance (NIHDI) and relies on the Permanent Sample (EPS), a longitudinal administrative database on the use of health care with more than 300 000 respondents. The results obtained for the sample are extrapolated to the future population using reweighting factors.

Expenditure projections from PROMES also contribute to the economic outlook in HERMES and the acute and long-term care in MALTESE (for the medium-term part).

Table 2.12. Overview and evaluation of PROMES

Name	PROMES (PROjecting Medical Spending)
Type	Partly dynamic microsimulation model based on logistic regressions of the probability of using care.
Description	PROMES computes detailed health care expenditure projections over the medium term for 25 expenditure groups (12 modules with subgroups). Projections use two-step modelling of the volume, or number of care units, by estimating the probability of accessing care with logistic regression and the average volume as a function of demographic, socio-economic characteristics, indicators of morbidity, previous consumption, and environmental factors. The model is calibrated on technical estimates from the National Institute for Health and Disability Insurance. Input data is longitudinal and comes from the Permanent Sample (EPS), an anonymous, randomised, and representative sample of 1/40th of the Belgian population from the database of the Inter-Mutualistic Agency, which consists of members of mutual insurance

	companies. To project health states, a chronic disease and disability indicator is constructed from data on insured persons and morbidity indicators have been constructed from data on the consumption of prescription drugs: an indicator of general health based on the number of different drugs taken, a series of indicators for chronic diseases (cardiovascular conditions, COPD/asthma, rheumatoid arthritis, diabetes, epilepsy, Parkinson's, Alzheimer's, psychosis and conditions of the thyroid gland) and other indications of chronic conditions. PROMES also includes an influenza epidemic variable constructed using data from the Scientific Institute of Public Health that can be set to assume above normal outbreaks of flu.
Mandate justification	The Bureau also has responsibilities toward the Belgian Health Care Knowledge Centre, such as calculating sustainability indicators, and toward the National Institute for Health and Disability Insurance. *Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
Outputs	Budget impact of measures, deviation from baseline, in thousands of euros, typically for a 4-to-6-year horizon. Expenditure by categories, such as dental practitioner fees, medical imaging, clinical biology, nurse practitioner fees etc. typically for a 4-to-6-year horizon.
Working paper	*Description and use of the PROMES model* (Geerts, Van den Bosch and Willemé, 2018[26])
Major reports	The report by the Belgian Health Care Knowledge Centre, *Assessing the sustainability of the Belgian health system using projections* (Lefèvre and Gerkens, 2021[27]), contains the Bureau's projections for medical care consumption up to 2025. Results of the model contributed to a report commissioned by the Minister of Health aimed at preparing a multiannual budget for health care. Results of the model were used to calculate the outcomes presented for each party's policy proposals, where relevant, on the DC2019 election policy costing portal: https://www.dc2019.be/. For example, "Cheaper medicines through public tendering" (Proposal 103 of party "Groen").
Key judgments	Data drawn from the EPS does not provide information on several important individual characteristics that may influence demand for care, such as household income, level of training, lifestyle (diet, consumption of alcohol and tobacco, physical activity, etc.), background and working conditions. Some of these variables are available in principle if the database is linked to other databases, but this has not yet been undertaken for reasons of privacy protection. PROMES only models the consumption and expenditure on care that fall under the health and disability insurance nomenclature (AMI). Some aspects of long-term care, which have been devolved to the Communities and Regions for a longer time (such as care for the disabled), are not included in the AMI nomenclature. Specific actions taken in these areas cannot be assessed with the PROMES model. Because the model is based on historical data it cannot directly evaluate new initiatives such as extending insurance to reimburse psychotherapy. The expected effects of such measures on expenditure are assessed through external estimates and then added to the projection results.
Software	SAS and Stata (for weights), with Python for summaries and data visualisation. No server license for SAS, three workstations. Looking at remote desktop licensing. NIHDI uses SAS, so the Bureau must follow for data aggregation. Rewriting weights in Python. GUI Tools for NIHDI are in conceptual phase. Needs more programming, which is planned for next year.
Theory and context	Good. Microsimulation models based on administrative data are the gold standard for health care expenditure modelling. The projections leverage the latest literature on the life-course perspective of health and social welfare analysis and empirical techniques of logistic regression for two-step modelling of number of care units and the probability of accessing them. They allow flexible aggregation and cross-tabulation after simulation, unlike macro approaches that determine aggregation in advance.
Accuracy	Good. Dynamic elements used for projection are empirically estimated. The first results were available in 2019, after which COVID-19 complicates *ex post* assessments of accuracy. Initial results of some out of sample assessments show some sectors better than others. In theory should be reasonably good forecasts given exogenous growth variables. The model is not only for forecasting, but also for scenario analysis to aid decision-making and frame the debate. The degree of model detail in microsimulation generally reduces prediction power through the accumulation of errors and biases of individual variables that are amplified (rather than smoothed as in macro approaches). However, it should be expected to give accurate conditional projections given the empirically derived logistic regressions. Economic growth factors and certain long-run spending factors taken exogenously will reflect the underlying accuracy of HERMES.
Communication	Good. For the most part easy to explain with intuitive paths and mechanisms. The dynamic framework complicates the story-telling ability but the decision framework for each category is straightforward to explain.
Transparency	Good. The model uses a mix of low-fee licensed software and open source (SAS and Stata and Python). The code could be made accessible and shared. A working paper has been published. Some room for judgment obscures underlying

	equation specifications.
Proportionality	Good. Model uses a little over two full-time equivalents (2. 5). Health care is not a core sectoral activity of the FPB but is critical fo2r thinking about long-run fiscal sustainability. DFR
Sustainability	Good. There is good documentation and transition plans for business continuity. In theory, the model can be run by undergraduate economists and developed by master's level economists with experience in the area. However, given the small size of the team this is not feasible in practice. Significant project capacity development in the form of new modules require a PhD economist or someone with considerable experience in the field of healthcare.
Precedent	Good. A similar approach has been used to project LTC expenditure in Flanders by Steunpunt Welzijn, Volksgezondheid en Gezin. France has expressed an interest in the FPB's modelling.
Opinion	Appropriate. The model is appropriate, and no further changes are required. An industry-leading model that the OECD will be recommending as an example for other independent fiscal institutions and central ministries. The COVID-19 challenges and data complications will require an investment to overcome.

2.5.9. MALTESE

The MALTESE model was developed to support the Bureau's mandate added in 2001 to serve as the secretariate for the Study Committee on Ageing (SCA). Results have appeared in the Committee's reports since 2002. The FPB also uses the model to represent Belgium at the EU's Working Group on Ageing Populations and Sustainability (AWG) established in 1999 by the Economic Policy Committee of the Economic and Financial Affairs Council (ECOFIN). The model has also informed several high-profile policy impact studies for pension reforms, such as those in 2015. The model is also used to answer pension questions posed to the Bureau as part of the Knowledge Centre of Pensions (established in 2015).

The model consists of a set of modules for translating demographic projections into budgetary developments for social protection spending, particularly public pensions, over a horizon of 50 years (currently until 2070). Results are published by branch of social protection. Total revenues and indicators of public finances (balances, debt) are also modelled.

Table 2.13. Overview and evaluation of MALTESE

Name	MALTESE (Model for Analysis of Long-term Evolution of Social Expenditure)
Type	Macroscopic accounting model
Description	MALTESE consists of a central model and several specific peripheral models (MOSES, PENSION, PUBLIC, HORBLOK) for estimating the long-term budgetary implications of ageing, especially on public pensions. MOSES determines the average pension in the scheme for self-employed workers, PENSION determines the evolution of the average pension in the scheme for salaried workers, PUBLIC determines the average pension in the scheme for civil servants, and HORBLOK carries out a projection of the number of pensioners by scheme and by category of pension within each scheme. For the AWG projections, it uses demographic data from Eurostat's population projection. For the SCA projections, it is based on the national demographic projection made by Statbel and the FPB. The projection horizon is fifty years, currently to 2070. Additional data comes from the national accounts and various social protection institutions. The starting point for the detailed public finances estimates is the HERMES medium-run forecast. The long-term MALTESE socio-economic and wages projections feed into the MIDAS simulation framework through alignment tables. It is developed and maintained by the General Directorate (ADDG).
Mandate justification	*Law of 5 September 2001 guaranteeing a continuous reduction of public debt and creating an Ageing Fund,* which named the Federal Planning Bureau as the technical and administrative secretariat of the Study Committee on Ageing to oversee the Ageing Fund to manage additional spending between 2010 and 2030 because of population ageing (the fund was cancelled in 2016 but the Study Committee remains). The Federal Planning Bureau also appoints a member of the Study Committee. The Study Committee produces a yearly report on the budgetary and social implications of ageing. MALTESE is used for the budgetary component. *Law of 21 May 2015 establishing a National Pensions Committee, a Centre of Expertise, and an Academic Council* assisted by a support committee of which the Federal Planning Bureau serves as the secretariat and also appoints a representative to sit on the committee. The Centre of Expertise on pensions is responsible for grouping all the knowledge on pensions from various administrations, public establishments, and public interest organisation. Since 2001 the FPB also represents Belgium at the EU's Working Group on Ageing Populations and Sustainability (AWG)

	established in 1999 by the Economic Policy Committee of ECOFIN), where MALTESE is used for the pension projection. The AWG is "responsible for producing common budgetary projections" on age-related public expenditure items and each member state must project its long-term pension expenditure under common assumptions. The Bureau must complete a detailed pension questionnaire about the results and the results undergo peer review of the pension projection results by a Member State and the European Commission.
Outputs	Benchmark and alternative scenarios (namely on productivity, employment rate or demographic parameters) for the additional cost of ageing on pensions and other social expenditure, expressed as the change in gross social expenditure in percentage points of GDP. Impact analyses of reforms. In the annual report of the Study Committee on Ageing, the following results are available: social protection expenditure by branch (pensions by scheme, health care, long-term care, incapacity to work, unemployment, family allowances, other social expenditure) in % of GDP; macroeconomic projections; socio-economic projections; population projections. For the Ageing Report of the European Commission, the results are focused on pensions: gross public pension spending by scheme as a % of GDP (with a breakdown for old-age and early pensions, earnings related, non-contributory pension, disability pensions, survivor pensions, other pensions); new pensioners; replacement rate at retirement; benefit ratio.
Working paper	High-level description in *Tools and methods used at the Federal Planning Bureau* (Federal Planning Bureau, 2006[28])
Major reports	The projections of public pensions are published in the EU *Ageing Report* and in the *Fiscal Sustainability Report* of the European Commission that assesses the medium-term and long-term fiscal situation of Member States. The projections of all social protection expenditure are used in an annual report produced by the Study Committee on Ageing (*Comité d'étude sur le vieillissement*, or CEV) on the budgetary and social implications of ageing. The first report was in 2002. Normally one long-term projection published in July for the Study Committee on Ageing where the medium-term projection is taken from the Economic Outlook (HERMES model) published in June for consistency. On a more irregular but therefore no less intensive basis, the model is used to answer policy questions, and in particular pension reforms, posed to the Bureau as a member of the Knowledge Centre of Pensions. The model was used in an influential impact assessment of pension reforms. The last one being the current proposition of reform 2022-2023 with behavioural-financial incentives to work longer and postpone retirement and the impact on the labour force. The MALTESE model was not used within the framework of DC2019 given the evaluation horizon retained by law (a short and medium-term calculation) and the team was required for social benefits analysis with HERMES and EXPEDITION. For this purpose, the underlying (pension) models of MALTESE were used for the medium-term calculation. *Outlook 2019-2070* (High Council of FInance, 2020[29]) *Annual report of the Study Committee on Ageing* (High Council of Finance, 2022[22])
Key judgments	For the AWG-projections, assumptions are based on common demographic, scope of pension, and macroeconomic assumptions discussed in the EU's Ageing Working Group and approved at the EPC level. These are different from those used in the national projection of the Study Committee on Ageing. Simulations of pension measures in the context of the Knowledge Centre of Pensions are usually simulated according to the SCA-scenario. Assumes no policy change. Legislation is included: for the AWG only if it has already been voted and passed; for the SCA promulgated measures are taken into account. Does not include second and third pillar pensions (private voluntary individual pensions schemes) for which there is a data gap. All social expenditure are automatically adjusted to the consumer price index, unless otherwise stipulated by legislation. Social benefits are also adjusted to living standards in real term, for example the pensions of retired public servants are partly indexed to the real wage of working civil servants.
Software	Iode for the core model of MALTESE and Python LArray, a library developed by the Bureau, for (almost) all peripheral models.
Theory and context	Good. Well-grounded in established methodologies that mimic the underlying accounting identities. Peer-reviewed among Member States and the European Commission. Appropriate for the EU context.
Accuracy	Good. Long-term projections are a thought exercise to identify whether immediate policy action is required and are therefore not intended or expected to be a most-likely scenario. As conditional projections, the framework is likely to give accurate results given the exogenous demographic projections and assumptions. In the context of the AWG, the results of the pension projection were peer reviewed in detail by the European Commission (DG ECFIN) and by the Romanian delegates to the AWG. They also receive ongoing scrutiny by other Member States.
Communication	Good. It is easy to communicate the moving parts and assumptions of accounting models. The Bureau could explore summary statistic that could improve communication (for example, a "pensions gap" that discounts the future stream of unfunded liabilities and gives the immediate and permanent adjustment to contributions as a share of GDP required to bring the accounts to a stable steady-state funding equilibrium).
Transparency	Fair. No public working paper. However, the Python LArray initiative is a fruitful transparency and open-source initiative for the policy community and appreciated by other institutions internationally.
Proportionality	Good. Two analysts part time to the core model MALTESE and 3 FTE for the peripheral models strikes the right balance within the Bureau's overall responsibilities. However, the team also is responsible for social analysis with HERMES and EXPEDITION, leading to potential conflicts in time commitments.

Sustainability	Good. As constructed, the model could in theory be both maintained and expanded by a relatively junior analyst with an undergraduate degree with a background in Python programming. However, in practice the small size of the team means that all tasks (including developing and extending the model) are performed by master's degree economists with large experience in the field of social expenditures. There is no sufficient duplication of knowledge to ensure business continuity. The Bureau should improve documentation.
Precedent	Good. Uses a common EU framework and assumptions (for the AWG projections). Demographics, cohort model, and supply side long-run potential GDP are all standard assumptions used by many other fiscal councils and PBOs for similar analysis.
Opinion	Appropriate. The tool is appropriate, and no further action is recommended.

2.5.10. PLANET

PLANET is a model developed in-house to make long-term projections of the demand for passenger and freight transport in Belgium and to carry out transport-related policy analysis. The model derives transport demand by mode and period (peak and off-peak hours) from the evolution of demographic, economic and price variables (fuel prices, transport fees, and time costs). It also considers externalities such as pollutions and congestion.

The latest PLANET version used for the 2019 election costing period including teleworking in the commuting module and distinctions between morning and evening peak hours, outward and return trips, and private and company cars.

Table 2.14. Overview and evaluation of PLANET

Name	PLANET (PLANning Economy and Transport)
Type	A framework including representative agent models, nested trees, (un)constrained gravity models and discrete choice modelling.
Description	A collection of tools developed in-house to assess the relationship between the economy and transportation demand to produce: (1) medium- and long-term projections of transport demand in Belgium, both for passenger and freight transport; (2) simulations of the effects of transport policy measures; and (3) cost-benefit analyses of transport policy measures. Produces the endogenous change in aggregate transport demand, mode choices, and time spent in response to changes in pecuniary and time costs. It uses the economic outlook from HERMES for the first five years and MALTESE projections afterward. Data comes from a variety of sources, including administrative databases and surveys. For measures assessed during the 2019 election costing period, the Belgian car fleet model CASMO (CAr Stock MOdel) was used as an input for PLANET. CASMO has undergone a recent overhaul to estimate the discrete choice model econometrically based on actual purchase transactions over several years and a distinction between the type of owner (private persons versus legal persons) by region allowing analysis of region-specific tax regimes.
Mandate justification	*The Programme Law of 23 December 2009* requiring the Federal Planning Bureau to develop and maintain a database of transport indicators and satellite statistical accounts for the FPS Mobility and Transport and to carry out transport simulations with impact analysis and policy analyses on request and in consultation with the FPS Mobility and Transport *Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
Outputs	Transportation demand and consumption for twenty years (currently to 2040). The medium and long-term impact of transportation policy proposals on traffic, emissions, and welfare.
Working paper	*The PLANET Model: Methodological Report, PLANET 4.0* (Daubresse and Laine, 2020[30]). *Telework and transport demand: an evaluation in the PLANET model* (Daubresse and Laine, 2020[31]). *Description and use of the PLANET model* (Daubresse et al., 2018[32]). The PLANET model methodological report: Modelling of short sea shipping and bus-tram-metro (Gusbin et al., 2010[33]).
Major reports	The Bureau is required to publish a *Transport Outlook* every three years as part of an agreement with the Federal Public Service Mobility and Transport, with whom it discusses and agrees upon which alternative scenarios to assess. In 2021, a technical report was published that studied the potential of a range of measures to encourage carpooling, including penalties for driving alone.

Key judgments	Own-price and cross-price elasticities from the literature. The only endogenous variable is the speed of the road. Always work on a constant policy basis. In CASMO, the Berry-Levinsohn-Pakes method for estimating discrete choice models based on aggregate market data was used.
Software	GAMS, some ad hoc in R, plan to migrate GAMS components to Python/LArray.
Theory and context	Good. Elasticities are taken from peer-reviewed literature. Structural relationships are firmly grounded in theory. Estimation techniques are well-founded. The overall model packages and individual specifications are sensible for the Bureau's unique mandate for transportation analysis to support government decision-making.
Accuracy	Fair. The team has performed *ex post* assessments that provide satisfactory results for the prediction. However, much of the data is ten to twenty years out of date. Accuracy could be improved with new survey programmes.
Communication	Fair. The various transport modelling modules generally tell an intuitive and convincing story; in some cases however, sometimes opaque inner workings or complexities emerge that are more of a black box. The team has occasional difficulties tracking the exact causal channels and explaining the results to stakeholders.
Transparency	Fair. The Bureau has published several detailed working papers. GAMS is a moderately priced licensed software with a relatively small community and is not commonly part of the software suite in other institutions. Some ad hoc components of the model suite are in open source. The Bureau has a plan to migrate the complete package to open-source software. The team is open to publishing the model and considering it as they migrate to open-source software.
Proportionality	Good. Four full-time staff, two of which receive funding under an agreement with the FPS Mobility and Transport. The size of the team is appropriate for the Bureau's unique mandate for transportation analysis and its duties to the government.
Sustainability	Good. Large team with distributed expertise and routines in place for knowledge transfer. Option to use commercial transportation modelling software would ensure development and support but would forego some of the adaptability and coherence of the current model suite and introduce further black box elements. The best practice is to continue to use the Bureau's in-house solution. Although niche, the model is accessible for non-PhD analysts from a range of generalist backgrounds and the Bureau has shown that they can find talent and onboard them quickly.
Precedent	Good. Switzerland has a similar model that is developed and maintained under a commercial software license with an external supplier. Government departments in other countries use a variety of patch-work solutions to model and assess transportation policy that are not unlike the Bureau's approach. The lack of close examples in other IFIs is an artifact of the Bureau's unique mandate, not that they're pursuing an inappropriate approach that is not widely prevalent.
Opinion	Appropriate. The tool is appropriate. The Bureau is a leader in the field and can be an inspiration to other governments and institutions looking to wade into similar analysis. The Bureau should persist in its plan to migrate the model to Python and make the code publicly available. The Bureau should continue to invest in a solution to redesign the freight transport module and adopt an approach more in line with physical flows and less constrained by a theoretical allocation of economic flows. This would allow improved modelling of mode choices and geographical influences of freight transport demand.

2.5.11. CRYSTAL SUPER GRID

CRYSTAL SUPER GRID is a "unit commitment" and "economic dispatch" model linking up to thirty-three European countries to assess the impact of different assumptions on prices and distribution within the electricity sector. Unit commitment determines the start-up and shut-down schedule of energy production units. Economic dispatch determines the power output of each energy production unit according to its cost and operational constraints, as well as the limits of the transmission network. The model determines both unit commitment and economic dispatch with optimisation routines that match supply and demand, while enforcing operational constraints (e.g. production limits, ramping constraints), by minimising total system production costs.

The Bureau has used the model since 2015. It is maintained and developed by Artelys, an external commercial software provider that specialises in energy modelling. In addition to the optimisation solvers, Artelys maintains an extensive library of physical and financial assets (thermal power plants, renewable energy sources, power lines, etc.) that is used in the scenario's construction.

Table 2.15. Overview and evaluation of CRYSTAL SUPER GRID

Name	CRYSTAL SUPER GRID
Type	Optimal unit commitment and economic dispatch model.
Description	An optimisation tool that minimises total system production costs while aligning demand with supply, and enforcing operational constraints, at any point in time for up to thirty-three European countries. Developed by Artelys, an external commercial software supplier. It contains an extensive library of both physical and financial assets (thermal power plants, renewable energy sources, power lines, etc.). Results cover imports and exports between zones (countries or regions), marginal costs of electricity generation, as well as the CO_2 emissions of the national and European electricity sector. Analysis can be performed at an hourly resolution (or indeed any frequency).
Mandate justification	*Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation. *The Law of 8 January 2012 amending the Act of 29 April 1999 on the organisation of the electricity market* requiring the Federal Planning Bureau to collaborate with the Directorate General for Energy of the FPS Economy, in concertation with the Commission for Electricity and Gas Regulation (CREG), to draw up a regular report on the monitoring of the security of the supply of energy. *The Climate Responsibility Mechanism Act of 6 January 2014* requiring the Federal Planning Bureau to monitor the methodologies and compliance with the trajectories and the realisation of the objectives with regard to the reduction of the Belgium's emissions under European legislation and the United Nations Framework Convention on Climate Change and its protocols. Various agreements and commitments to collaborate in the work of Elia (Belgium's transmission system operator), DG Energy of the EC, and FPS Economy.
Outputs	The long-term effects of energy policies on its security of supply, sustainability, and affordability. Imports and exports between countries or regions, marginal costs of electricity generation, CO_2 emissions of the national and European electricity sector, load losses, productions by generation type/unit, production of renewables, estimated future price effects.
Working paper	*Description and use of CRYSTAL SUPER GRID* (Devogelaer, 2018[34])
Major reports	The Bureau provides feedback to Elia for the *Federal Development Plan and the Adequacy & Flexibility Study and collaborates with the DG Energy of the FPS Economy and the CREG in the Etude Prospective.* The Bureau supplies both analysis and text for Energy Outlook/Studies and the long-term energy outlook published every three years. Analysts may also use the model to contribute to the National Energy and Climate Plan.
Key judgments	Energy demand is exogenous. Therefore, prices determined on the wholesale market will not influence energy demand.
Software	Proprietary software and web interface from Artelys, an external provider. Written in Java. Bureau has a license for the cloud-based instance of the model.
Theory and context	Good. The optimisation routines come from a long history within the engineering field and have been well-scrutinised.
Accuracy	Good. The model is used for scenarios and sensitivity analysis, not prediction. Energy industry and systems planners use similar software and optimisation routines to determine energy investment and supply so likely to closely approximate real-world decisions and allocations.
Communication	Good. Can trace the effects of policy simply and intuitively and tell obvious stories—for example, increasing the price of one source of energy with a tax would instigate a reallocation to other generation technologies.
Transparency	Fair. The optimisation routines are largely a black box from proprietary software; however, the model largely consists of a set of mathematical solvers without a great deal of judgment applied in either producing results or choosing model specifications. The Bureau has drafted and published a working paper describing how it engages with the model with as much detail as possible.
Proportionality	Good. Two analysts, with one backup in another workstream. Appropriate for the weight of energy analysis within the Bureau's mandate and business agreements.
Sustainability	Good. The team has shown it can handle business disruptions as it has recently had turnover of most of the team. Analysts report that they can be trained up to speed in a day. Artelys also provides training and support under a maintenance contract. That maintenance contract provides for the delivery of some new functionalities. Model developments or updates are not handled by the FPB's analysts themselves—if there is a need for new functions or specifications an additional contract has to be signed with Artelys. Somewhat expensive and the Bureau is exposed to price increases that could disrupt operations.
Precedent	Good. Similar models and optimisation routines used by the energy industry in its commercial decision making. METIS used by government departments and energy institutions in other countries (same company, a few differences, core model

	is the same).
Opinion	Appropriate. The model is appropriate, and no changes are recommended. The Bureau is ultimately paying for a set of solvers that it has assessed would not be cost-effective to reproduce in-house. The review confirms this assessment.

2.5.12. Models under construction

The assessment also included three models that are not yet in full production (LASER and DynEMIte) or are very early in their development stage. While it is not possible to issue an opinion on the appropriateness of the models at this stage, the models were nonetheless partially assessed, with preliminary feedback provided below.

LASER

LASER is a static structural discrete-choice model that estimates the change in an individual's labour supply in response to a policy that affects household disposable income. The policy's affect on household disposable income is taken from the EXPEDITION model.

The model has been in an ongoing state of development since 2017 to contribute to the Bureau's election platform costing mandate. It is currently undergoing a refinement of its parameters and elasticities in response to the lessons learned during the 2019 election and to allow a link with the HERMES model.

Table 2.16. Partial overview and evaluation of LASER (the model is still in development)

Name	LASER (LAbour Supply model to Evaluate policy Reform)
Type	Cost of Working Model, a static structural discrete choice model of labour supply that uses multinomial logit with mass points on household consumption.
Description	The model uses the output of EXPEDITION to assess the expected impact of a measure on labour supply (both the extensive and intensive margin) after households consider the impact on their disposable income. It is estimated using the same set of administrative data as EXPEDITION—that is, microdata on individuals and their households from the Labour Market and Social Protection Datawarehouse of the Crossroads Bank for Social Security (a collaboration between dozens of institutions involved in social security), tax records from the IPCAL administrative database, and census data for the highest level of education attained. The model is still under construction within the General Directorate (ADDG).
Mandate justification	*The Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, amended 2018 to restrict requests to a minimum 3 and maximum 5 priorities. The analysis is to include the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
Outputs	Change in unemployment, change in labour force participation, change in hours worked, plus the same outputs as EXPEDITION, but corrected for labour supply responses
Working paper	Not available.
Major reports	Results of the model will be featured election policy costing portal for the next election.
Key judgments	Do not observe wage equation. Needs a wage floor.
Software	Stata
Theory and context	Good. The methodology to estimate a COW model is appropriate and its application is less complex than other estimation methods such as those used to estimate a Random Utility Random Opportunity Model (RURO).
Accuracy	N/A. The predictive power of the COW model will need further investigation.
Communication	Good. The model is theory-based and the responses of workers to changes in incentives should be an intuitive story to communicate to stakeholders.
Transparency	N/A. When the model is put into use it should be accompanied by a working paper. The Bureau's plan to transition the model development to Python will score highly on transparency.

Proportionality	Good. The Bureau currently has one analyst developing the model part time. This is appropriate, as the labour supply analysis will be only a minor component of the election platform costings and is not strictly required for delivering the Bureau's other legislated mandates, although it will eventually be a useful information point for stakeholders in all relevant areas of the Bureau's policy analysis.
Sustainability	Good. Once developed, the module could in theory be manageable by a junior analyst with an undergraduate economics toolkit and has a short learning curve. Maintenance and development require a skilled economist. There are no obvious risks to business continuity with employee turnover.
Precedent	Good. Similar labour-response models are used by researchers in other think tanks, at universities, and in fiscal institutions that supply similar analysis, like the CPB Netherlands Bureau for Economic Policy Analysis.
Opinion	N/A. The model development plan is appropriate for delivering the Bureau's mandate and the resulting tool, when finished, should meet industry standards. As the Bureau continues to improve LASER, it should study the possibility of (1) expanding the target population with more types of working status, such as unemployed and self-employed and people with disabilities, (2) linking administrative data to data from the labour force survey, and (3) using LASER's elasticities in the new environmental CGE model.

DynEMIte

Following the 2019 election platform costing exercise, the Bureau began developing a new in-house DSGE model it has named DynEMIte. The model is largely based on the structure of QUEST III R&D, but incorporates multiple industries, intermediate consumption (and hence, input-output linkages between industries) and labour-augmenting semi-endogenous technological growth. It is currently in the calibration and estimation phase. The team is having problems with the convergence of the model under certain parameter values .

Table 2.17. Partial overview and evaluation of DynEMIte (the model is still in development)

Name	DynEMIte
Type	Dynamic stochastic general equilibrium model
Description	Based on the structure of QUEST III R&D but incorporating multiple industries, intermediate consumption (and hence, input-output linkages between industries) and labour-augmenting semi-endogenous technological growth.
Mandate justification	*Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, including the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation. *The Law of 25 November 2018* establishing the National Productivity Council which prescribes that the bureau nominates two of its members to the National Productivity Council and must contribute to the meetings and reports on the topics of diagnosing and analysing developments in productivity and competitiveness, associated challenges, and the consequences of policy options on productivity and competitiveness.
Outputs	Equilibrium percentage change of typical macroeconomic variables.
Working paper	Not available.
Major reports	N/A. Model still in development.
Key judgments	N/A. Model still in development.
Software	Dynare and Matlab.
Theory and context	Good. As with QUEST III R&D, theory-derived DSGE models are generally considered to be the only practical solution for structural reform questions.
Accuracy	N/A. Model still in development and will need to undergo testing. DSGE models are a device to simulate the propagation of shocks through a highly stylised and simplified theoretical and empirically validated framework, but are not intended to be used for forecasting.
Communication	Fair. DSGEs are grounded in economic theory and should be able to tell a coherent and consistent economic story of the relationships between variables of interest. However, the complexities of the model in practice make it somewhat of a black box.
Transparency	N/A. Model still in development.

Proportionality	Fair. Two researchers committed part time. The Bureau should reflect on the resources it devotes to DSGE research considering the growing literature (such as (Korinek, 2015[35]) and (Stiglitz, 2017[36])) on its practical limitations and the expertise and attention it demands of the Bureau's analysts.
Sustainability	Poor. Maintaining and developing DSGE models generally requires a PhD economist in the field. Once developed, experienced analysts with a degree in economics or a numerate field could run the models but would need support of colleagues or external consultants. Most central finance ministries with a DSGE model retain external academic economists for developing new capabilities. If the Bureau departs too much from the stock QUEST III R&D model, there could be a risk to business continuity with fewer potential candidates in the event of staff turnover.
Precedent	Good. DSGE models are commonly found in central banks and across EU governments. QUEST III R&D and its forebearers are used commonly in think tanks and other fiscal institutions.
Opinion	N/A. While the new DSGE model will be a welcome tool to answering questions, it may be necessary to also maintain QUEST III R&D for EU policy analysis commitments and to benefit from the relatively large QUEST community. Despite clear synergies between QUEST and DynEMIte allowing to increase the efficiency of resources used, two DSGE models may be out of step with the practices of the Bureau's peers and could be a misplacement of resource priority.

New environmental CGE model (unnamed)

The Bureau is developing a new computable general equilibrium (CGE) model to focus on climate and energy policy. It is in the very early stages of conceptual development and is supported by the Belgium Research Action Through Interdisciplinary Networks (BRAIN-BE). It is intended to be a standard multi-sector recursive dynamic model covering Belgium and its regions with an emphasis on energy inputs and heterogeneous labour demand. It is also to be linked to microsimulation data for distributional analysis.

Table 2.18. Partial overview and evaluation of the new environmental CGE model (the model is still in development)

Name	Unnamed
Type	Dynamic (recursive) Computable General Equilibrium Model
Description	Standard multi-sector recursive dynamic model covering Belgium and its regions with an emphasis on energy inputs and heterogeneous labour demand. It is also to be linked to microsimulation data for distributional analysis.
Mandate justification	*Law of 21 December 1994 on social and miscellaneous provisions* giving the bureau the responsibility of calculating a set of additional indicators for measuring quality of life, human development, social progress and the sustainability of our economy. *The Law of 22 May 2014* requiring the Federal Planning Bureau to cost the election manifestos of political parties, amended 2018 to restrict requests to a minimum 3 and maximum 5 priorities. The analysis is to include the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
Outputs	N/A. Model still in preliminary stage of development.
Working paper	Not available. Model still in preliminary stage of development.
Major reports	N/A. Model still in preliminary stage of development.
Key judgments	Intended to develop alternative to standard nested CES production functions.
Software	GAMS initially and eventually an open-source alternative.
Theory and context	Fair. There is a wide body of literature on CGE models applied to environmental and climate studies; however, the results of the literature are mixed on the usefulness and appropriateness of CGE models in policy applications.
Accuracy	N/A. Will need to be assessed. However, CGE models are geared toward theory and conceptual scenario analysis, rather than real-word predictive power, and are not generally considered to be adept at forecasting or capturing empirical relationships accurately.
Communication	Fair. CGE models are theory-based and should allow for intuitive narratives; however, their complexity and moving parts means they become black boxes in practice.

Transparency	N/A. Model still in preliminary stage of development.
Proportionality	Poor. The Bureau's responsibilities surrounding environmental and climate modelling are considerable and growing. Currently one full-time analyst with some part-time support does not reflect the weight of climate analysis in the Bureau's mandate and it has fallen behind in preparation for the policy conversation. The Bureau should invest rapidly to catch up and devote sufficient staff resources to the project.
Sustainability	Fair. CGE models require specialised skills and have a steep learning curve. However, the Bureau is capable of recruiting and there is a sufficient stock of PhD economists in Belgium and Brussels.
Precedent	Good. The most common model applied to climate analysis and emissions trading schemes. Precedents in eQuest, GEM-E3. HMRC CGE model in the United Kingdom, Finland, Denmark.
Opinion	N/A. Model still in preliminary stage of development. CGE models have limitations but are generally considered the only tool capable of the time of climate and emissions trading analysis for which the Bureau intends to build capacity.

2.6. Recommendations

During interviews with analysts and stakeholders it was clear that the Bureau has many strengths. For example:

- The Bureau has renowned expertise internally and productive relationships with external experts in both the academic and practitioner communities.
- It has unparalleled data access and relationships with government ministries compared to other OECD fiscal institutions stemming from its engagement in Belgium's statistical framework and its role in directly supporting government departments, committees, and other stakeholders. More generally, the administrative and survey data available in Belgium facilitates economic and fiscal models would make researchers in other countries envious.
- Analysts at the Bureau have leveraged their expertise, data, and relationships to develop a remarkable suite of sophisticated models and have cemented the institution as a leader in the modelling community.

Even institutions at the leading edge of policy analysis can learn from outside views and fresh perspectives. In that spirit, the review team identified several areas where the Bureau could benefit from reviewing its practices and receiving support from its peers in the OECD Working Party of Parliamentary Budget Officials and Independent Fiscal Institutions.

2.6.1. Summary of overall recommendations for model coverage and workflow

1. The institution's strength — its collection of sophisticated models — may become a weakness. The strict commitment to rigid supermodel frameworks means long lead times to fulfil requests in new areas of analysis. Where other fiscal institutions in some cases prefer to fulfil novel requests in a quick manner, often within 48 hours, the Bureau generally prefers several months or even years of lead time to analysis to the same sophistication it has grown accustomed. In all cases, there should be a reflection on the potential gain in terms of precision and accuracy from additional months of development.

   Further, sophisticated modelling can miss simple but valuable analysis. For example, IFIs commonly introduce behavioural adjustments from the academic literature to make simple calculations that may not have the depth of a microsimulation model run on administrative data but may ultimately provide reasonable results.

   The Bureau also overestimates the sophistication of stakeholders and their ability to understand the models and commit their purpose to memory. For example, on the election platform website and publications, there are references to model names, which – when seen out of context - may be confusing for non-technical stakeholders.

Finally, with such gold-standard hammers, all analysis tends to become nails—policies that may not be worth an exhaustive assessment of every facet of economic consequences receive full treatment, taking analytical effort away from areas where it may be better prioritised.

Recommendation: As a sense test and communication device for cost estimates, the Bureau should make a habit of accompanying the results of its showpiece models with high-level "back-of-the-envelope" calculations of the financial costs with simple behavioural responses taken from the literature to make their results more transparent and intuitive for outside stakeholders to replicate. It could also provide more information and detail on the financial costs of policies as part of its election platform costings. For example, rather than only showing the ultimate impact on the budget deficits, it could show each offsetting line of higher revenues or expenses, the different affected budget line categories, and any breakdowns of more granular costs and revenues underlying the ultimate budget impact.

2. The Bureau has undertaken many more open-sourced projects than stakeholders and peers may be aware of.

   Recommendation: The Bureau should promote its existing open-source tools and models and continue to proactively make its work available to the public. It should advertise a Bureau-branded GitHub repository and participate in or host conferences, code camps in collaboration with universities and think tanks, and do more modelling community outreach. These efforts can pay dividends in forming relationships that result in other people contributing to model refinements that the Bureau can then leverage. The Bureau should continue to transition its models to open-source collaborative working approaches with modern software with widespread use in the economic community.

3. The Bureau once was a leader in the multi-country HERMES Club initiated by EU institutions to jointly address challenges of the 1980s energy and inflation crisis. With the European Union facing similar conditions again, it may be worth revisiting that project. The world has changed, with better modelling software options, better harmonisation of national accounts, and a more connected EU with greater institutional support. Further, large-scale macroeconometric models are regaining favour in the academic and practitioner community.

   Recommendation: The Bureau should explore the appetite among institutions in other countries for restarting the HERMES project. If there is sufficient demand, it could look for partners in other domestic institutions or international organisation for funding to explore converting HERMES to open-sourced software hosted on GitHub for a collaborative modelling initiative across European Member States.

4. The Bureau does not devote as much attention to the measurement of the business cycle and cyclical budget as other jurisdictions. This is largely because the business cycle in Belgium is subject to more limited variation, making the issue of measuring the output gap less important. However, Belgium is qualified by the European Commission as a "high risk country" in terms of public debt and the issue may come under the spotlight if Belgium was to be under the Excessive Deficit Procedure.

   Recommendation: To get ahead of potential future contention, the Bureau could explore alternative tools to assess the output gap from different perspectives, such as the heat maps used by peers, or the suite of model averaging used by the Irish Fiscal Advisory Council.

5. The Bureau does not currently have statistical forecasting tools as a sense check for its structural models. For example, dynamic factor analysis for nowcasting, or vector autoregression models (VARs) for short-run forecasts up to eight quarters.

   Recommendation: The Bureau should explore ready-made or out of the box dynamic factor models and simple reduced-form VARs to serve as a sense check for its structural models and for adding nowcasting capacity to its model suite.

2.6.2. Summary of key recommendations for individual models

- **HERMES**. The Bureau should review the theoretical basis for using futures markets quotations as short-run forecasts for oil prices, exchange rates and interest rates—a practice that is common but has a poor theoretical justification and poor forecasting track record.
- **EXPEDITION and TYPECAST**. The Bureau should continue to develop EXPEDITION and invest in the following areas to improve its usefulness for policy analysis: (1) Work with data providers to refine the co-ordination process, (2) Improve the model's link to HINT to leverage the greater detail that HINT will produce in the next election, which will take place in the context of a sustained period of significant price volatility, (3) Work with STATBEL to compare and contrast its analysis on disposable income, (4) Review construction of the weights and matching to uprate and reweight tax benefit years to bring them forward to more recent years, (5) Support the main model with satellite models to adjust results for implementation date and policy year, (6) Explore how to present the results of TYPECAST in a more comprehensive and comprehendible way for a broader audience, (7) Explore a link with the LASER labour supply model, (8) Refine the model so it has the capacity to simulate policies in more detail for wealth taxes, personal income taxes, and regional policies.
- **HINT**. The Bureau should explore additional links to environmental taxes, more direct interaction with EXPEDITION, and options to refine income quartiles, which are not immediately comparable to other models which present results as quintiles and deciles. The Bureau should explore satellite models that could impose assumptions on own-price elasticities of demand and cross-price elasticities that could be used to complement or refine the results of HINT.
- **PLANET**. The Bureau should continue to invest in a solution to redesign the freight transport module and adopt an approach more in line with physical flows and less constrained by a theoretical allocation of economic flows. This would allow improved modelling of mode choices and geographical influences of freight transport demand. They should leverage their close connection with the network of Belgium statistical agencies to fill any data gaps to address the gap in freight transport modelling capacity.
- **LASER**. As the Bureau continues to improve LASER, it should study the possibility of (1) expanding the target population with more types of workers, such as unemployed and self-employed, (2) linking administrative data to data from the labour force survey, and (3) using LASER's elasticities in the **new environmental CGE** model.

References

Bassilière, D. et al. (2013), *A new version of the HERMES model - HERMES III*. [4]

Bassilière, D. et al. (2018), *Description and use of HERMES: : Document drafted in the framework of preparing for the 2019 costing of electoral programs*, https://www.plan.be/uploaded/documents/201901110952260.WP-1-DC2019_HERMES_11843_F.pdf. [3]

Bassilière, D., L. Dobbelaere and F. Vanhorebeek (2018), *How the HERMES model works - Description using variants*, https://www.plan.be/publications/publication-1822-fr-le_fonctionnement_du_modele_hermes_description_a_l_aide_de_variantes. [2]

Baudewyns, D., A. Dewatripont and P. Michiels (2020), *Labor cost reduction measures: what is the effect on employment and public finances in the Brussels Region?*, https://www.plan.be/publications/article-2013-fr-les_mesures_de_reduction_du_cout_du_travail_quel_effet_sur_l_emploi_et_les_finances_publiques_en_region_bruxelloise. [9]

Baudewyns, D. and V. Lutgen (2022), *How the HERMREG bottom-up model works: A description using variants*, https://www.plan.be/uploaded/documents/202202030749560.WP_2202_12562_F.pdf. [7]

Baudewyns, D. and V. Lutgen (2022), *The HERMREG bottom-up model: A multiregional model of the Belgian economy*, https://www.plan.be/uploaded/documents/202202030739580.WP_2201_12561_F.pdf. [6]

Biatour, B. et al. (2018), *Description of the QUEST III R&D model*, https://www.plan.be/publications/publication-1848-fr-description_du_modele_quest_iii_r_d. [10]

Biatour, B. et al. (2017), *Public Investment in Belgium - Current State and Economic Impact*, https://www.plan.be/publications/publication-1650-fr-public_investment_in_belgium_current_state_economic_impact. [12]

Bureau, F. (2022), *Economic Budget – Economic forecasts 2022-23 for September 2022*, Federal Planning Bureau, https://www.plan.be/publications/publication-2283-fr-budget_economique_previsions_economiques_2022_2023_de_septembre_2022. [25]

Communities, C. (ed.) (1993), *HERMES*, Elsevier, https://doi.org/10.1016/C2009-0-10171-X. [1]

Daubresse, C. et al. (2018), *Description and use of the PLANET model*, https://www.plan.be/uploaded/documents/201901111505430.WP-6-DC2019_PLANET_11848_F.pdf. [32]

Daubresse, C. and B. Laine (2020), *Telework and transport demand: an evaluation in the PLANET model*, https://www.plan.be/publications/publication-2059-fr-teletravail_et_demande_de_transport_une_evaluation_dans_le_modele_planet. [31]

Daubresse, C. and B. Laine (2020), *The PLANET Model: Methodological Report, PLANET 4.0*, https://www.plan.be/publications/publication-1967-fr-the_planet_model_methodological_report_planet_4_0. [30]

De Ketelbutter, B. et al. (2014), *A new version of MODTRIM II*, https://www.plan.be/uploaded/documents/201407111401360.WP_1405_10748.pdf. [23]

De Vil, G. et al. (2018), *Description and use of the EXPEDITION model*, Federal Planning Bureau, https://www.plan.be/publications/publication-1849-fr-description_et_utilisation_du_modele_expedition. [16]

Dekkers, G., R. De smet and K. Van den Bosch (2023), *MIDAS 2.0: Revision of a dynamic microsimulation model*, Federal Planning Bureau, https://www.plan.be/uploaded/documents/202301240701580.WP_2302_12752.pdf. [19]

Dekkers, G., R. Desmet and G. De Vil (2010), *The long-term adequacy of the Belgian public pension system: An analysis based on the MIDAS model*, https://www.plan.be/publications/publication-946-fr-the_long_term_adequacy_of_the_belgian_public_pension_system_an_analysis_based_on_the_midas_model. [20]

Devogelaer, D. (2018), *Description and use of SUPER CRYSTAL GRID*, https://www.plan.be/uploaded/documents/201901111032530.WP-5-DC2019_CrystalSG_11847_F.pdf. [34]

Federal Planning Bureau (2021), *Macroeconomic and fiscal effects of the draft National Recovery and Resilience Plan: Report to the Secretary of State for Recovery and Strategic Investments*, https://www.plan.be/publications/publication-2106-en-macroeconomic_fiscal_effects_of_the_draft_national_recovery_resilience_plan_report_to_the_secretary_of_state_for_recovery. [5]

Federal Planning Bureau (2006), *Tools and methods used at the Federal Planning Bureau*, Federal Planning Bureau, https://www.plan.be/uploaded/documents/200610230931210.wp0607_en.pdf. [28]

Geerts, J., K. Van den Bosch and P. Willemé (2018), *Description and use of the PROMES model*, https://www.plan.be/publications/publication-1850-fr-description_et_utilisation_du_modele_promes. [26]

Gusbin, D. et al. (2010), *The PLANET model methodological report: Modelling of short sea shipping and bus-tram-metro*, https://www.plan.be/uploaded/documents/201007060844530.wp201016.pdf. [33]

Hertveldt, B. and I. Lebrun (2003), *MODTRIM II: a quarterly model for the Belgium economy*. [24]

High Council of FInance (2020), *Outlook 2019-2070: a sharp increase in social spending until 2040 but a decrease in the risk of poverty of pensioners*, https://www.plan.be/press/communique-2019-fr-perspectives_2019_2070_une_augmentation_prononcee_. [29]

High Council of Finance (2022), *Annual report of the Study Committee on Ageing*, https://www.plan.be/publications/publication-2263-en-study_committee_on_ageing_yearly_report_2022. [22]

Hoorelbeke, D. et al. (2007), *HERMREG: A regionalisation model for Belgium*, https://ecomod.net/sites/default/files/document-conference/ecomod2007/93.pdf. [8]

Kegels, C. and D. Verwerft (2018), *Economic impact of professional services reform in Belgium - A DSGE simulation*, https://www.plan.be/publications/publication-1798-fr-economic_impact_of_professional_services_reform_in_belgium_a_dsge_simulation. [11]

Korinek, A. (2015), *Thoughts on DSGE Macroeconomics: Matching the Moment, But Missing the Point?*, https://www.ineteconomics.org/uploads/downloads/Korinek-DSGE-Macro-Essay.pdf. [35]

Lefèvre, M. and S. Gerkens (2021), *Assessing the sustainability of the Belgian health system using projections*, https://kce.fgov.be/en/evaluatie-van-de-duurzaamheid-van-het-belgische-gezondheidssysteem-op-basis-van-projecties-1. [27]

Liu, E. and S. Ma (2022), *Innovation Networks and R&D Allocation*. [15]

Nevejan, H. (2021), *Regional Child Benefit Reforms - An Impact Analysis Using the EXPEDITION Microsimulation Model*, https://www.plan.be/uploaded/documents/202105180544440.WP_2104_12405.pdf. [18]

Rotemburg, J. (1982), "Monopolistic Price Adjustment and Aggregate Output", *Review of Economic Studies*, pp. 517-531. [13]

Smets, F. and R. Wouters (2003), "An estimated dynamic stochastic general equilibrium model of the euro area", *Journal of the European Economic Association*, Vol. 1, pp. 1123-1175. [14]

Social Protection Committee (SPC) and the European Commission (DG EMPL) (2021), *2021 Pension adequacy report*, https://op.europa.eu/en/publication-detail/-/publication/4ee6cadd-cd83-11eb-ac72-01aa75ed71a1. [21]

Stiglitz, J. (2017), *Where Modern Macroeconomics Went Wrong*, NBER Working Paper 23795, https://www.nber.org/papers/w23795. [36]

Thuy, Y., G. Van Camp and D. Vandelannoote (2020), *COVID-19 Crisis: A simulation of the impact of the loss of wages for temporary unemployment in the case of force majeure and the loss of income in the case of bridging rights*, pp. 149-174, https://socialsecurity.belgium.be/sites/default/files/content/docs/nl/publicaties/btsz/2020/btsz-2020-1-covid-19-crisis-simulatie-impact-van-het-loonverlies-en-het-inkomensverlies.pdf. [17]

Notes

[1] Although the Bureau does compute these statistics and publishes them occasionally. See for instance - https://www.plan.be/uploaded/documents/201902280925280.PP_117_11866_F.pdf

[2] Initially "*Intégrateur d'outils de développement économétrique"*

3 Review of election budgetary costings and impact assessment by the Federal Planning Bureau

This chapter provides an in-depth assessment of the Federal Planning Bureau's first exercise in election costings and provides recommendations to help strengthen the exercise for the 2024 federal election and beyond.

3.1. Introduction and context

There is a secular trend across the OECD toward greater fiscal transparency. This is evident in the growing frequency and detail of fiscal disclosures by governments, as well as the increased granularity of recommendations regarding public sector budgeting (see in particular (OECD, 2015[1])). It is equally apparent in the increasing number of IFIs and their expanding role in assessing budgetary information released by the executive branch, in addition to publishing their own analysis.

A nascent frontier for fiscal transparency is the independent costing of political parties' electoral platforms. This is currently undertaken in some form or another in four OECD countries, specifically the Netherlands (since 1986), Australia (since 2013), Belgium (since 2019) and Canada (since 2019) (OECD, 2021[2]). It is also being contemplated by legislators in several other OECD countries.

Election costings set out the quantitative impacts of political platforms proposed during an election campaign. Rendering political promises into math provides greater transparency to citizens regarding what they are voting for and the likely trade-offs between different voting choices. At a minimum, these costings outline the fiscal implications of election platforms, as well as highlight their wider-ranging social, economic and environmental implications.

While the precise administrative framework differs across countries, there is a common motivation underpinning the exercise: greater transparency engendering public confidence and trust in electoral institutions. The existence of trusted information on the impact of the platforms curbs the potential for disinformation and allows for a richer policy debate during the election campaign. Furthermore, election costings support more informed voting and help promote awareness of the fiscal position ahead of elections. This provides important context for voters of competing options being proposed and their implications. The ability of political parties and candidates to have their platforms costed also ensures a level playing field for political parties, regardless of their alignment. Overall, through rendering elections more informed, open and inclusive, independent costings are one of the instruments that help to shape citizens' trust in the legitimacy and functioning of the election process, strengthening democracy.

In the case of Belgium, the Belgian Parliament promulgated legislation in May 2014 to vest the FPB with responsibility to provide election platform costing for political parties. This legislation was subsequently amended in July 2018 to further delineate an administrative framework for the costing exercise. This includes the prescription that only political parties with representation in the federal parliament are compelled to use the service.

Another key feature of the assessment framework is that it is not the full election platform of each eligible party that is analysed, but just key policies that it chooses to put forward. Specifically, parties are required to submit between three and five "priorities". This limit was put in place in recognition of the limited resources available within the FPB for the exercise and reflects a political resistance to increasing these resources. However, each priority could include several measures and, in practice, at the extremes one political party introduced 3 measures and another 47 measures.

The legislation also prescribes the analytical assessment framework for election costing. In addition to the impact of policy proposals on public finances, it sets out that the FPB should consider the impact of policy proposals on a wide range of variables, including: purchasing power and employment of various income groups, social security, the environment and mobility.[1] Both the limited scope of the costing exercise and the wide range of impacts captured make the Belgian approach distinctive amongst international peers (see Table 3.1).

Table 3.1. The nature of election costings in Belgium relative to other OECD countries

Responsible institution	Election costings first undertaken	Scope of policies costed	Impacts quantified	Dynamic impacts of election platform captured?
Belgian FPB	2019	3-5 "priorities"	Economic, Financial, Socioeconomic	Yes
Australian PBO	2013	Full election platform	Financial	No
Canadian PBO	2019	Full election platform	Financial	No
Netherlands CPB	1986	Full election platform	Economic, Financial, Socioeconomic	Yes

Note: The Canadian legislation provides an optional analytical service for political parties to submit individual measures for costing. As such, the Canadian PBO costs static, behavioural and interaction effects among measures, rather than the socioeconomic impacts of the platform itself.
Sources: Australian Parliamentary Budget Office; Belgian Federal Planning Bureau; Canadian Parliamentary Budget Office; Netherlands Central Planning Bureau.

The FBP undertook its first electoral platform costing exercise for Belgium in concert with the federal and regional elections of May 2019. It assessed over 300 measures and aspects of 13 political platforms at the federal and regional level. The FPB accepted proposals of a regional nature as long as they were consistent with the geographical competence of a party. Flemish parties were authorised only to propose measures applicable to Flanders and Brussels. The same type of rule applied to Francophone parties. While an important step in enhancing fiscal transparency, it was immediately evident that some aspects of the exercise did not fully meet stakeholder expectations.

Legislation requires that the application of the law be evaluated following the 2019 election. In the first instance, the FPB undertook its own internal review of the exercise shortly following the 2019 election. This review generally concluded that the exercise was a success, albeit with some potential areas of improvement. It also concluded that a more comprehensive review was warranted. With this in mind, the FPB sought an external review from the OECD regarding its performance including the technical tools it used. The detailed terms of reference is appended as Annex C.

This chapter provides an in-depth review of the FPB's first exercise in election costing, as well as recommendations to help strengthen the exercise for the 2024 federal election and beyond. The first section provides background regarding Belgium's political system and legal framework for election platform costing. This is followed by an assessment of the 2019 initiative, including the identification of key successes and challenges, before providing recommendations for how to improve election costings in 2024 and beyond.

3.2. A brief history of Belgium's electoral platform costing

Key findings

Belgian federal politics are characterised by a delicate balance of power among differing linguistic communities and political parties. As such, it necessitates a need for compromise and co-operation to effectively govern the country. The political context has both led to, and presents challenges for, resolving Belgium's economic and fiscal challenges. As surfaced by OECD consultations with political parties, there is a significant appreciation for the need to provide more transparent fiscal choices to electors.

For the 2014 federal election, a Belgian university (KU Leuven) in collaboration with several media outlets, conducted an analysis of election manifestos of Flemish political parties. The analysis revealed that most parties underestimated the costs of their electoral programmes. The report recommended that independent experts should be involved in the subsequent platform election costing exercise to ensure transparency, credibility, and non-partisanship.

Belgium's first electoral platform costing legislation was introduced in 2014 and subsequently amended in 2018 for the 2019 election. Inspired by the Netherland's electoral platform costing exercise, the law requires all political parties with members in the House of Representatives to submit between three and five "priorities" from their political platforms to the Federal Planning Bureau 115 days prior to the fixed election date. Hence, only part of each political manifesto is subject to scrutiny. The assessment includes both a costing of individual measures, as well as the evaluation of socioeconomic impacts. The FPB is required to publish the results 30 days prior to the election day.

This section provides an overview of the Belgian federal political system, highlighting key factors that influenced the development of the country's electoral platform costing. It is followed by a short synopsis of the first federal election platform costing exercise in 2014, which was managed independent of the public service. A summary of the current Belgian election platform costing framework concludes the section.

3.2.1. Belgian federal political system

Belgium is a federated parliamentary democracy, with the monarchy as the head of state and a multi-party system. The federal government has executive power and is composed of the Prime Minister and other ministers appointed by the monarch (King), subject to approval by the federal parliament.

In addition to the federal government, the country's constitution provides for two other co-existing levels of government: the regions and the communities. The three regions are the Flemish Region, Walloon Region, and Brussels-Capital Region. The three (language-based) communities are the Flemish Community (Dutch-speaking), French Community (French-speaking) and the German-speaking Community. Each has their own regional government and legislature. The Flemish Region and Flemish Community have merged theirs into one single institutional body of parliament and government.

Areas of authority are demarcated between the federal parliament, regional legislatures, and communities. The federal government is responsible for defence, aspects of economic policy, parts of the judiciary, parts of energy policy, parts of public transport, public debt financing, social security and foreign affairs. Regions are responsible for aspects of economic policy, employment policy, housing, agriculture, parts of public transport, aspects of environmental policy and elements of energy policy. Communities are principally responsible for education, public health, social assistance and cultural affairs.

Belgium has a complex political landscape with numerous political parties. The primary schism is linguistic; many political parties with similar agendas field candidates in either Flanders or Wallonia. The country has

also experienced periods of political instability owing to the number of elected representatives across political and linguistic divides. Recent elections have resulted in a more pronounced bifurcation, with the New Flemish Alliance being the largest party in the Flemish region and the Socialist Party in the French-speaking region.

Overall, Belgian federal politics are characterised by a delicate balance of power among differing linguistic communities and political parties. As such, it has necessitated a need for compromise and co-operation to effectively govern the country.

Belgium is a member of the European Union and profits from its internal market and free trade agreements. The country is also home to several major international organisations, including the European Union and the North Atlantic Treaty Organisation (NATO), which contribute to its role as a hub for international business and diplomacy. Additionally, Belgium has a highly skilled workforce arising from its strong education system, which supports its knowledge-based economy.

The need for effective government is underscored by the fiscal challenges facing Belgium. Belgium has an elevated level of government spending compared to its OECD peers, financed through a combination of taxes and borrowing. The country's public debt-to-GDP ratio has grown in recent years, reaching roughly 110% of GDP in 2021.

The elevated levels of public spending are mostly matched by commensurate taxes. In 2020, Belgium's tax-to-GDP ratio was 42.5%, substantially higher than the OECD average (33.2%) (OECD, n.d.[3]). The country has a progressive income tax system with multiple tax brackets, and individuals are taxed on a range of different income types (for example employment and rental income). In addition, Belgium has a value-added tax (VAT) system that applies to most goods and services, with a standard rate of 21%.

Overall, the political context has both led to, and presents challenges for, resolving Belgium's economic and fiscal challenges. The fiscal situation of high debt and uncertain fiscal sustainability underscores the importance of evidence-based decision-making. During debates surrounding the electoral platform costing legislation, discussions focussed on the belief that an independent, non-partisan assessment of political platforms would lead to better policy development and social outcomes. Moreover, some commentators also suggested that such an exercise would enhance the importance of perceived "fiscal credibility" (that is, the view that the proposed platform is reasonable and advances common public interests), therefore providing clear incentives for positive fiscal management. As surfaced during OECD consultations with political parties, there is a significant appreciation for the need to provide more transparent fiscal choices to electors.

3.2.2. The 2014 election costing exercise

In the 2014 federal election, a Belgian university (KU Leuven), in collaboration with several media outlets (VRT, De Tijd, De Standaard), conducted an analysis of election costings of the Flemish political parties. The study aimed to evaluate the credibility of the costings provided by the parties and present a transparent and independent assessment of the fiscal impact of their electoral programmes.[2] The scope of the costing was primarily driven by the economic models at the disposal of the university.

The study found notable differences between the costings presented by the parties and their actual fiscal impact. The analysis revealed that most parties underestimated the costs of their electoral programmes. The study also found that most parties relied on optimistic growth assumptions and underestimated the impact of demographic and economic changes.

The report recommended that parties should provide more detailed and realistic costings of their programmes, including the corresponding assumptions and risks. It also suggested that independent experts should be involved in the subsequent platform costing exercise to ensure transparency and credibility, as well to enhance perceived non-partisanship.

The study generated significant media attention in Belgium, with many commentators highlighting the importance of fiscal transparency in the electoral process. Opposition parties also used the findings to challenge the credibility of costings presented by the government.

Overall, the KU Leuven study and the reciprocal media coverage helped to raise awareness regarding the importance of credible and transparent political platforms. This contributed to a more informed public debate pertaining to the fiscal policies proposed by political parties. In turn, it also set the table for establishing a legislative framework for the FPB to undertake electoral platform costing.

3.2.3. Legislative framework

Inspired by the Netherlands' electoral platform costing programme, the "Law relating to the costing by the Federal Planning Bureau of electoral programmes presented by political parties during the election for the House of Representatives" (the law) was introduced in spring 2014 and was promulgated with unanimous support in May 2014. It was subsequently amended in July 2018 in advance of Belgium's first official federal election platform costing exercise in 2019.

The law requires all political parties with members in the House of Representatives to submit between three and five "priorities" from their political platforms the FPB to be costed (). While imposing a new legal obligation on political parties and the FPB, the law is also permissive. It neither defines the concept of "priority", nor the number of specific measures for each priority. In contrast, the technical costing framework for the FPB is precisely defined and includes the "consequences for public finances, purchasing power and employment for various income groups…as well as the impact on the environment and mobility…".

Legislation also provides for a precise calendar for the exercise (Figure 3.1). The political parties are required to submit their measures to the FPB no later than 115 days prior to the election (31 January 2019 for the 26 May 2019 election). Political parties can receive preliminary results at least 75 days prior to the vote, following which they can provide feedback to the FPB up to 45 days before the election. Ultimately, the FPB is obliged to publish the final results 30 days before the election.

Table 3.2. Legislative calendar for platform costing exercise

31 January 2019	*115 days prior to the vote*	Political parties provide the FPB with a list of priorities and measures
12 March 2019	*75 days prior to the vote*	The FPB provides political parties with an initial estimate of impacts
11 April 2019	*45 days prior to the vote*	Deadline for political parties to submit their comments on the draft costings to the FPB
26 April 2019	*30 days prior to the vote*	Publication of the political parties' costing results by the FPB
26 May 2019	*Elections*	

Source: Belgian parliament: The Act of 30 July 2018 (Article 5)

Finally, the law establishes operational "rules of the game" for the exercise. Most notably, the FPB is provided with legal authority to call upon other public bodies to assist in the costing process. All work of the FPB (and other public bodies assisting) is subject to strict confidentiality throughout the exercise. In addition, the application of the law is required to be reviewed following the first election costing process.

3.3. Assessment of the 2019 election costing exercise

Key findings

There was strong demand for the FPB's electoral platform costing services and evidence of public engagement. The FPB indicated that its resources were more than fully subscribed during the costing period and it was unable to fully meet the demands of political parties.

Overall, the 2019 exercise met its legislative mandate and intended policy objectives. There is a consensus among stakeholders that the FPB's election exercise is now a permanent feature of the Belgian institutional landscape and needs to be expanded.

Political parties widely view that the first exercise improved transparency. Stakeholders expressed the view that it improved quality and credibility of measures being proposed. The FPB is also perceived to have performed a high-quality, credible and non-partisan job.

At the same time, there are issues that should be addressed in advance of the 2024 exercise. These include:

- Ensuring greater comparability among the priorities costed by the FPB.
- Enhancing the capacity of FPB models to accommodate a greater range of platform proposals.
- Incorporating more granular regional analysis in the assessment of priorities.
- Enhancing communications and engagement with political parties, media, and electors.

This section provides an assessment of the 2019 Belgian electoral platform costing exercise. Specifically, it looks at the actions of three key stakeholders in the process: the FPB, political parties, and the media. It draws on *ex ante* guidance documents published by the FPB, an *ex post review* also conducted by the FPB, and stakeholder consultations undertaken by the OECD. A list of interviewees is presented in Annex D and a list of survey questions presented in Annex E.

The FPB's operational approach toward the 2019 exercise was comprised of two distinct phases: *preparatory* and *active*. The preparatory phase occurred during the nine months leading up to the legislative start date and the active phase comprised the 115-day costing period set out in legislation.

Preparatory phase to define the election policy costing framework

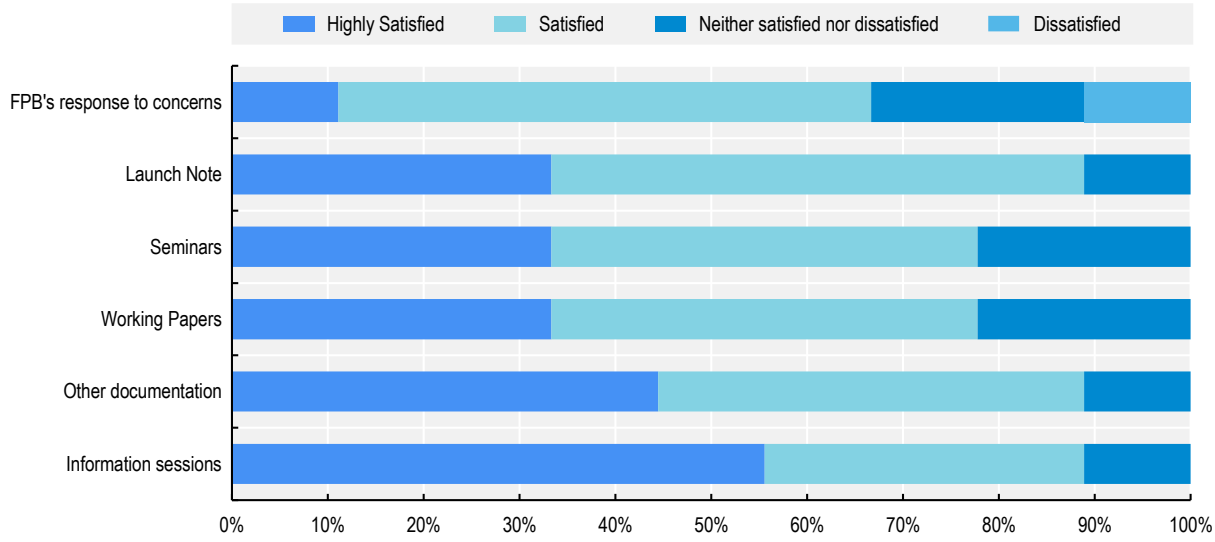
(April 2018 – January 2019)

The principal objective of the preparatory phase was to encourage greater awareness and understanding of the platform costing exercise among stakeholders – in particular, political parties. To that end, the FPB made a concerted effort to communicate how the technical work of platform costing would be undertaken. This included four general information sessions organised by the FPB[3] and three seminars to provide an overview of its models,[4] as well as a suite of technical working papers.[5]

As presented in Figure 3.1, political parties are generally satisfied with the efforts of the FPB during the preparatory phase. Notably, during discussions with the OECD, most lauded the high degree of transparency regarding the publication of technical documentation and the ability of the FPB to clarify analytical questions. At the same time, some political parties flagged their perception that concerns raised pertaining to the scope of modelling capacity and ability to accommodate "novel" measures were not fully addressed. In addition, some expressed the view that, in hindsight, greater clarity could have been provided regarding which types of measures were eligible for the costing exercise.

Figure 3.1. Political parties were generally satisfied with the FPB's pre-costing preparations

"Please rate your satisfaction regarding…"



Source: OECD stakeholder survey

Active phase as defined by the law (*January 2019 –April 2019*)

The active phase comprised the 85-day assessment period set out in legislation. It began with the submission of priorities and measures by political parties via predefined templates to the FPB. First, the FPB examined all proposed measures to determine if they were within the scope of the exercise. The parties were asked to provide an estimate of the fiscal impact for each measure, which was then "validated" by the FPB. In practice this validation process implied that the FPB produced its own estimates which may or may not be identical to the one provided by the party. In case the FPB was unable, for technical reasons or due to a lack of data, to produce its own estimate, the estimation provided by the party was taken over by the FPB but labelled as "unvalidated" figures and identified them as such in the ultimate publication (Figure 3.2).

Figure 3.2. Decision matrix for cost estimates

FPB determines whether proposed measure is inside scope		
For measures within scope:		
Party's cost estimate is similar to FPB's	->	Cost estimate "validated by the FPB" and included in exercise
Party's cost estimate differs from FPB's	->	FPB cost estimate included in exercise, labelled as "validated by the FPB"
Party has cost estimate but the FPB not	->	Party's cost estimate included in exercise, labelled as "could not be validated by the FPB"

Source: Federal Planning Bureau

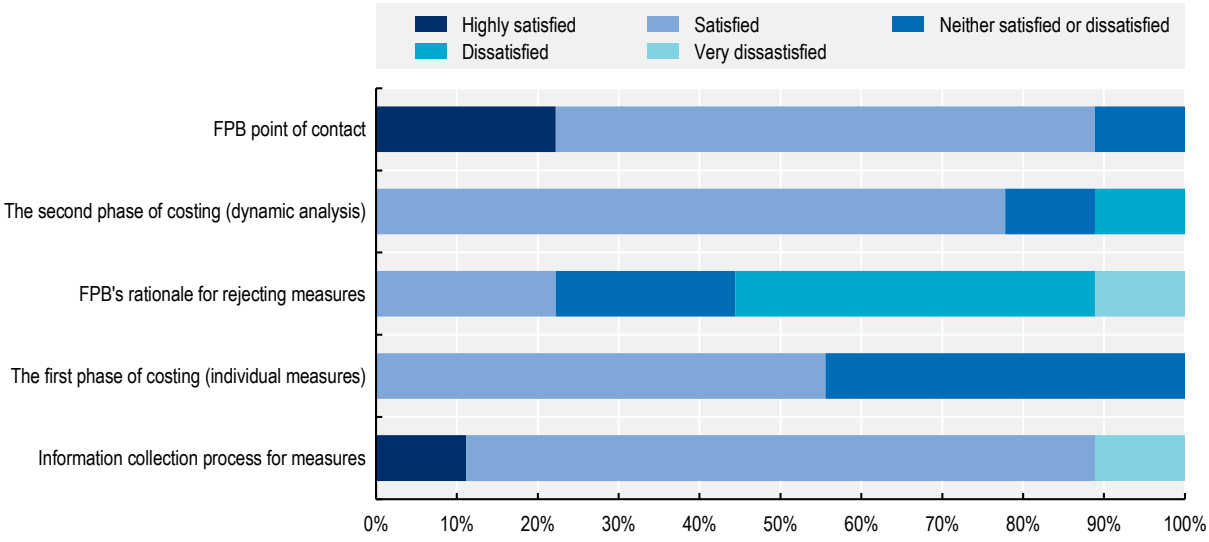
Following the costing of the individual measures, the FPB used its models to analyse the impact of each party's package of initiatives on a series of key indicators including: economic growth, public finances, employment, purchasing power, mobility and the electricity system. Specifically, two scenarios were compared: a reference scenario (that is, which does not include the proposed measures) and an alternative scenario that included these measures.

Ultimately, the results were shared with the respective political parties according to the calendar laid out in Figure 3.1, presented by the FPB at a news conference and published online at dc2019.be. Throughout the process, the FPB maintained ongoing communication with political parties via a single-point-of-contact (or SPOC) assigned to each party.

As presented in Figure 3.3, political parties were mostly satisfied with the FPB's work during the Active Phase. However, these satisfaction levels were markedly lower compared to the pre-costing preparations. OECD consultations with political parties suggested that most felt that the FPB performed well on the administrative aspects of the exercise (communication with SPOCs, information collection for measures) and technical work (impact assessment using different models). Political parties were less sanguine regarding the FPB's decision of which measures were determined to be eligible for the technical evaluation (examination of the measures, justification for not costing measures).

Figure 3.3. Political parties were mostly satisfied with the FPB's administration of the exercise

"Please rate your satisfaction regarding…"



Source: OECD stakeholder survey

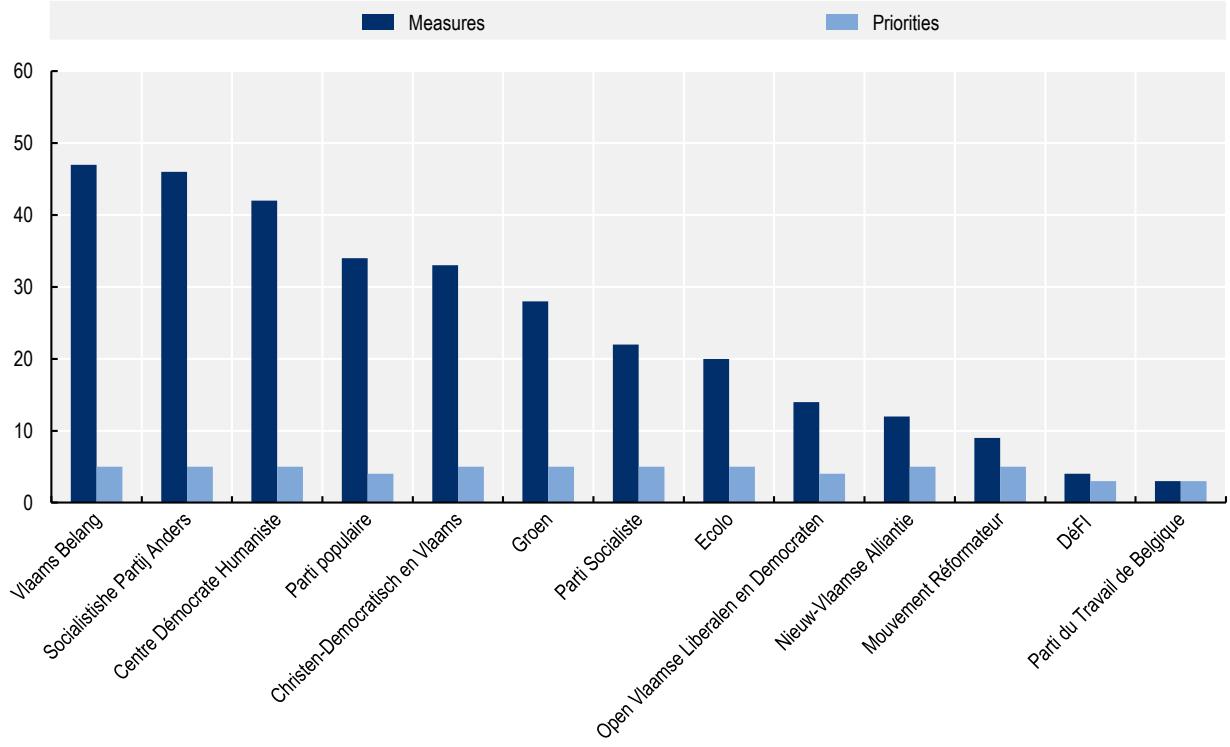
3.3.1. Nature of participation by political parties

Consistent with their legislative obligations, all political parties submitted between three and five "priorities" to the FPB for assessment (Figure 3.4). That said, the levels of underlying engagement varied significantly with some priorities including a larger number of measures than others. The 59 priorities submitted by political parties encompassed 314 distinct measures costed by the FPB. While the average number of measures costed per political party was about 24, this ranged from a low of three (Parti du Travail de Belgique) to a high of 47 (Vlaams Belang). In addition, several stakeholders suggested that some political parties only submitted "token" measures for costing, thus fulfilling the letter of the law rather than the spirit.

Some political parties indicated that lower numbers of assessed measures reflect higher rejection rates on the part of the FPB, rather than a lack of engagement on their part. Consistent with considerations flagged by the FPB at the outset of the exercise, some parties suggested that because more of their proposed measures were novel and represented a "break with the past", they could not be costed.

For its part, the FPB indicates that a little over 10% (34 measures) were rejected during the costing exercise. About half of these were attributed to the measure not being precisely specified, although some did pertain to novelty and structural reforms. Moreover, the FPB indicated its resources were more than fully subscribed during the costing period, with staff going over and above the call of duty to get through the workload. The FPB was therefore challenged to fully meet the demands of political parties.

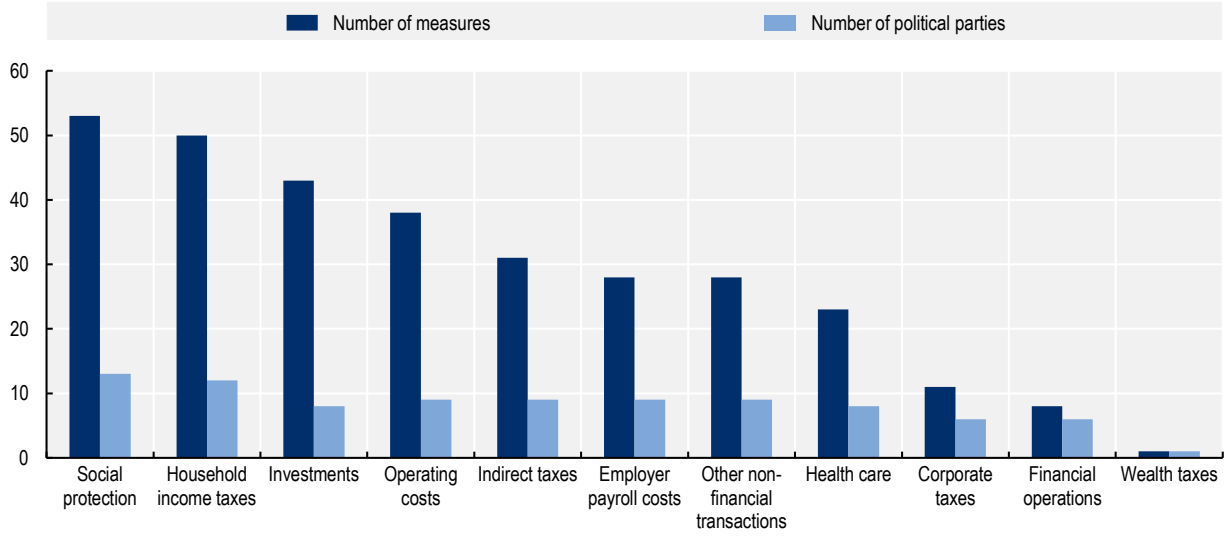
Figure 3.4. Intensity of demand for costings varied significantly across political parties



Source: Federal Planning Bureau

The FPB classified all costed measures across eleven distinct "policy themes". As depicted in Figure 3.5, all political parties had proposals costed regarding social protection, virtually all for household income taxes and most for investments and operating costs. Over half of all assessed measures fell within these four categories. As noted earlier, stakeholders suggested that this is primarily a function of a need to respond to issues of common interest for electors. In short, while the measures proposed may differ, there are common policy themes in a campaign. In addition, some political parties expressed the view that it could reflect the ability of the FPB's models to accommodate some policy themes more easily than others.

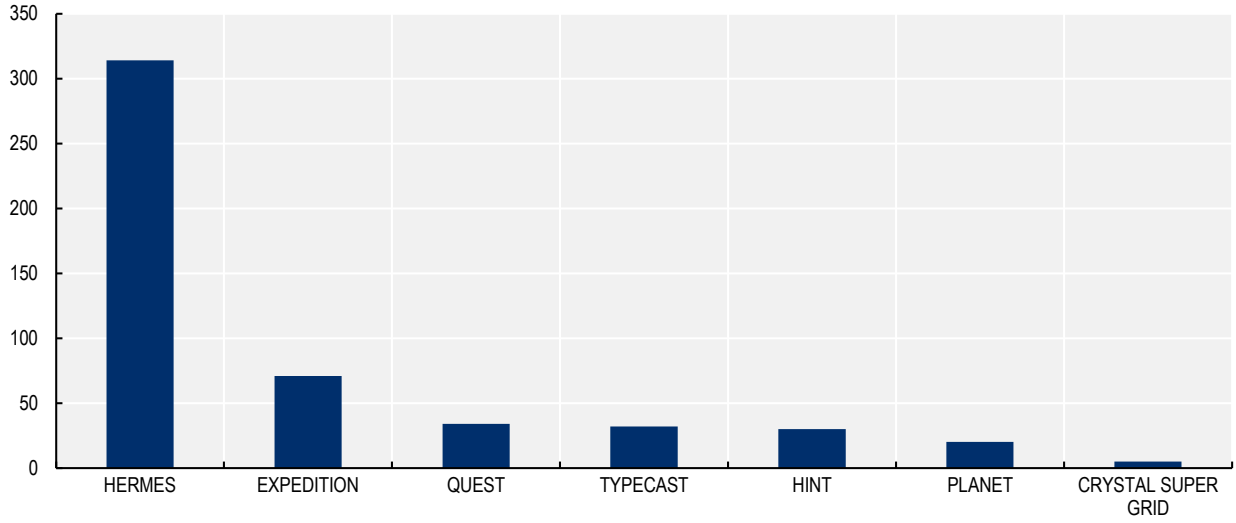
Figure 3.5. There were several common themes among political parties costed measures



Source: Federal Planning Bureau

Consistent with the preponderance of most measures in certain policy areas, the FPB also used some models more than others. As presented in Figure 3.6, all measures were assessed for their medium-term macroeconomic impacts. However, smaller proportions were analysed for their impacts on households' purchasing power (71, EXPEDITION), long-term macroeconomic impacts (34, QUEST), consumer prices (30, HINT), mobility (20, PLANET) and the electricity system (5, CRYSTAL SUPERGRID).

Figure 3.6. Some FPB models saw a lot more service than others



Source: Federal Planning Bureau

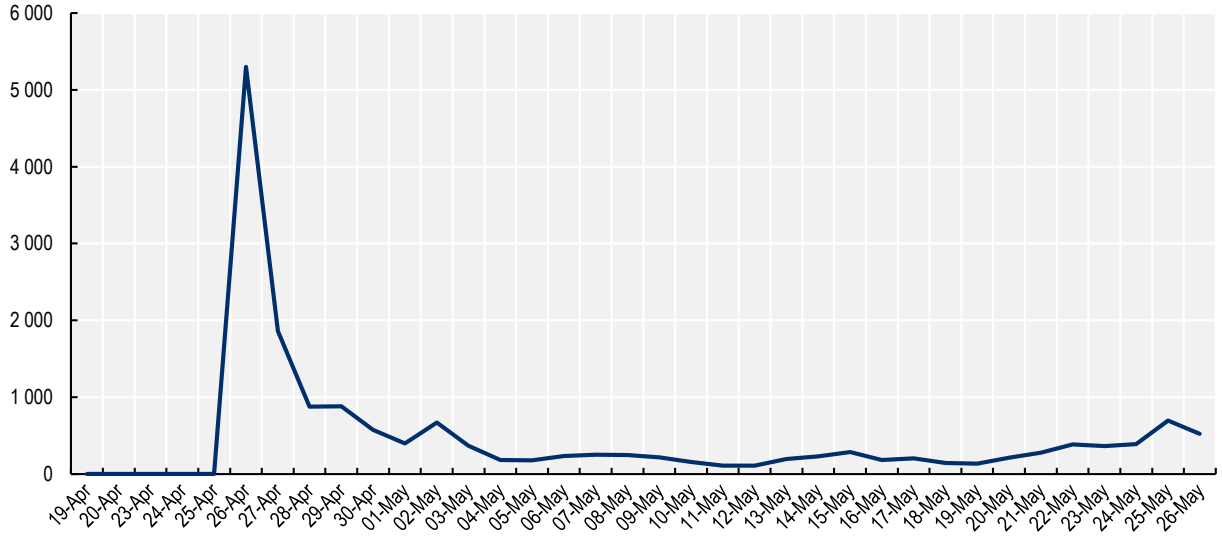
3.3.2. Engagement with the media and citizens

The FPB's traditional audience is comprised of economists, politicians, and decision-makers. In contrast, the FPB determined that the costing of electoral platforms required a refined communications approach to accommodate non-experts in the media and broader public. To that end, the FPB launched a new website for the election campaign, populated by new and more accessible information products.[6]

Feedback provided by journalists during OECD consultations was very positive regarding the work of the FPB and relevance of the platform costing exercise. All journalists indicated that the FPB was perceived to perform a solid job in engaging with the media and citizens. That said, journalists did echo similar concerns regarding the lack of comparability among the aspects of party platforms analysed. They also indicated that some political parties and journalists seemed to misinterpret the technical scope of the FPB's work.

With respect to the dedicated election website, traffic peaked on the first day of its launch at more than 5 000 visitors. This coincided with the release of the costing results. However, this activity was short-lived, with daily traffic falling to a range of about 200 to 500 daily visitors during the remainder of the election campaign (Figure 3.7). This activity was far less than that generally observed on the FPB's main website, which observed about 600 new visitors each day during the four-month analysis period.

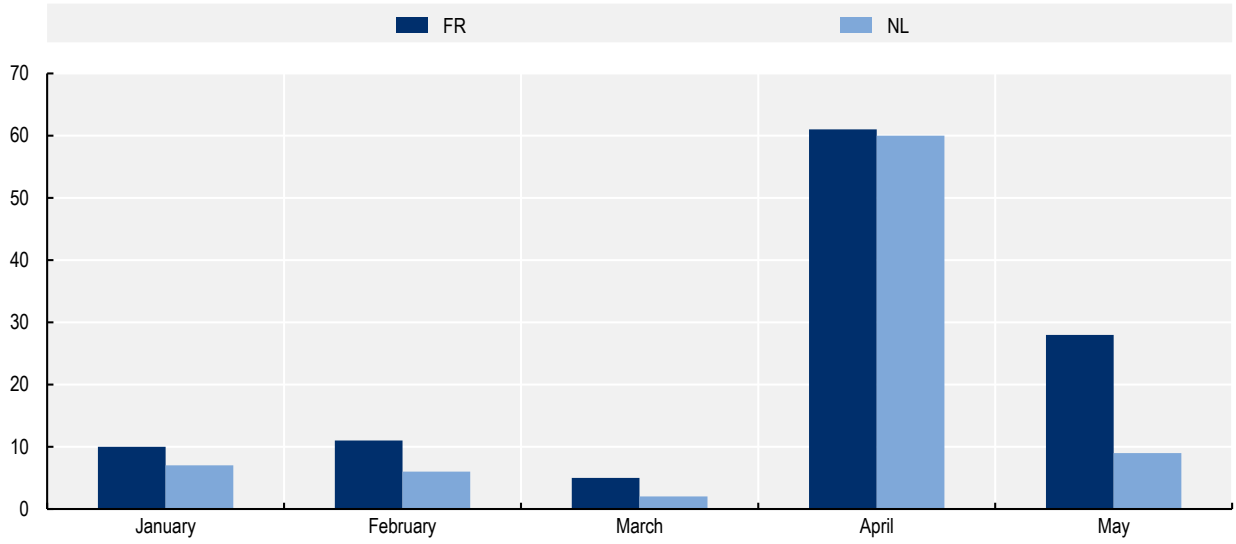
Figure 3.7. Electoral platform costing website activity spiked but diminished quickly



Source: Federal Planning Bureau

Overall, the exercise enjoyed written media coverage almost 200 times (Figure 3.8). This ranged from short articles of several lines to several pages. As with the website, coverage peaked in April, coinciding with the release of platform costing results by the FPB. Linguistically, coverage was slightly higher among Francophone media compared to Flemish media (115 compared to 84).

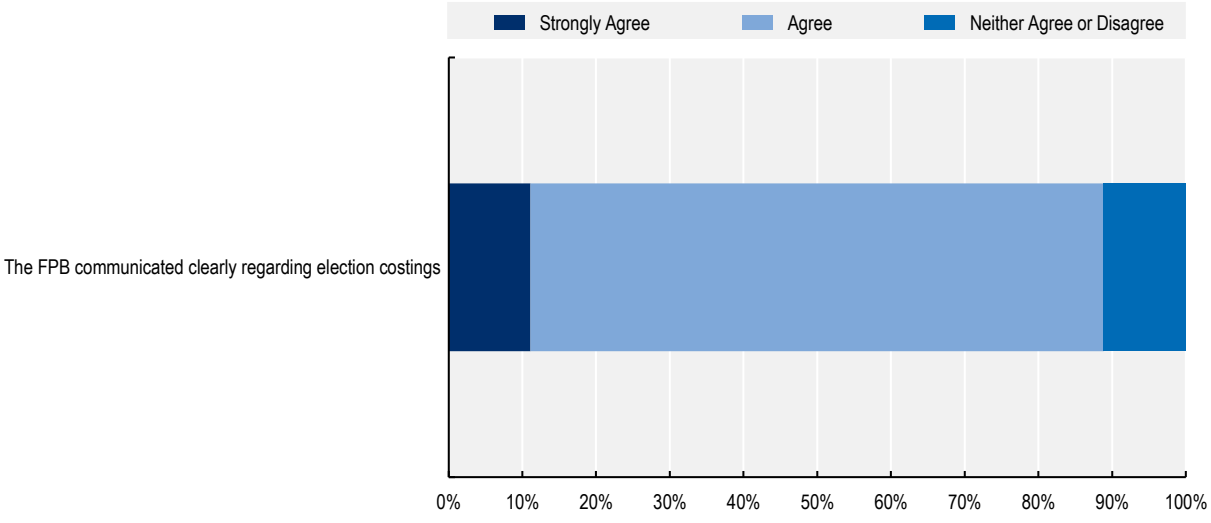
Figure 3.8. Media coverage peaked with the release of the costing results



Note: FR = Francophone media, NL = Flemish media
Source: Federal Planning Bureau

As presented in Figure 3.9, the vast majority of stakeholders (political parties, experts and journalists) are of the view that the FPB communicated clearly regarding election costings (88% strongly agree or agree). This was particularly the case for efforts undertaken prior to the official start of the exercise. Political parties were pleased with the transparent communication pertaining to modelling capacity, assumptions, and early engagement with the FPB. Almost all political parties had a positive view of the FPB's stakeholder relations, including protocols for request management, confidentiality, and exchange of information. At the same time, many also expressed the view that media and public engagement failed to meet expectations. In short, when the FPB communicated, it performed well; but it did not necessarily communicate enough or with sufficient engagement. This may partly be framed by the large media attention generated by the 2014 election costings exercise, itself sponsored by the media.

Figure 3.9. Stakeholders think that the FPB communicated clearly



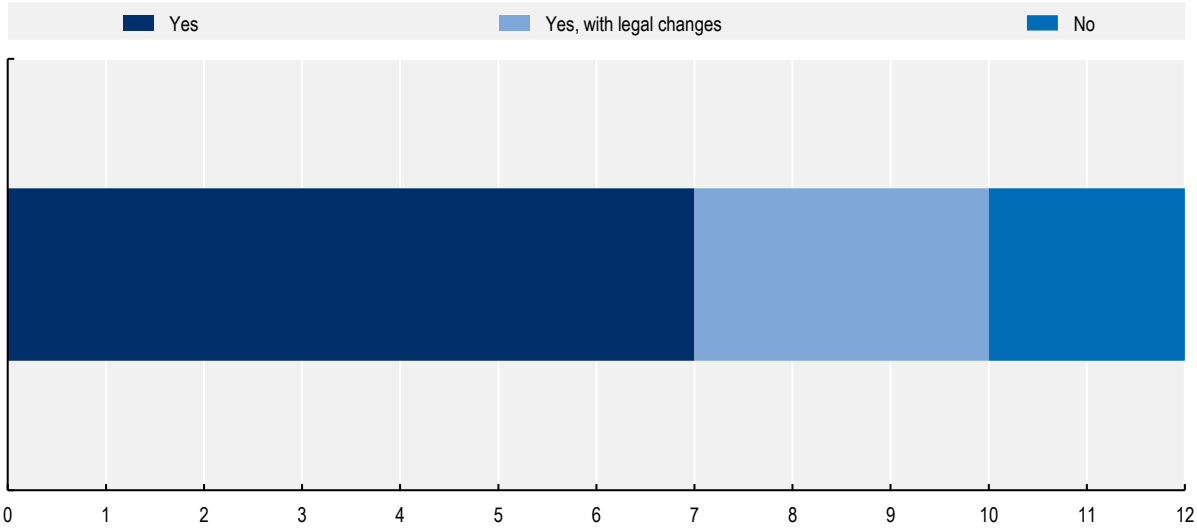
Source: OECD stakeholder survey

Given that *ex ante* expectations regarding public engagement are subjective, it is impossible to determine whether they were realistic or not. That said, the experiences of other OECD countries with similar election costing exercises (Canada, Australia) suggest that Belgium's media and public engagement was on-par with that experienced internationally. It should also be noted that media tracking statistics collected by the FPB exclude references to the FPB made in radio and television interviews – including those made during debates. As such, it understates the media impact of the FPB's election platform costing work. This view was corroborated during consultations with journalists conducted as part of the review. Finally, as will be discussed in the subsequent section, there was re-publication of results as part of an independent on-line interactive tool. This engagement via tertiary sources is also not collected as part of FPB's media tracking.

3.4. Overall assessment

Stakeholders widely view the first election costing exercise as having improved transparency around the economic and budgetary consequences of election commitments. The FPB is seen as independent in the way that it carried out the election costing and that it demonstrated sufficient skills and expertise to undertake the work. The vast majority of stakeholders are also of the view that the FPB communicated clearly. Furthermore, stakeholders reported that the exercise had helped them develop more robust policy and given them a greater understanding of how to design policy so that it could deliver greater impact.

Figure 3.10. Political parties support electoral platform costing



Source: OECD stakeholder survey

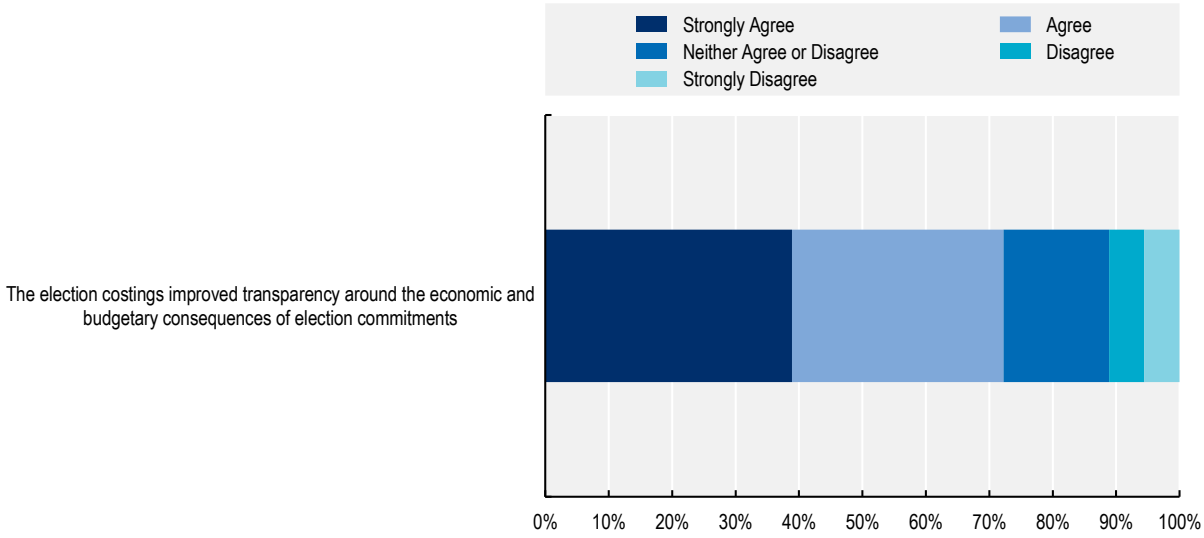
Overall, the 2019 exercise met its legislative mandate and intended policy objectives. Importantly, the legislative framework is not deemed to be a significant impediment and its prescribed timelines are believed to be reasonable. There is a general consensus among all political stakeholders that the FPB's election platform costing exercise should be an enduring feature of the Belgian institutional landscape and can be built upon to further improve its impact (Figure 3.10).

3.4.1. Key successes

Improved transparency around fiscal and budgetary impact of political proposals

Political parties widely view the first election costing exercise as having improved transparency around the economic and budgetary consequences of election commitments (70% agree or strongly agree; Figure 3.11). During OECD consultations, many indicated that the most important change for the upcoming 2024 exercise was more support from the FPB. In particular, earlier, and more frequent engagement prior to the official start of the exercise and greater technical capacity to have more proposals included in the process.

Figure 3.11. Stakeholders think that the election costings exercise improved transparency



Source: OECD stakeholder survey

Higher quality political platform policy design

During OECD discussions with political parties and media, stakeholders expressed the view that the exercise improved the credibility of measures being proposed in election debates. This arose primarily from a perceived increase in quality and quantity of information available to political parties and the electorate, including the coverage and comprehensiveness of costed policies versus announced policies. In particular, providing information not just on budgetary and economic impact, but also other socioeconomic elements (for example greenhouse gas emissions – a leading practice among IFIs).

Notably, most political parties reported that the exercise helped hone policies and improve their design through iterative consultations with the FPB. Most importantly, virtually all stakeholders expressed the view that the exercise enhanced the political "cost" of making proposals without credible evidence.

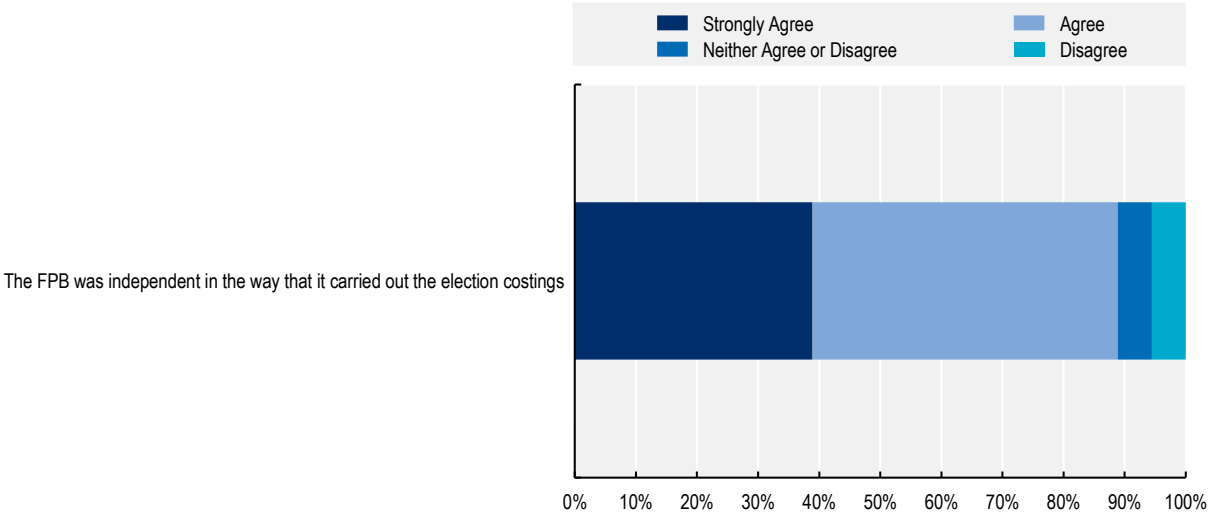
Stakeholders also reported that the exercise was helpful after the election during the negotiation of the coalition agreement, with the technical work undertaken by the FPB being viewed as credible and independent by all parties.

Strengthened reputation of FPB as an independent and trusted institution

The FPB is seen as independent in the way that it carried out its technical analysis (Figure 3.12). Stakeholders also expressed the view that the FPB demonstrated that it had the skills and expertise to

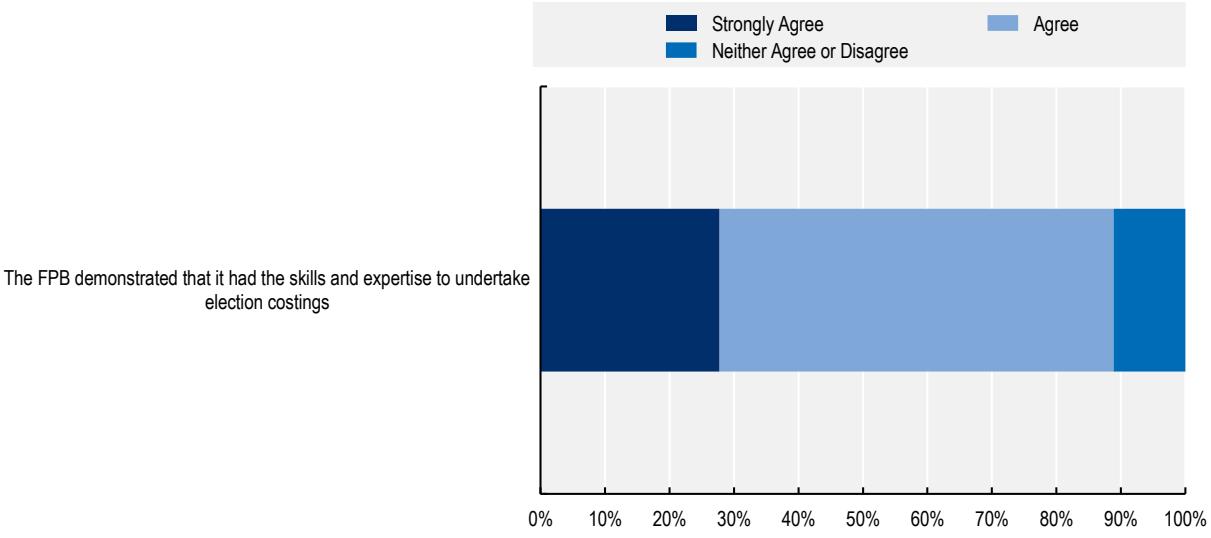
undertake the work (88% strongly agree or agree). Importantly, during OECD consultations, many political parties reported that the FPB was best placed among other competing entities to manage the exercise. Some political parties that ultimately formed the government indicated that the FPB's analysis expedited the negotiation process surrounding the government's agenda, as the numbers were deemed "credible" and therefore not requiring further scrutiny.

Figure 3.12. Stakeholders perceive the FPB as independent



Source: OECD stakeholder survey

Figure 3.13. Stakeholders perceive the FPB as competent and credible



Source: OECD stakeholder survey

While feedback was generally positive, many political parties expressed the view that there were some "surprises" during the process. These principally stemmed from two areas. First, some measures submitted to the FPB were unexpectedly deemed "ineligible" for analysis (for example, abolishing the monarchy some proposals regarding tax fraud reduction). Second, some measures that were "novel" to Belgium (for example a wealth tax, or capital gains tax) could not be validated by the FPB. In some situations, political parties

reported that they were advised of these decisions relatively late in the process. For its part, the FPB indicated measures were only rejected when models were deemed inappropriate to evaluate their impact.

There is a general consensus among all stakeholders that more detailed guidance would be helpful in advance of the 2024 exercise. Such guidance material is seen as beneficial in improving transparency and avoiding misunderstandings. In addition, there could be benefits from internal administrative developments to enhance co-ordination among staff (for example, through regular meetings of SPOCs, analysts and the steering committee) thus ensuring greater consistency in communication with political parties.

3.4.2. Opportunities for improvement

Comparability of political platforms

Virtually all stakeholders expressed the view that the discretion afforded to political parties regarding the choice of "priorities" undermined the exercise. In particular, the lack of comparability amongst measures was perceived to undermine transparency. Some political parties suggested that their competitors "gamed" the system, referring "priorities" and measures to the FPB that would not be subject to independent verification or be rejected outright. Alternatively, some stakeholders suggested that political parties only submitted those "priorities" that would generate the most positive macro-economic and socio-economic outcomes, opting to exclude those with potentially unflattering results. As such, many suggested that the exercise served to exacerbate a "deficit bias", wherein most political parties selected measures advantageous for households for costing, notwithstanding the overall bias toward deficits and debt.

The comparability challenge in the Belgian election costings exercise is unique internationally. As noted earlier, this is because Belgium is the only country where a limited portion of election platforms is analysed. In all other countries where election costings are undertaken, a more comprehensive approach is adopted, where all measures proposed by political parties can be included in the exercise.

The breadth and depth of platform analysis is primarily mediated by resources. The number of measures costed is far greater in the Netherlands than in any other country. However, as presented in Table 3.3, the Netherlands relies on about twice the number of full-time-equivalent staff (FTEs) compared to Belgium and Canada. In addition, they enjoy a longer official "costing window" during which the work can be undertaken compared to Australia and Canada. The Netherlands also benefits from greater experience in managing an election platform costing exercise, as both the Netherlands Bureau for Economic Policy Analysis (CPB) Central Planning Bureau and Dutch political parties have relatively greater familiarity with the process compared to Canadian and Australian peers. The Netherlands also tasks a separate federal agency with evaluating environmental impacts of electoral platforms.

Table 3.3. Scope and resourcing of election costings across OECD countries

	Number of measures costed	Timescale for election costings	Number of FTEs internally	Estimated FTE's drawn from other institutions
Belgian FPB	314	85 days	35	0
Australian PBO	316	58 days	43	8
Canadian PBO	130	30 days	30	10
Netherlands CPB	1 457	90 days	60	8

Notes: Canadian and Netherlands data presented for the 2021 elections.
Australian data presented for the 2022 election.
Number of days reflect calendar time; actual business days are lower.
Contrary to practices in Belgium and the Netherlands, the Australian and Canadian PBOs do not calculate dynamic second-round effects of measures
Sources: Australian Parliamentary Budget Office; Belgian Federal Planning Bureau; Canadian Parliamentary Budget Office; Netherlands Central Planning Bureau

Based on the stakeholder survey results and OECD consultations, there is limited appetite for increasing resources for the FPB. Most stakeholders attributed their lack of support to overarching fiscal challenges facing Belgium. In addition, there was no support among stakeholders to amend the legislation to eliminate the obligation for assessing macroeconomic and socioeconomic impacts, but instead require a costing or verification of all platform measures. Some expressed the view that it would undermine the primary objective of the exercise.

In the absence of additional resources for the FPB, there is another option available – drawing on modelling capacity across the federal and regional public administration (for example, the federal Ministry of Finance, the federal Ministry of Social Security and regional planning bureaus). As noted earlier, this is a common feature of the election platform costing processes in other jurisdictions. It also represents a material source of resources in the overall exercise, ranging from about 10% to 30% of FTEs. Canada has memoranda of understanding (MoUs) with key analytical departments allowing its IFI to draw upon their models and FTEs. These MoUs provide administrative frameworks to ensure the confidentiality of any support and are deemed to be a key success factor in their exercise. In the Netherlands, some employees of ministries and the central bank were seconded to CPB. They work under the full responsibility of the CPB. Independence and secrecy are established through a secondment agreement.

Belgium's legislative costing framework allows the FPB to request assistance from other authorities to support its work. During consultations, a number of stakeholders across federal and regional administrative bodies expressed their openness to collaborating with the FPB in the election platform costing process. Stakeholders recognised that political parties, citizens, and the country would be supported by a broader effort on the part of the public service. Some highlighted political, administrative and resource constraints that could hamper their efforts. For example, there were some reservations regarding the potential politicisation, or the potential heightened risk of breaching confidentiality requirements. Others indicated a willingness to both undertake analytical work on behalf of the FPB and/or provide advice as required. It is noted that collaboration with other agencies is a common feature of other OECD independent fiscal institutions that cost political platforms and explicit protocols are in place to manage these risks.

Scope of measures costed, and impacts captured

The scope of measures that the FPB was able to cost and analyse was the second principal issue raised by stakeholders, as well as the breadth of indicators produced through the dynamic scoring exercise.

With respect to the scope of measures assessed, this primarily related to the challenges accommodating measures that are novel to Belgium (for example, a tax on wealth or capital gains). As is common among most independent fiscal institutions, modelling capacity is primarily focused on the existing tax and transfer system, and its relationship to the overall economy. Introducing novel policy measures presents two challenges: the model needs to be extended or modified to accommodate the new measure; and relevant domestic data do not exist to populate the model or underpin assumptions. As such, this contributed to the FPB's reasonable reticence to prepare, validate, or incorporate cost estimates of these measures in the electoral platform costing exercise.

While political stakeholders were forewarned by the FPB that they could not analyse a number of the novel policy measures proposed, there were also instances where – at the end of the costings process - they were taken by surprise that other measures had not been costed. Stakeholders were not always clear on the reasons for this and would like to see clearer guidance relating to what can and cannot be costed by the FPB as part of this exercise.

Some political parties also flagged concerns regarding the specification of existing FPB models. Specific issues included their ability to capture the full impacts of policies with labour supply or productivity responses, and as well as behavioural responses to certain priorities and measures. While most stakeholders accepted that these impacts may principally occur outside of the medium-term window of

analysis, it was noted that this would bias political parties toward proposing measures with short-term gains to the detriment of longer-term social reforms.

Finally, a plurality of stakeholders expressed strong interest in additional indicators being added to the exercise (for example, the impact of policies on poverty), as well as greater granularity in model outputs. Some stakeholders also expressed concerns that environmental impacts were not consistently captured. A key challenge for the FPB in this regard relates to the fact that many environmental impacts occur beyond the time-period covered by the costing (for example, the time-horizon with Crystal Supergrid was to 2030). This "time horizon" issue is common across other jurisdictions costing political party platforms. In the case of Canada and the Netherlands, supplementary information tables are presented where the longer-term impacts can be calculated and are relevant.

Regional dynamics

The federated nature of Belgium's political system and cultural duality engenders greater regional diversity among political parties. As such, it is not surprising that a number of political stakeholders expressed strong views that costing results should be disaggregated by region. Compounding this interest was the fact that regional and federal elections were held concurrently in 2019 (as will also be the case in 2024). This was a key issue for policies in areas such as mobility, where competencies for trains, trams, buses are split across different levels of government.

Beyond interest in the regional results of platform policies, there were also measures proposed in the 2019 election campaign to further decentralise the Belgian federation. For example, transferring responsibility for the federal social security programme to regional authorities. By their very nature, these proposals would require a "regional lens" of evaluation to fully appreciate the policy outcomes. Many political parties highlighted their view that electors had limited interest in the national results and instead based their decisions on regional and community impacts.

Political stakeholders reported that their requests for region-specific results were not fulfilled for the 2019 exercise. This may have primarily stemmed from the raison d'être of the FPB: to prepare *national* analysis of economic and fiscal policies. As such, the FPB was unable to generate substantive region-specific analysis as their models generally lacked regional variables and data was not easily available. As noted in its background guidance document, the FPB's models are primarily structured to generate results for the federal government, rather than regional governments. As such, even if the FPB wanted to provide greater granularity in their modelling results, the data required to do so often rested with the regional governments that were not compelled to share it. Further, some would argue that full legitimacy to present regional-level impacts would require providing regional planning bureaus with a legal mandate to undertake the analysis.

Apart from the technical challenges of generating regional results, there was a perception on the part of the FPB that the primary objective of the electoral platform costing exercise was to present national analysis. This perspective was well-justified, given the parliamentary debates surrounding the promulgation of the legislative framework. As such, the FPB's limited technical resources were principally allocated toward assessing the national impact of programmes rather than delving into geographic minutiae (that is, examining the impacts at a national level for both federal and regional measures).

Notwithstanding this, the FPB has recently been investing in its regional modelling capacity (see Box 3.1). This puts it in a better position to be able to disaggregate policy impacts by region as part of its analytical work, including forthcoming costings exercises where resources allow.

Box 3.1. Recent efforts to strengthen regional modelling capacity at the FPB

HERMES regional (or HERMREG) is the FPB's regional version of the national macroeconomic model that estimates regional output and its components. The model is a collaborative effort between the FPB and its three regional counterparts: Statistiek Vlaanderen; Institut Wallon de l'Evaluation, de la Prospective et de la Statistique; and Institut Bruxellois de Statistique et d'Analyse.

HERMREG is comprised of both a "top-down" and "bottom-up" approach. A first "top-down" version was developed in 2006 to allocate national projections across the regions. In 2015, the Bureau started developing a new bottom-up structure for policy impact assessments by constructing a block of regional equations for sectoral production factors and regionalised demand.

A multi-phase model development programme has since deepened the bottom-up version by improving the household income block, integrating the public finances block of the HERMES model, and improving the link between public finances and public consumption.

The four partners are currently in the midst of a four-year expansion plan (2022 to 2026) to improve the short- and medium-term projections of the top-down model, and improve impact assessments using the bottom-up model and enhance the back-end database. This phase also involves broadening and deepening the regional HERMES energy component.

Relevance of election costings for the public debate

A key measure of success for the 2019 exercise is its influence on public debate. Specifically, did electors use the work of the FPB to inform their voting choice? There is a clear view by all stakeholders that the FPB's technical work "mattered" during the campaign. At the same time, many stakeholders expressed the view that there is substantial opportunity for improvement. Most notably, the FPB itself indicated that the 2019 electoral platform costing exercise did not generate the level of public interest anticipated. This may be partly because the FPB did not have a formal communications function at the time of the exercise. However, this is now in place, and puts the FPB in a stronger position going into the 2024 election costing exercise.

Potential changes to enhance the relevance of the exercise fall into three general categories. First, improving the presentation of the FPB's results. Second, presenting additional supporting details of pertinence to electors. Finally, ensuring that the results of the FPB's technical work can be situated in the overall Belgian fiscal context.

There is an appetite among stakeholders for clearer presentation of technical results. While the summary of results published by the FPB was determined by some stakeholders to "be a good start", most believe that more effort is required. More specifically, most expressed the view that citizen engagement could be increased by a more interactive presentation of results. Several cited the online tool published by a media outlet during the campaign as an example.[7] The FPB's internal review of the 2019 exercise reached a similar conclusion.

The publication of additional supporting information pertains to two factors: greater transparency regarding the costings themselves; and a wider range of socioeconomic indicators. With respect to the former, stakeholders suggested publishing greater detail regarding the assumptions underpinning the analysis of specific measures, as well as some assessment regarding the uncertainty of results. Similar disclosures are provided by other OECD countries that undertake electoral costings, such as Canada (see Box 3.2). The latter pertains to stakeholder interest discussed earlier, such as a greater breadth of impact analysis on households (for example, incidence of poverty). Other jurisdictions also consider including a longer-term timescale for impacts where pertinent (such as those relating to structural reforms).

Box 3.2. Communicating uncertainty in Canadian election costings

The Canadian Parliamentary Budget Office (PBO) has always integrated an uncertainty assessment into its platform costings. Compared to technical reports prepared during the regular parliamentary financial cycle, election costings typically reach a broader audience of laypersons and have a greater potential to influence decision-making. As such it believes that this is an important aspect of communicating the limitations of its technical analysis to the public.

At the same time, the approach to communicating uncertainty has evolved over the first two Canadian election proposal costing exercises. In 2019, each costing support note contained a qualitative statement disclosing whether the costing has limited uncertainty, some uncertainty, or significant uncertainty. The qualitative statement was supported by a discussion covering five areas of uncertainty: modelling approach; data quality; volatility; sensitivity to economy; and behavioural response.

As part of its review of the 2019 electoral proposal costing exercise, PBO received stringent feedback from stakeholders (in particular, political parties) that the qualitative assessment of technical uncertainty was misinterpreted (unintentionally or otherwise) as being a judgement regarding the feasibility of the proposal itself. As a result, it adjusted its approach to communicating uncertainty in the 2021 exercise to identify the sources of uncertainty, but not provide a qualitative assessment. The 2021 review concluded that stakeholders were generally satisfied with this approach.

Source: Canadian Parliamentary Budget Office. Evaluation of Election Proposal Costing 2019. Canadian Parliamentary Budget Office: Evaluation of Election Proposal Costing 2021.

Finally, stakeholders expressed concerns that many political parties were putting forward political platforms that were unrealistic given federal budget constraints and the current fiscal context, with no political cost. This is believed to undermine the election costings exercise.

While stakeholders rejected the idea of a common budget constraint for political platforms, there was some appetite for the FPB highlighting where election platforms would not comply with EU rules. More generally, stakeholders were open to the FPB giving greater prominence to the fiscal context in the presentation of the costings results. Given Belgium's current fiscal and economic challenges, this was viewed as beneficial for determining the feasibility of priorities.

Although it is generally accepted that a comprehensive comparison will not be possible owing to a partial assessment of each platform (that is, selected priorities), most stakeholders thought that a greater communication effort was required to promote greater public awareness of independent election platform costings by the FPB. There was also a suggestion that the FPB could dedicate a section of the election costings website to Belgium's fiscal context. For example, Canada typically publishes a fiscal sustainability report prior to the official election costing period that identifies how much new (or less) spending room is available. In the Netherlands, the CPB also publishes a fiscal sustainability report prior to the analysis of the election platforms. In its final publication, the CPB indicates how each election platform would change the general government balance (EMU balance) and the structural EMU balance by the end of the next cabinet period. Also, the projected EMU debt in the year 2060 is published, together with the change of the fiscal sustainability gap due to the election platform. FPB has noted that it already has much of the data and analysis available for such a publication.

3.5. Recommendations for 2024 and beyond

Key findings

Independent election costings, such as those provided by the FPB, support the development of realistic, more transparent election platforms based on evidence. They also provide credible information that offsets misinformation, augmenting the trust between citizens and political parties and facilitating more informed voting. In turn, this bolsters the possibility of aspiring governments to propose more fundamental reforms and helps strengthen engagement in the democratic process.

This review presents ten recommendations aimed at ensuring that the election platform costing exercise in Belgium can serve to increase the legitimacy and effectiveness of democratic elections in Belgium. These relate to five key areas: awareness; comparability; modelling; guidance; and regional impacts. All recommendations respect Belgium's existing legislative framework for electoral platform costing.

Recommendations

1. Promote greater public awareness of independent election platform costings by the FPB, e.g, through a new online interactive application enabling comparison of the results.
2. Provide greater prominence to the fiscal context alongside technical analysis of platform costings to improve public understanding of the feasibility of different election platforms.
3. Consider establishing pre-determined categories for costings (for example, health or pensions), thus ensuring greater comparability among election platforms.
4. Pursue opportunities for collaboration with other public sector entities among federal and regional governments to enable the Bureau to cost a greater number of measures, further facilitating improved comparability among election platforms.
5. Enhance modelling capacity to better cost electoral platforms proposing structural reforms, and be willing to undertake *ad-hoc* analysis where feasible.
6. Enhance and expand the FPB's administrative guidance, for example, to explain more concretely what can be costed (and what cannot) and ensure regular meetings between SPOCs during the costings exercise to ensure consistency of communication between the FPB and the different political parties.
7. Publish a list of measures previously costed in the 2019 exercise, to assist parties in selecting measures to include in their election platforms.
8. Encourage earlier engagement from political parties – even ahead of the election costing period – where they anticipate that electoral platforms may contain "novel" measures that may be more complex to assess.
9. Present regional results of measures included in the election costings, where appropriate and feasible.
10. Expand the additional supporting information published by the FPB alongside election costings to include assumptions and uncertainty.

3.5.1. Priorities for the 2024 election costings exercise

Based on the foregoing analysis, there are ten recommendations covering five areas of change that could improve the relevance and impact of the election platform costing exercise. The areas relate to: comparability; modelling; guidance; regional impacts; and communications. All can be accommodated within the existing legislative framework. Each is discussed below.

1. Promote greater public awareness of independent election platform costings by the FPB

To improve public awareness of the independent election platform costings undertaken by the FPB, the Bureau could consider a number of actions, including further developing the online tools it uses to present – and enable comparison of - the results. Several stakeholders cited an online tool published by a media outlet during the campaign as an example. Furthermore, the FPB could consider the publication of additional supporting information regarding the assumptions underpinning the analysis of specific measures, as well as an assessment regarding the uncertainty of results. Where feasible and appropriate the FPB could also expand the breadth of impact analysis to include other socioeconomic indicators which are likely to be of interest to the public (such as impacts on poverty).

To improve the extent to which the public can assess how realistic different election platforms are in the Belgian fiscal context, the FPB could give greater prominence to its analysis on the fiscal context (for example, its medium-term projections) alongside its communications of election costings. An alternative approach could be to invite political parties to present priorities and measures that are broadly fiscally neutral. This could help ensure that the exercise respects an implicit fiscal anchor consistent with Belgium's current budgetary challenges.

2. Improving the comparability of political platforms

To address concerns regarding the comparability of costings and potential "gaming" of the system by political parties, the FPB could explore the option to increase the comparability through establishing prescribed "thematic" categories . For instance, based on consultations with political parties, the FPB could establish five broad thematic areas for which political parties are invited to submit corresponding priorities (such as health, justice, taxation, environment, transport). This would ensure that electors would be presented with more of a reasonably comparable basket of competing proposals. Care needs to be taken when selecting the themes to ensure that they cover all potential policy areas, and that the themes chosen do not put any political party at a disadvantage.

This thematic approach may elicit a broader selection of measures being submitted for analysis by political parties. The FPB could strengthen its capacity to cost a larger volume of measures and/or increase the quality of analysis through drawing on modelling expertise across the greater public administration (for example, the federal Ministry of Finance, federal Ministry of Social Security, and regional planning bureaus). Such collaboration could be potentially arranged via memoranda of understanding (as in Canada), secondments (as in the Netherlands) or both. Further details are provided in Box 3.3.

Box 3.3. Wider contribution of public administration to election costing exercise in Canada and the Netherlands

Canada

Similar to Belgium, Canadian electoral costing legislation allows the Parliamentary Budget Office (PBO) to request assistance from departments during the costing period. That said, the legislation is more prescriptive than in Belgium, in that it articulates an administrative framework. This includes the requirement that:

- PBO must ask a minister to personally agree that the department over which he/she presides will provide assistance;
- If the minister agrees to the request, he/she must abstain from any involvement in the provision of assistance and instead direct the non-partisan public service to render support;
- PBO cannot identify the political party for which the assistance is requested; and,
- The public service must maintain confidentiality during and after the election.

Consistent with this legislative framework, the PBO typically negotiates detailed memoranda of understanding (MoU) prior to the election campaign. This ensures that the only interactions outside of the independent fiscal institution (IFI) during the official costing period are with the public service. In addition, the MoUs also specify that the PBO is ultimately accountable for all technical support from departments, meaning that it is published under the name of the IFI.

Netherlands

The CPB uses the expertise of other organisations for its analyses, but ultimately always is responsible for the final judgement. During the costing exercise, there is frequent consultation with third parties, such as the PBL Netherlands Environmental Assessment Agency, ministries and the tax authorities. Information about measures is only shared if necessary and always anonymously. This may involve consultation about the feasibility of measures, but also, for example, obtaining information about cost estimates. At the request of the CPB, the Ministry of Finance has made calculations of the budgetary consequences of some changes in the tax system. The information obtained in this way is assessed and weighed by the CPB. The published numbers are always CPB's responsibility.

Finally, some employees of ministries and the central bank were seconded to CPB. They work under the full responsibility of the CPB. Independence and secrecy are established through a secondment agreement.

Sources: Canadian Parliamentary Budget Office. Costing Election Proposals for the 45th General Election; Netherlands Central Planning Bureau

3. Expanding technical capacity to capture the impacts of a broader range of policies

While the OECD's technical review of the FPB concluded its models are robust, there are opportunities to address stakeholder concerns. Specifically, that the Bureau is still unable to cost the full range of measures proposed, and its models do not always capture the full impacts of structural reforms that bring about supply-side or productivity changes. While there was some degree of understanding around this for the first election costings exercise, stakeholders are hoping that the FPB will be able to capture the impacts of a broader range of policies for the 2024 exercise.

With this in mind, the FPB should seek to further improve their models to better capture the impacts of measures involving structural reforms (see Box 3.4 for the example of how Canada improved its models over time to support election costings). It should also stand ready to undertake *ad-hoc* analysis for policies whose costs cannot be estimated through existing models, but for which external evidence exists (for example, academic literature, estimates from other developed economies).

Box 3.4. Targeting model development toward election costings in Canada

Prior to Canada's first electoral proposal costing exercise in 2019, the Parliamentary Budget Office (PBO) met with political parties to provide an overview of modelling capacity. Specifically, conveying to political parties the type of proposals that the PBO would be well-placed to cost (such as microsimulation models of the existing tax and transfer system and fiscal projections), compared to those for which capacity did not exist and therefore would require more time (such as new measures to promote greenhouse gas reductions). The PBO also completed a survey of proposals endorsed at each political party's policy conventions to determine where modelling gaps may exist that could be addressed prior to the 2019 costing exercise.

During the 2019 exercise, the PBO's modelling capacity was able to accommodate most requests from political parties. However, there was an extensive requirement to develop new models to address novel proposals (such as a proposed wealth tax, defence procurement and tax fraud reduction). There were also several "novel" proposals that were unable to be costed during the 2019 exercise due to time and resource constraints. Structural changes to the economy were unable to be accommodated by the PBO.

Following the first election platform costing exercise, PBO identified those uncosted proposals likely to be submitted during subsequent elections. Efforts were made to expand modelling capacity in anticipation of receiving the same request in the future, either through building new models or tailoring models from other jurisdictions to the local context. In general, this assured that the organisation was able to address these costing requests during the second electoral proposal costing exercise in 2021.

Source: Canadian Parliamentary Budget Office. Review of the Election Proposal Costing Process for the 43rd General Election.

Having an early indication with regard to the types of policies being proposed in election platforms will help the FPB in ensuring it has the appropriate models. The FPB would likely see benefits from offering political parties opportunities for earlier engagement in relation to the development of complex (or novel) measures. This would provide greater lead time to develop a costing approach. A similar approach is taken in the Netherlands (see Box 3.5).

Box 3.5. Early communications in the preparatory phase in the Netherlands

In the Netherlands, the Central Planning Bureau (CPB) uses the preparatory phase to alleviate the burden in the active phase as much as possible, both for the CPB and the political parties. The preparatory phase is used to analyse complex new measures. Also, CPB publishes comprehensive lists of optional measures in different policy areas, including the costs and expected effects according to the literature. Early communication of complex and novel ideas by the parties increases the probability of these measures to be included in the costing exercise.

In an early phase, parties are invited to hand in complex measures that have not been analysed before. This increases the time for the CPB to collect data and make appropriate analyses. Each election cycle, political parties have the opportunity to submit one policy package to the CPB prior to the official costing period. Most of these packages are aimed at fiscal reforms and social security, the analysis is limited to the budgetary and purchasing power effects. This proves to be helpful for political parties and is a useful preparation for the CPB as well.

For a variety of policy areas, the CPB also regularly publishes an overview of optional measures and their effects, in the promising policies series. These publications offer comprehensive lists of optional measures. The budgetary costs are estimated, based on Dutch data. The publications also present economic effects of the measures and the relevant trade-offs. These are based on CPB-models and/or economic literature. There are CPB-publications on promising policies regarding the labour market, poverty, fiscal system, innovation, mobility, education and the housing market, and a similar document about health policies. Political parties may choose measures from these publications, but are of course not limited to measures from these publications.

Source: Netherlands Central Planning Bureau

Although the FPB can aim to cost a broader range of policies, there will inevitably be some policies for which it is unable to do this, given limited resources and the short timescales involved. Where this is the case, it would be helpful to have clearer and prominent communications explaining why a costing was not possible, cross-referencing the terms set out in the election costings guidance (see also point 4 below).

4. Presenting regional impacts of priorities and measures

Since the 2019 election platform costing exercise, the FPB has undertaken efforts to enhance its regional acuity. At the same time, the FPB should further examine options to build greater regional precision into their suite of models. Where possible and relevant, the regional results of technical work should be made available to political parties as requested. For example, the FPB may be able to show the results of a federal policy, such as benefits for the long-term unemployed, disaggregated by region.

The FPB already has good relationships with regional administrations who help support their regional modelling (for example, through analytical collaboration or providing relevant regional data or local knowledge). For the FPB to be in a position where it can respond to the demands from political parties on the regional impacts of priorities and measures set out in their federal political platform, it will need to leverage these strong relationships. Potentially more importantly, these regional organisations would benefit from being provided with a clearer legal mandate to assist the FPB in its election analysis.

5. Clearer and more comprehensive administrative guidance

To reduce the risk of “surprises” for political parties, the FPB could build on their 2019 guidance document and provide additional details regarding administration of the exercise. Guidance documents from Canada and the Netherlands both provide useful examples that can be drawn upon for this (see Box 3.6). Revised

guidance could include greater detail on the type of measures that can and cannot be costed alongside a list of examples. This would help support engagement with political parties and manage expectations around the exercise.

Complimenting enhanced external guidance for political parties, the FPB could also consider measures to improve internal co-ordination during the exercise. In particular, implementing more frequent meetings among the SPOCs, as well as between SPOCs, analysts and the steering committee will help ensure consistency in political party communications, and facilitate equitable priority setting. This practice would mirror the Netherlands, where the CPB holds short daily meetings with all project members during the costing exercise, as well as daily meetings with the project leaders and the CPB director. Twice a week, there is also a meeting of the team leads. This allows for the quick communication of updates relevant for multiple teams and supports consistent communications with political stakeholders.

Box 3.6. Guidance documents for election costing in Canada and the Netherlands

Canada

The Canadian Parliamentary Budget Office (PBO) publishes an election platform costing guidance document prior to each election. While legislation provides the broad rules of engagement between the PBO and political parties, it is largely silent on practical details. Given that not every specific circumstance can be anticipated, the guidance document also outlines key principles that will determine decision-making. Specifically: non-partisanship, credibility, and operational feasibility.

Based on consultations with political parties, the report outlines which measures are eligible for costing (and what is ineligible), how they will be costed, and operating service standards for costing. The inclusive consultation process with primary clients is a key aspect of ensuring that the competing views of political parties are reflected in the exercise, and they also have a sound understanding of how the process will work.

Beyond political parties, the guidance document also outlines how the PBO will engage with other stakeholders. This includes the public service and media. Overall, stakeholders have expressed appreciation for the PBO's transparent approach toward the exercise, which has built confidence that there will be few (if any) surprises.

Netherlands

In the Netherlands, CPB publishes a guidance document of about 25 pages. The document is updated before the start of each election costings project. It is published just before the invitation is sent to the political parties, and there is also a meeting with the political parties to explain the procedures and to answer questions.

The guidance document has information about the scope of the analysis, which measures are eligible, information about the time schedule and about confidentiality and means of communication between CPB and the parties. It also contains templates for) tables and graphs to be presented in the final publication, so that there are no surprises for political parties about the output variables. Changes or additions to the rules during the project are sent to all participating parties.

The process is confidential, but the results are part of the political debate. Therefore, it is essential that CPB's calculations are transparent and traceable. A chapter in the main publication accounts for the principles used, the process followed, and the method of calculating the economic effects.

To further enhance engagement with political parties, the FPB could also consider publishing a list of measures analysed in the 2019 exercise. This would mirror the successful practice in the Netherlands. In that jurisdiction, the costing compendium serves to provide political parties with additional examples of the type of measures that are eligible for costing and the magnitude of corresponding fiscal impacts.

3.5.2. Looking beyond 2024

The recommendations in this report are expected to enhance Belgium's electoral platform costing exercise over the short- and long-term. At the same time, they are circumscribed by the imminent election. Specifically, less than a year remains before Belgium's second electoral platform costing process. As such, there is no reasonable scope to consider amending the legislative framework or introducing other significant structural changes.

Looking beyond the next election, there are other potential changes that could be contemplated by the FPB. These could support election platform costing to achieve its full potential - the same comprehensive exercise that exists in the Netherlands. To achieve this, the FPB would be required to build on its recent and incipient progress and deepen engagement with other analytical staff placed across the public administration.

As discussed earlier, something that the FPB does well, and could do more of, is formal technical collaboration with other organisations. The Bureau currently collaborates with a range of external public sector organisations in building and refining its modelling capacity. This includes federal and regional entities, as well as universities. During OECD consultations, there was a general consensus that a collaborative approach served everyone well in ensuring a transparent, integrated analytical framework. Further developing and deepening linkages with teams across federal and regional administrations could create a stronger "critical mass" of analytical capacity, enabling the exercise to be scaled up over time to encompass entire platforms. This would be a natural extension of the efforts already underway by the FPB, although it would require new legislation to fully implement.

Another natural extension of the exercise would be for the FPB to analyse the coalition agreement reached following each election campaign. To the extent possible, the FPB already does this calculation within its Medium-Term Outlook which incorporates a no-policy change scenario, allowing readers to see the impact of new government measures. However, publishing this analysis as a standalone report in advance of the coalition agreement being voted on in parliament could provide stakeholders (including parliamentarians and citizens) with an independent, non-partisan assessment of the government's fiscal and economic strategy, and how it aligns with the fiscal context faced in Belgium. Importantly, it could also identify transparency gaps – where measures are not sufficiently detailed to quantitatively assess. This would, however, require the FPB to be given timely and specific information on policies included in the agreement.

In the longer-term, creation of capacity to analyse entire platforms would provide sustained benefits outside of the election costing period. For example, the challenges faced by Canada in its first election proposal costing process necessitated a change in its operating posture (Box 3.7). These changes provided ongoing benefits outside of the costing period. A similar improvement could be expected in Belgium.

Box 3.7. Election proposal costing improved the Canadian PBO's relevance and efficacy

In the years prior to the first Canadian election costing exercise, the Canadian Parliamentary Budget Office produced between 15 and 20 reports annually, typically with a turnaround time of several months. With the vesting of a new legislative election costing mandate in 2017, there was recognition that the existing operating model was inadequate to meet this new challenge.

Costing election proposals differs from the standard IFI analytical mandate in several important ways. First is the breadth of analysis: a platform can encompass every policy proposal imaginable. More critical is the volume of proposals, as a government will typically table a budget, fiscal update and roughly 10 major pieces of financial legislation in a parliamentary financial cycle, whereas each platform contains about 100 proposals. Finally, the tempo of an election campaign is much faster than standard parliamentary deliberations.

As noted earlier, the Canadian PBO borrowed practices from other IFIs to reform its operating structure. This included greater collaboration with external experts (including federal departments), increasing the aegis of modelling capacity and a renewed communications approach that relied on much shorter costing notes. Overall, stakeholders were pleased with these changes and as a result they were maintained following the 2019 costing exercise, now forming a permanent feature of the office.

Source: Canadian Parliamentary Budget Office. Evaluation of Election Proposal Costing 2019.

As noted in the first two chapters, the Bureau's current operating strategy leaves it well situated to address current and emerging challenges with electoral platform analysis. Together, it is hoped that the proposed improvements will help strengthen the credibility, usefulness and awareness of the election costings exercise by the FPB. In turn, this will support the development of realistic, more transparent election platforms based on evidence. The election costings exercise can help improve the credibility of the information available to voters, offsetting misinformation and augmenting the trust between citizens and political parties. It can also bolster the possibility of aspiring governments to propose more fundamental reforms and helps strengthen voter engagement in the democratic process.

A further evaluation of the 2024 exercise will help identify whether the challenges identified in this report have been alleviated through a refined approach. It will also serve to inform the priority of further changes to ensure the election costings exercise continues to be credible, useful and relevant.

References

OECD (2021), "OECD IFI Independent Fiscal Institutions Database", OECD, Paris, https://www.oecd.org/gov/budgeting/ifi-database.htm (accessed on 10 September 2023). [2]

OECD (2015), "Recommendation of the Council on Budgetary Governance", *OECD Legal Instruments*, OECD/LEGAL/0410, OECD, Paris, https://www.oecd.org/gov/budgeting/Recommendation-of-the-Council-on-Budgetary-Governance.pdf. [1]

OECD (n.d.), *OECD Tax Database*, OECD, Paris, https://www.oecd.org/tax/tax-policy/tax-database/ (accessed on 10 September 2023). [3]

Notes

1. Belgian Parliament: *The Act of 22 May 2014*.

2. https://multimedia.tijd.be/rekening14/

3. Four preparatory information sessions were organised: on 26 April, 22 June, 21 September, and 14 December 2018.

4. 15/10/2018 (HERMES & QUEST), 25/10/2018 (PLANET & CRYSTAL SUPER GRID), 8/11/2018 (EXPEDITION/HINT & PROMES).

5. Published first on www.plan.be and later on www.dc2019.be

6. www.dc2019.be

7. See the online application published by https://www.standaard.be/verkiezingen-2019/rekening-berekenzelf.

Annex A. List of stakeholders consulted for institutional and operational review

- Advisor Macroeconomics (Office of the Prime Minister)
- Chef cabinet adjointe (Cabinet du Ministre des indépendants, des PME et de l'Agriculture)
- Chef de Cabinet (Cabinet du Vice-Premier ministre et ministre de l'Économie et du Travail)
- Conseiller (Cabinet du Secrétaire d'État pour la relance et les investissements Stratégiques)
- Directeur de Cabinet de la ministre des Pensions
- Direction Estimations macro-budgétaires (Service d'études du SPF Finances)
- Direction Mobilité-Service Études et Enquêtes (SPF Mobilité &Transport)
- Federal Planning Bureau
  - ADDG team
  - SDDS team (including the Do no significant harm (DNSH) team)
  - Management board
  - Administration
  - IT Team
  - Communication
  - WG Software packages and programming environments
- Hoofdstatisticus (Vlaamse Statistische Autoriteit - Statistiek Vlaanderen)
- Journaliste (De Tijd)
- Journaliste – éditorialiste (La Libre Belgique)
- Journaliste (De Standaard)
- Journaliste (Le Soir)
- Secrétariat de la Section Besoins de financement des pouvoirs publics du Conseil Supérieur des Finances
- National Bank of Belgium
- Perspective.brussels
- Présidente du SPF Économie
- Secrétaire général (Conseil Central de l'Économie)
- Senior Economist (KBC Groep)
- Service macro budgétaire (SPF Stratégie et Appui)
- SPF Santé Publique

Annex B. Legal responsibilities of the Belgian Federal Planning Bureau

Table A B.1. The main responsibilities of the Federal Planning Bureau named in legislation

Law	Responsibility
Law of 21 December 1994 on social and miscellaneous provisions.	Preparing the economic forecasts for the federal budget, drawing up the five-yearly input-output tables and other satellite accounts for Belgium, along with the overarching mandate to assess and forecast socio-economic and environmental developments with a view to improving their rationality, efficiency, and transparency.
Law of 10 April 2014 that implemented Directive 2011/85/EU requiring multi-annal budgets	Serving as the arm's length independent body responsible for producing the macroeconomic forecasts underlying the budget to comply with the enhanced budget co-ordination and surveillance framework in Regulation (EU) No 473/2013 of the "Two Pack" of reforms.
Law of 5 May 1997 relating to the coordination of the federal sustainable development policy	Preparing an *ex ante* and *ex post* monitoring report consisting of indicators and scenarios to support the newly created federal plan for sustainable development to achieve domestic, international, and European commitments, and placing a representative of the Bureau on the Interdepartmental Commission for Sustainable Development as an observer.
The Law of 5 September 2001 guaranteeing a continuous reduction of public debt and creating an Ageing Fund	Serving as the secretariat of the Study Committee on Ageing, of which the Vice-president (Commissioner) and one member is from the Federal Planning Bureau.
The Royal Decree of 14 November 2003 implementing the law of 28 April 2003	Supplying the mortality tables and demographic studies for certain calculations related to annuity payments.
The Programme Law of 23 December 2009	Developing and maintaining a database of transport indicators and satellite statistical accounts for the Ministry of Mobility and Transport and to carry out a long-term transport demand outlook and transport simulations with impact analysis and policy analyses on request and in consultation with the Ministry of Mobility and Transport.
The Law of 8 January 2012 amending the Act of 29 April 1999 on the organisation of the electricity market	Collaborating with the Directorate General for Energy to draw up a report on the monitoring of the security of the supply of energy every two years.
The Law of 25 November 2018 establishing the National Productivity Council	Nominating two of its members to the National Productivity Council and contributing to the meetings and reports on the topics of diagnosing and analysing developments in productivity and competitiveness, associated challenges, and the consequences of policy options on productivity and competitiveness.
The law of 21 May 2015 establishing a National Pensions Committee, a Centre of Expertise, and an Academic Council	Serving as the secretariat of a support committee for the Centre of Expertise and appointing a representative to sit on the committee. The Centre of Expertise on pensions is responsible for grouping all the knowledge on pensions from various administrations, public establishments, and public interest organisation.
The Law of 2 May 2014	Costing the election manifestos of political parties, amended 2018 to restrict requests to a minimum 3 and maximum 5 priorities and to political parties represented in the House of Representatives. The analysis is to include the short- and medium-term consequences for public finances, the purchasing power and employment of various income groups, for social security, and of the impact on the environment and transportation.
The Law of 22 May 2014 amending the Civil Code	Supplying the mortality tables for calculating the value of the rights of surviving spouses to enjoy a property.
The Law of 15 May 2014 implementing the Compact for Competitiveness, Employment and Recovery	Calculating increases in wage limits and other social security contribution parameters for various stakeholder decisions and negotiations.
The Law of 14 March 2014 amending the FPB's 1994 legislation	Calculating a set of additional indicators for measuring quality of life, human development, social progress, and the sustainability of our economy.

1. Note – this law is currently under review, with potential implications for the Bureau's responsibilities.

Annex C. Terms of reference for review of election costings

The OECD team will review the FPB's first electoral costing exercise, including its strategic approach, process, and analytical capacity with recommendations for improvements and an action plan.

The review will cover the two phases of analysis in the electoral costing exercise: (1) estimated budgetary cost of individual measures, and distributional cost effects undertaken for one package of relevant measures, and (2) analysis of overall electoral proposals based on key economic, fiscal, social, and environmental indicators.

The review will examine existing analytical resources and resource gaps, as well as analytical issues such as:

- Neutrality of macroeconomic feedback and behavioural analysis.
- Appropriateness of time horizon for cost estimates.
- Method and order of operations for assessing interaction effects between measures.
- Comprehensiveness of the costing service.
- Transparency regarding relevant assumptions and uncertainty in costings.
- Procedures for quality control, transparency of assumptions and provision of information.

In addition, the review will cover aspects such as:

- Stakeholder relations and satisfaction, and communications.
- The scope of requests, and the handling of requests that do not fall within that scope or have insufficient information or policy details.
- Protocols for:
  - Request management.
  - Confidentiality.
  - Exchanging information and feedback.
  - Revising, retracting, or correcting requests or issuing errata.
- Timelines.
- The increase in quality and quantity of information available to political parties and the electorate, including the coverage and comprehensiveness of costed policies versus announced policies.
- The influence of cost estimates in the media and public debates.

Where relevant, the FPB's experience will be compared to that of peers with an election policy costing mandate, such as the Netherlands CPB or the Canadian and Australian PBOs, and assessed against good practices, such as in the "OECD Guidelines for Independent Costing of Policy Proposals" (2023).

Annex D. List of stakeholders consulted for review of election costings

- Belgian Federal Ministry of Finance
- Belgian Federal Ministry of Social Security
- Belgian Federal Planning Bureau
- Institut Bruxellois de Statistique et d'Analyse (perspective.brussels)
- Flanders Ministry of the Environment
- Journalists
- KU Leuven
- National Bank of Belgium
- Political parties that used the 2019 costing service (with their current name)
  - Les Engagés
  - DéFI
  - Ecolo
  - Mouvement Réformateur
  - Parti Socialiste
  - Partij van de Arbeid van België - Parti du Travail de Belgique
  - Christen-Democratisch en Vlaams
  - Groen
  - Nieuw-Vlaamse Alliantie
  - Open Vlaamse Liberalen en Democraten
  - Vooruit
  - Vlaams Belang
- Statistiek Vlaanderen
- Institut Wallon de l'Evaluation, de la Prospective et de la Statistique

Annex E. OECD stakeholder survey methodology for review of election costings

- **Survey administration date**: March 2023
- **Survey sample population**:
  - Federal political parties (12)
  - Journalists (3)
  - Experts, such as academics (5)
- **Language of survey**: English
- **Survey questions:**

  Overall Impression
  - The election costings improved transparency around the economic and budgetary consequences of election commitments (Strongly agree; Agree; Neither Agree nor Disagree; Disagree; Strongly Disagree)
  - The FPB was independent in the way that it carried out the election costings (Strongly agree; Agree; Neither Agree nor Disagree; Disagree; Strongly Disagree)
  - The FPB demonstrated that it had the skills and expertise to undertake election costings (Strongly agree; Agree; Neither Agree nor Disagree; Disagree; Strongly Disagree)
  - The FPB communicated clearly regarding election costings (Strongly agree; Agree; Neither Agree nor Disagree; Disagree; Strongly Disagree)
  - Please describe what you think worked well in relation to the 2019 election costings by the FPB
  - Please describe what you think did not work so well in relation to the 2019 election costings by the FPB

  Impressions of the Pre-Costing Period
  - Information sessions organised by the FPB (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
  - Working Papers presenting the models (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
  - Seminars presenting the models (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
  - Launch note (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
  - FPB response to concerns expressed during meetings (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
  - Do you have any other comments relating to the preparatory phase for the 2019 election costings?

Impressions of the Costing Period

- The way the information regarding the measures was collected (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
- The first phase [examination of the measures, validation of the budgetary impulse] (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
- The arguments put forward by the FPB not to be able to cost certain measures ["measure is outside the scope of DC2019"] (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
- The second phase of the costing [impact assessment using the different models] (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
- Specific communication with the FPB contact person assigned to your party (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
- The general communication/guidelines coming from the Steering Committee (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
- The way the results were presented by the FPB [press conference, press release and the dc2019.be website] (Highly Satisfied; Satisfied; Neither Satisfied nor Dissatisfied; Dissatisfied; Highly Dissatisfied)
- Would you like to see the FPB continue to cost election platforms for the 2024 election?
- Is there anything that the FPB did in relation to the 2019 costings that it should not do for the 2024 exercise?
- Is there anything that was missing from the 2019 costings that the FPB should do for the 2024 exercise?
- Setting a common budgetary constraint or target for all political parties (Essential; High Priority; Medium Priority; Low Priority; Not a Priority)
- Identifying a common list of areas covered by the costing (Essential; High Priority; Medium Priority; Low Priority; Not a Priority)
- Restricting the number of measures contained in each priority (Essential; High Priority; Medium Priority; Low Priority; Not a Priority)
- In light of your answers above, would you like to see any changes to the legal framework for election costings?
- Do you have any other comments or proposals for how the FPB might improve the transparency of the economic and budgetary consequences of measures proposed by political parties in their election manifestos?
- Feel free to enter any additional comments

OECD Review of the Belgian Federal Planning Bureau

AN ASSESSMENT OF INSTITUTIONAL, OPERATIONAL AND ANALYTICAL CAPACITY

This Review assesses the Federal Planning Bureau (FPB) and its institutional, operational and analytical performance as an independent fiscal institution. The FPB's responsibilities have been growing and this Review provides insights into how effectively the institution continues to serve the needs of its stakeholders. As part of this, it looks at the Bureau's performance related to its new mandate to undertake election budgetary costings and impact assessment, carried out for the first time in relation to the 2019 election.

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