

# What can we learn from service model analysis? An application in the government export finance sector

Public Policy and Administration  
2024, Vol. 0(0) 1–24

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DOI: 10.1177/09520767241251913

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## Abstract

The service model approach, like business models in the private sector, is gaining increasing attention in public management literature. In line with this evolving discourse, our study analyzes service models in government export promotion. By exploring the use of service models and discussing key developments, we shed light on the diverse application of service models in the context of officially supported export credits – an under-researched field in which a lot of innovation is happening. We observe a limited number of traditional service models with significant relevance. In addition, our findings suggest a rising diversity that signifies innovation and the broadening scope of activities. We also uncover the underlying motivations and practical experiences associated with their implementation and provide valuable insights into the benefits they offer.

## Keywords

Business models, economic promotion, export credits, public service models, trade finance

## Introduction

Public administration research increasingly analyzes and portrays government service delivery through the lens of service models or, alternatively framed, business models

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(Bel et al., 2014; Wirtz et al., 2021). Service models describe ways a government task is accomplished from the perspective of the administration delivering the service. They distinguish between three aspects: The value proposition made with a service; the way public value is created; and the way the service is financed in a sustainable way. This comprehensive view has the advantage that an entire service delivery system can be analyzed, but also innovated (Schedler and Guenduez, 2023).

Service models have been subject to studies especially in the context of digitization and smart city projects (Ranerup et al., 2016; Timeus et al., 2020) or in the analysis of collaborative arrangements between government and private actors (Agarwal et al., 2021; Coombes and Nicholson, 2021). To date, however, there is a lack of empirical analyses that address the range and developments in the application of service models in a government context. Similar to Gassmann et al. (2020) for the private sector, Schedler and Guenduez (2023) developed a typology for public administration and found 45 different service models in use by core administrations. Typical service models include *pay-for-performance* or *government as a platform*, but they also embrace models such as *auction* or *crowdfunding*, to name two less obvious models in government. The present typology serves as a valuable tool for examining the specific utilization and extent of various models employed in particular tasks, as well as identifying emerging innovative developments. By employing service model analysis, researchers can delve into a comprehensive understanding of ongoing advancements, such as the adoption of new models or their increased intensity. These insights provide valuable indications of innovations that have the potential to enhance the overall performance of governmental tasks.

This research aims at understanding the application of specific service models in a particular policy sector, officially supported export credits, in order to better understand the development in this sector. Public export credits and insurance are areas of government activity in which several innovative forms of public support have been developed in recent years. Export credit agencies (ECAs) and export-import banks (EXIMs) are governmental or quasi-governmental organizations which traditionally grant, guarantee, or insure export credits for foreign trade promotion (Felbermayr and Yalcin, 2013; Gianturco, 2001; Turguttopbas, 2023). They were originally countercyclical public instruments and so-called lenders or insurers of last resort, stepping into the breach when commercial banks or insurers do not offer sufficient financial instruments. In recent years, however, public ECAs and EXIMs have introduced new and innovative approaches for their operations. They have enlarged their range of activities to foster growth and openness in developing countries. This includes new instruments such as equity and mezzanine capital to support internationally oriented, innovative start-ups, as well as capital expenditure (CAPEX) guarantees to finance new technologies or climate action (Jennekens and Klasen, 2023). Furthermore, the state in the situation of ECAs and EXIMs has started to offer other novel approaches for export promotion to raise awareness, build capacity and help exporters to find new customers. These new service models include, for instance, advisory services for exporters or the organization of matchmaking events.

In our research, we analyze the application of different service models by ECAs and EXIMs. The research question guiding this analysis is: *How do ECAs and EXIMs adopt public service models for supporting exporters?* To answer the research question,

we conducted a multiple case study of ECAs and EXIMs in 27 countries using online interviews with 35 members of the C-level of these organizations. The analysis focuses on how organizations apply the public service models developed by [Schedler and Guenduez \(2023\)](#). In addition, we focused on the potential that lies in the service model approach from the perspective of the interviewees. We find that there is a variety of use of different service models by ECAs and EXIMs under consideration, and that the service model approach bears great potential to learn from each other and innovate existing services.

Our study contributes to the existing academic debate in several ways. First, we apply the theoretical concept of public service models to ECAs and EXIMs for the first time. Assessing 45 service models which were yielded through the collection of international practices, we show how the government delivers export financing and de-risking support via ECAs and EXIMs. Based on these findings, we analyze new developments by assessing which service models are particularly relevant, and which models are emerging. This includes an analysis how value for most relevant stakeholders is created and captured. The article addresses both gaps in the literature on service models in the public sector and on the current role of ECAs and EXIMs.

This article is structured as follows. In Section 2, we explain the theoretical background. In section 3, we present the methodological approach. Section 4 provides our findings and the analysis of our results. In Section 5, we conclude and point out limitations and future research opportunities.

## Background

### *Government service models and roles*

Studies in public administration are currently shifting the theoretical lens from the structure of the public organization to the collaborative achievement of public services ([Bertz et al., 2023](#)). Focusing on the benefits for the addressees of government services, but also on public value ([Cruz and Paulino, 2022](#)), service delivery is designed in a comprehensive way. In many cases, government achieves its impact not through its own performance alone, but in interaction with other actors activating their specific expertise ([Osborne et al., 2022](#); [Petrescu, 2019](#)) for innovative service designs.

Researchers are increasingly focusing their analyses on the question of which services are provided in which form to achieve optimal impact. Following the terminology of the private sector, individual authors speak of business models ([Coombes and Nicholson, 2021](#); [Osborne et al., 2014](#); [Timeus et al., 2020](#); [Wirtz et al., 2021](#)), others of service models ([Karim, 2003](#); [Peters et al., 2018](#); [United Nations, 2022](#)). Public service models have been studied in the past, but mainly with a focus on a government using or changing one model, such as purchasing public services ([Cao and Cai, 2017](#)), fostering participation in a specific service model ([Trpevska and Micevski, 2021](#); [Woods and Woods, 2004](#)), establishing a de facto privatization of a formerly government-run service ([Bresnihan, 2016](#)), or demonstrating the poor will of government to take care of a service ([Pajoni, 2019](#)), which according to [Lopez-Golan and Campos-Freire \(2017\)](#) could be compensated by private funding. In the private sector, business models are used primarily to foster

innovation (Chesbrough, 2010). In doing so, innovators often take existing models and transfer them to their own context (Frankenberger et al., 2013) in order to redesign their own business model. This design approach is now also increasingly used in public administration to design better services (Strokosch and Osborne, 2023).

In their study on public sector service models, Schedler and Guenduez (2023) analyze existing literature and real-world cases from various regions. Through their research, they identify and describe 45 different service models within the core government. These service models are categorized based on the role of the government in their fulfillment. Table 1 presents and describes the service models in short.

Schedler and Guenduez (2023) deliver a comprehensive investigation into the diverse range of service models employed within core public administrations worldwide and define five roles governments play when using the respective services: Activator, Funder, Guardian of the Public Good, Performance Designer, and Yield Shaper. In the role of the activator, the government activates others to become involved in the fulfillment of a public task. In the role of the funder, the government promotes the accomplishment of a public task by using public money. In the role of the guardian of the public good, the government transfers the use of public goods to private parties and safeguards public rules. In the role of the performance designer, the government fulfills public tasks itself in different arrangements. In the role of the yield shaper, the government varies its income from performing a public function. In practice, governments take several roles in varying emphasis when delivering a service.

Their study sheds light on the variety, utilization, and design of implementation of these service models. However, the extent of the prevalence of individual models and their relative significance within specific areas of responsibility remains uncertain. To the best of our knowledge, no prior research has systematically examined the adoption of these service models in governmental organizations, although a better understanding of the actual and developing use of specific models can improve the discourse on innovative services in a field. This study offers a valuable framework for conducting an in-depth analysis of their specific applications. Such a service model analysis not only captures the prevailing practices but also traces their evolutionary trajectory. By utilizing ECAs and EXIMs as cases, we aim to demonstrate that this analysis substantially enhances the understanding of the dynamics within the export promotion policy domain.

### *The role and relevance of ECAs and EXIMs*

Governments traditionally intervene in international trade by providing exporters with access to market intelligence, legal advice, and other forms of support such as equity, loans and guarantees or insurance. The rationale for public interventions in several areas of trade finance and export credits can be summarized as follows: addressing information asymmetry, providing financial support, and mitigating risk to promote trade and help to create or secure jobs in the domestic economy (Chatterjee et al., 2020). First, government interventions can address information asymmetry by providing market analyses, trade fairs and delegation trips, as well as individual advice to businesses seeking to engage in international trade. Second, government interventions can provide financial support to

**Table 1.** Service models in government (Schedler and Guenduez, 2023).

| Service model            | Mode of operation                                                                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contracting out          | The government mandates a service provider to deliver a specific public service directly to users                                                        |
| Crowdsourcing            | The state involves many external actors in value creation, in innovation processes or in the generation of knowledge                                     |
| Developer platform       | The state or a third party provides digital modules on a platform that other communities can use in developing their own applications                    |
| Fractional ownership     | The state shares ownership of an infrastructure that generates public value with individual private parties, who may also be users of the public service |
| Government as a platform | Creation of network effects among both the providers and the buyers of services. This creates a pull to use the platform                                 |
| Orchestrator             | The state coordinates the interaction of different groups of actors in such a way that public value is created in the end                                |
| Self-service             | The state lets citizens perform certain public tasks themselves                                                                                          |
| Guarantees/Insurance     | The government enables the private party to raise capital at low cost to accomplish a task by guaranteeing the full loan or a portion of the loan        |
| Payment-by-results       | The government pays the service provider based on the impact the service has                                                                             |
| Seed money               | The state provides start-up funding to a public service that subsequently becomes self-sustaining                                                        |
| Start-up loan            | The state provides a private party with a (free) loan to set up a service, which must be repaid if the service is successful                             |
| Subsidies                | The state supports the private fulfillment of tasks with cash benefits. These can be investment or operating contributions                               |
| Voucher                  | The state supports persons to be supported by contributions to the consumption of necessary services                                                     |
| Waivers                  | The government promotes a specific task by waiving or reducing taxes or fees                                                                             |
| Concessions              | The state grants the private sector the right to extract a natural resource and to charge third parties for the costs of producing the service           |
| Licenses                 | The license allows an actor to use a licensor's intellectual property for commercial purposes                                                            |
| Permits                  | The state grants or denies permits for activities that involve immissions for society                                                                    |
| Registrator              | The state is running a register that clarifies relations, rights, and duties                                                                             |
| Regulator                | The state regulates access to a network and competition in an area characterized by natural monopolies                                                   |
| Sanctions                | The state punishes behavior that does not comply with the law                                                                                            |
| Rent instead of buy      | The state grants a paid, temporary right of use for part of its property. The user is effectively a tenant but has extensive rights of use               |

*(continued)*

**Table 1.** (continued)

| Service model                 | Mode of operation                                                                                                                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Add-on                        | The basic service is financed by the state, but additional services can be used for a fee                                                                                                                          |
| Barter                        | Tit for tat - the state exchanges goods, services, or rights with third parties without money being involved                                                                                                       |
| Digitization                  | The state provides (formerly analogous) services in digital form                                                                                                                                                   |
| Experience selling            | The state provides emotional value to a “natural” offering through clever labeling                                                                                                                                 |
| Label-the-level               | The state offers different quality levels of a service and sells them at different prices with easily understandable names                                                                                         |
| Lock-in                       | Technical measures or penalties are used to keep switching costs high so that users do not switch providers                                                                                                        |
| Mass personalization          | Personal configuration of standard modules creates individual solutions for individual citizens or companies                                                                                                       |
| Object self-service           | Objects order material autonomously                                                                                                                                                                                |
| Open source                   | The state provides data or source codes of its applications so that third parties can further refine and improve them                                                                                              |
| Outsourcing                   | The government is responsible for performance but purchases inputs from suppliers                                                                                                                                  |
| Sell-your-services            | Government sells services in a commercial way to third parties (public or private customers)                                                                                                                       |
| Sensor-as-a-service           | The state supplies sensors to the private sector promising them additional benefits or uses sensors to provide services to the public                                                                              |
| Shop-in-shop                  | In addition to the core offering, the state (or a leased-in actor) offers other services in the same infrastructure                                                                                                |
| Solution performance designer | The state organizes on the principle of “one face to the customer”, combined with a comprehensive service package in specific situations                                                                           |
| Standby                       | The state ensures that a particular service is available to beneficiaries when needed                                                                                                                              |
| Auction                       | Special public services are sold at auction to the highest bidder. The model skims off customers' willingness to pay for prestige objects                                                                          |
| Crowdfunding                  | The creation of a service is financed by contributions from the community of potential users. The crowd can organize itself as a private company with ownership participation, but it can also take informal forms |
| Flat rate                     | The state levies a tax on a service, but this is defined as fixed irrespective of the quantity purchased                                                                                                           |
| Leverage customer data        | The government generates data from a service that it then makes available for other services or the public                                                                                                         |
| Revenue sharing               | Collaborative creation of a public service leads to revenues that are shared among the different actors                                                                                                            |
| Sell your network             | The state is part of a larger (exclusive) network and sells this advantage                                                                                                                                         |

*(continued)*

**Table 1.** (continued)

| Service model    | Mode of operation                                                                                                      |
|------------------|------------------------------------------------------------------------------------------------------------------------|
| Taxpayer's money | The state provides a public service, which is financed by taxpayers' money. This is free of charge for the beneficiary |
| Trash-to-Cash    | The state provides itself with a source of income from the waste of its citizens or from its own waste                 |
| User-pays        | The state charges a fee for extraordinary burdens caused by an actor                                                   |

internationally oriented firms both for pre-shipment and post-shipment. Third, government interventions can help to mitigate risks in international trade. By reducing risk, government interventions help to make international trade more attractive to businesses, encouraging them to engage in trade and promoting economic growth.

Up to now, financing interventions as well as risk mitigation can take many forms, including government-backed loans for innovation or CAPEX financing, working capital guarantees, public trade insurance schemes, and officially supported export credits. Export financing is a form of lending that provides funds to support exports. ECAs and EXIMs provide a range of export financing products, including direct loans, lines of credit, and buyer financing. Direct loans are provided to exporters to finance the production and shipment of goods or services. Lines of credit provide exporters with a source of financing that they can draw upon as needed, while buyer financing provides financing to foreign buyers to enable them to purchase goods or services from the exporter (Franzetti, 2021). Export credit insurance is a form of insurance that protects exporters against the risk of non-payment by foreign buyers. ECAs and EXIMs provide export credit insurance to help exporters manage the risk of non-payment and increase their competitiveness in foreign markets (Rotblatt, 2018; Turguttopbas, 2013). It covers a range of risks; these risks can arise due to factors such as political instability, currency fluctuations, and non-payment by buyers (Salcic, 2014). Guarantees are another product typically offered by ECAs and EXIMs. Guarantees can take a variety of forms, including bid bonds, advance payment guarantees and performance guarantees (Kurkela, 2008).

External factors have a profound influence on innovation within public sector organizations such as ECAs and EXIMs. Previous research has highlighted the impact of economic conditions, policy changes and political leadership as drivers of innovation in the public sector (Damanpour and Schneider, 2008; Kearney et al., 2000; Lewis et al., 2018). As large public finance institutions with multi-billion exposures that are currently transforming their services, ECAs and EXIMs are highly relevant for an analysis of service models. Mandates, intervention principles as well as products are changing with a focus on trade facilitation and trade creation. Agencies and banks could be used for industrial subsidies and the weaponisation of trade. In addition, the role of the state in the context of ECAs and EXIMs being innovative is key for a just transition to net-zero through innovation-driven exports, becoming trade facilitators, providing not only financing and de-risking, but also education, advice, and market information to (potential) exporters (Klasen et al., 2022; Oramah, 2020; Wright, 2011).

## Methodology

Analyzing usage and perception of different models and applications is a common research focus in social science (Arenas-Gaitán et al., 2011; Bharadwaj and Soni, 2007). It allows to simultaneously capture the quantitative importance of a model, and to obtain a qualitative assessment of the model by the respondents. Our research employs a multiple case study and qualitative research approach, employing a mix of deductive and inductive analyses which is crucial for obtaining a comprehensive understanding of our research topic. The integration of these two approaches offers several advantages: First, deductive analysis following the 45 different service models developed by Schedler and Guenduez (2023) provides a framework for organizing and structuring the analysis. However, relying solely on deductive analysis would limit the ability to capture the complexity and richness of the content. Inductive analysis allows us to identify emerging themes or patterns of ECAs and EXIMs in detail that were not anticipated in advance. By combining deductive and inductive analysis, we can strike a balance between theory-driven inquiry and data-driven exploration. This integrated approach enhances the validity and reliability of the findings and promotes a more holistic understanding of past, present and future service models of ECAs and EXIMs, as deductive analysis brings theoretical context, while inductive analysis provides depth and nuance to the data.

## *Sampling and data collection*

In this study, a purposive sampling method was employed to select institutions for examination. Our sample included ECAs and EXIMs from developed countries, emerging markets and developing economies, as well as least developed countries. By encompassing a diverse range of national contexts, we identified agencies and banks from 27 countries, ensuring comprehensive coverage. The selection of cases was guided by multiple dimensions, aiming to explore a wide range of situations and contexts, such as ECA and EXIM mandates, intervention models, organizational structures, offered products, and portfolio sizes. These institutions were geographically dispersed across Africa, the Americas, Asia-Pacific, and Europe. The purposive approach employed in this study allowed us to generate high-quality findings and obtain valuable insights into the subject matter. For the collection of primary data, our interview guidelines included the comprehensive list of models. The data collection process involved conducting semi-structured interviews in English between September 2022 and February 2023 through online video MS Teams meetings, supplemented with web-based survey questions. The interviewees comprised executives, such as Chief Executive Officers, Chief Financial Officers, Chief Risk Officers, and Managing Directors, as well as Senior Managers and Policy Officers, primarily from international departments. The duration of interviews ranged from 30 to 55 min, and recordings and/or notes were made for reference (Table 2).

To facilitate participant preparation, we shared the interview questions in advance, enabling familiarity with more complex or sensitive topics. Deductively, we first provided a brief introduction to all 45 service models during the video interviews. Then, closed questions regarding the application of all service models with four answer possibilities



**Table 2.** List of cases.

| Case | Country        | Organization | Main respondent   | Survey and interview date | Medium | Duration (minutes) |
|------|----------------|--------------|-------------------|---------------------------|--------|--------------------|
| 1    | Australia      | EFA          | Policy officer    | Oct 2022                  | Teams  | 37                 |
| 2    | Belgium        | Credendo     | Executive         | Oct 2022                  | Teams  | 30                 |
| 3    | Botswana       | BECI         | Executive         | Dec 2022                  | Teams  | 30                 |
| 4    | Canada         | EDC          | Executive         | Oct 2022                  | Teams  | 39                 |
| 5    | Czech Republic | EGAP         | Senior management | Sep 2022                  | Teams  | 31                 |
| 6    | Denmark        | EIFO         | Executive         | Oct 2022                  | Teams  | 35                 |
| 7    | Finland        | Finnvera     | Executive         | Oct 2022                  | Teams  | 44                 |
| 8    | France         | Bpifrance    | Executive         | Nov 2022                  | Teams  | 32                 |
| 9    | Germany        | EH           | Executive         | Sep 2022                  | Teams  | 31                 |
| 10   | Hungary        | EXIM         | Senior management | Oct 2022                  | Teams  | 38                 |
| 11   | Japan          | NEXI         | Senior management | Nov 2022                  | Teams  | 31                 |
| 12   | Malawi         | EDF          | Executive         | Dec 2022                  | Teams  | 31                 |
| 13   | Netherlands    | ADSB         | Executive         | Oct 2022                  | Teams  | 33                 |
| 14   | New Zealand    | NZECO        | Executive         | Oct 2022                  | Teams  | 30                 |
| 15   | Nigeria        | NEXIM        | Senior management | Jan 2023                  | Teams  | 55                 |
| 16   | Norway         | Eksfin       | Executive         | Oct 2022                  | Teams  | 31                 |
| 17   | Oman           | Credit Oman  | Executive         | Oct 2022                  | Teams  | 35                 |
| 18   | Poland         | KUKE         | Executive         | Oct 2022                  | Teams  | 35                 |
| 19   | South Africa   | ECIC SA      | Executive         | Sep 2022                  | Teams  | 46                 |
| 20   | South Korea    | KEXIM        | Policy officer    | Feb 2023                  | Teams  | 35                 |
| 21   | Spain          | CESCE        | Executive         | Feb 2023                  | Teams  | 36                 |
| 22   | Sweden         | EKN          | Executive         | Oct 2022                  | Teams  | 34                 |
| 23   | Switzerland    | SERV         | Senior management | Feb 2023                  | Teams  | 31                 |
| 24   | Turkey         | TürkEXIM     | Senior management | Sep 2022                  | Teams  | 45                 |
| 25   | UAE            | ECI          | Executive         | Jan 2023                  | Teams  | 33                 |
| 26   | UK             | UKEF         | Senior management | Oct 2022                  | Teams  | 33                 |
| 27   | US             | US EXIM      | Policy officer    | Oct 2022                  | Teams  | 41                 |

were asked, namely “always”, “often”, “rarely”, and “never”. This allowed to elicit factual information pertaining to the utilization of the 45 public service models within ECAs or EXIMs. Employing the inductive approach, we engaged in discussions with the interviewees regarding the practical application of all relevant models in the same stage and encouraged interviewees to share their thoughts on the individual service models, the

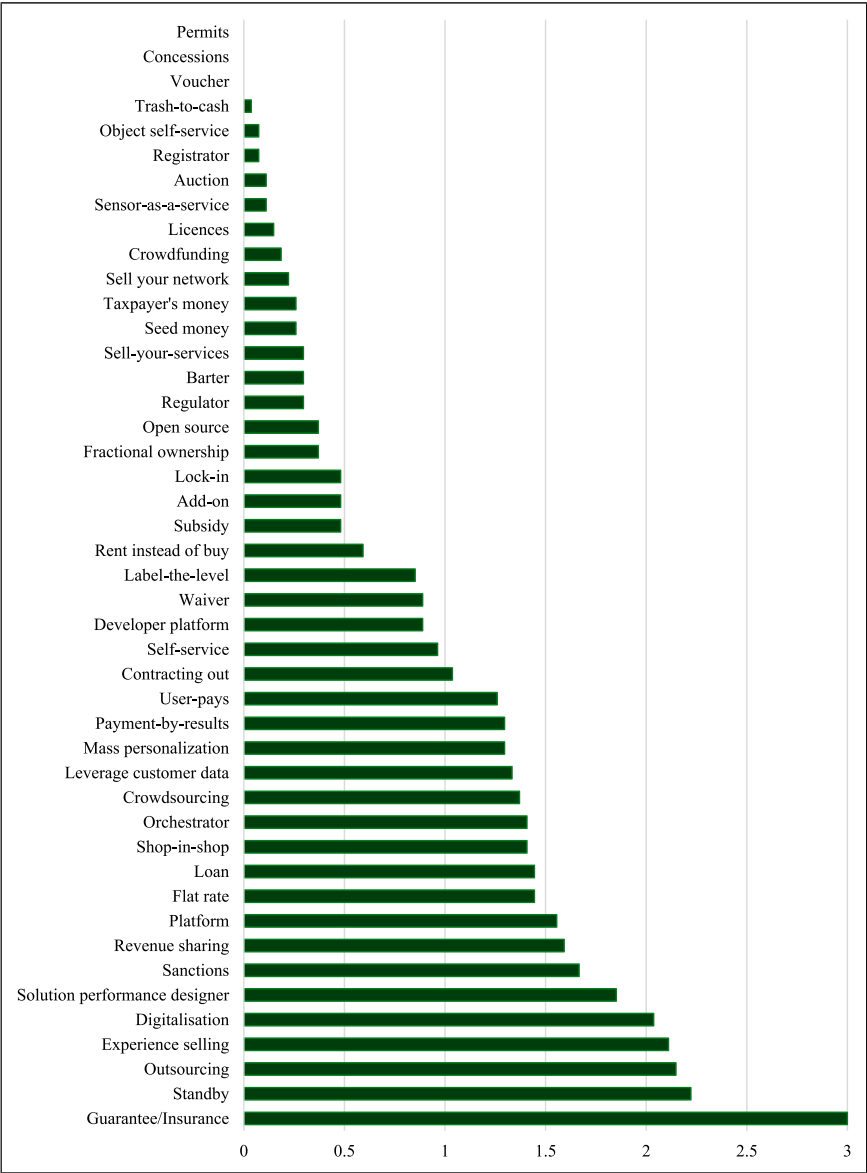
diverse roles of the state, and the inherent characteristics of the service models themselves. Through this semi-structured interview approach, we were able to collect rich qualitative information, including relevant experiences and personal opinions concerning roles and public service models. Throughout the individual interviews, we provided necessary clarifications as required. In addition to the interview data, we also incorporated secondary data sources to complement the primary data from interviews, such as ECA and EXIM annual reports and respective websites.

### **Data analysis**

For the data analysis, we applied a two-stage approach. In step one, we systematically converted ECA and EXIM responses regarding the application of all public service models with the four answer possibilities to numerical data and use descriptive statistics. In line with [Beck et al. \(2010\)](#), we applied mechanistic approaches and a form-orientated content analysis focusing on the frequency of references to public service model samples. We counted the number of the different responses, that is, “always”, “often”, “rarely”, and “never” to reduce key elements to manageable amounts. This mechanistic approach with a systematic conversion to numerical data allowed for an illustration of priorities in the selection of service models by ECAs and EXIMs. It also enabled us to draw associations between different variables by identifying most relevant service models for additional in-depth assessments, as well as service models where agencies and banks have a very limited role. In line with previous research, the deductive coding phase during the first cycle was followed by an inductive coding phase in a second step ([Gioia et al., 2013](#); [Mergel et al., 2019](#); [Wilson and Mergel, 2022](#)). We analyzed interview data from participants in a pragmatic way through qualitative content analysis ([Creswell and Poth, 2017](#)). This was applied both within ECA and EXIM cases, as well as across cases. Cross-case patterns were revealed based on salient similarities and differences. The narrower public service model categories identified through this approach were then analyzed for characteristics, communalities and relationships via open coding and axial coding.

### **Findings and analysis**

By converting ECA and EXIM responses on the application of public service models to numerical data, findings reveal that most relevant service models are the traditional guarantees and/or insurance, as well as standby and outsourcing. On the other hand, agencies and banks have a very limited role as guardian of the public good. ECAs and EXIMs never provide permits, concessions, or vouchers ([Figure 1](#)). Based on the results from the interviews, we are not only able to analyze the specific application of the individual service models, but we can also make a comparison between cases. For the sake of clarity and by analogy with the state in the core administration, we do this at the level of the five roles that organizations play in delivering their services. We thus explore current and future relevant roles of ECAs and EXIMs, that is, if they were, are, or will be funders, yield shapers, performance designers, activators, and guardians of public goods. We pay attention to which instruments are key, and how and to what extent institutions innovate



**Figure 1.** EXIM/ECA application of public service models (0 = never; 1 = rarely; 2 = often; 3 = always).

regarding these public service models. [Figure 2](#) provides an overview, showing that each case exhibits all five fundamental state roles of the state, albeit with notable divergences in their respective emphases. In addition to the role of funder, every country embraces at least one additional role, with examples such as Belgium, New Zealand, and, to a lesser

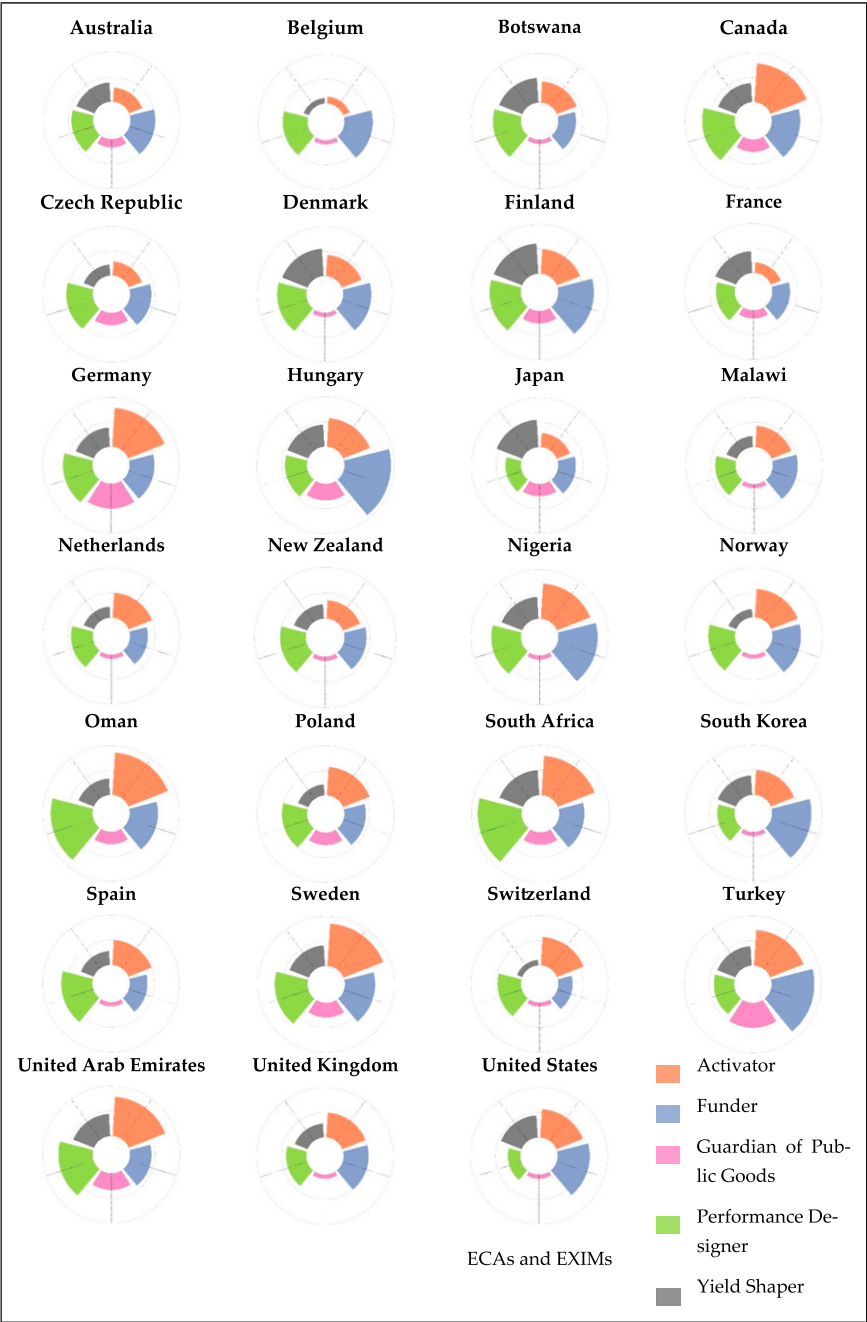


Figure 2. Roles of government by country.

extent, the Czech Republic, primarily functioning also as performance designers. Certain nations actively participate in three roles, exemplified by Canada and Oman, strategically positioning themselves not only as funders and performance designers but also as activators. Similarly, Malawi, Poland, and the Netherlands demonstrate tripartite engagements, albeit with distinctive nuances. Some countries demonstrate a robust involvement across all five roles, with one role assuming particular prominence. Noteworthy examples include Hungary (predominantly as a funder), Germany (dominant in the activator role), and Japan (distinguished as a yield shaper). In general, we observe comparatively modest role definitions in France and the United Kingdom, while Turkey uniformly deploys all four roles.

### *Funding as ECAs and EXIMs' traditional role*

Government interventions provide financial support to exporters seeking to engage in foreign trade. Our findings show that ECA and EXIM mandates and strategies focus on export-led growth policy with the main *role of a funder* to insure and guarantee or finance exports, fostering trade and helping to secure jobs in the domestic economy (Figure 2). These results confirm previous research, for example from Felbermayr and Yalcin (2013), (Franzetti, 2021; Klasen et al., 2022; Krummaker, 2020). The most relevant service model is *guarantees and insurances*. The traditional role of many ECAs for decades has been to de-risk other stakeholders in an export transaction through insurance or guarantees. Governments help to mitigate risk due to political and commercial factors such as adverse measures taken by foreign governments or warlike events, non-convertibility of local currency amounts, as well as insolvency or non-payment by buyers. Our results give evidence that this is still the case: all assessed institutions provide insurance or guarantee offerings as their key public service model. This includes post-shipment offerings, that is, supplier credit insurance and buyer credit insurance or guarantees. With supplier credit insurance, an ECA or EXIM covers the risk that an exporter will not be paid by the importer due to political or commercial circumstances. A buyer credit insurance is a loan provided by a bank and insured by an ECA or EXIM to an exporter's foreign buyer for purchasing goods or services from a country of export. Several institutions also offer whole turnover insurance, protecting the insured parts of exporters' turnover against the non-payment of short-term receivables of several buyers in different countries. In addition, many institutions offer pre-shipment risk mitigation instruments such as working capital guarantees. Pre-shipment products refer to insurance or guarantees extended to exporters prior to the shipment of goods for the execution of an export order. Working capital financing is funding that companies use for short-term cash needs and day-to-day operations.

“Working capital guarantees have become very relevant for us, also during the (Covid) pandemic. They are crucial for small and medium-sized exporters to obtain bank funding” (Participant 22).

An important development in the last decade has been the introduction of loan financing windows by several ECAs. In addition to EXIMs, these ECAs aim to fill gaps in the availability of liquidity from the private market to finance export transactions. Our results are in line with previous studies, for example from (Turguttopbas, 2013) and Oramah (2020), which show that financing is

very important, with about 50% of the institutions in our sample providing direct loans. Our results reveal that European ECAs, such as Belgium's Credendo, Denmark's Export and Investment Fund (EIFO), Finnvera in Finland and UK Export Finance (UKEF), which have traditionally focused on providing insurance, have introduced new funding windows to fill gaps in the availability of liquidity from the private market to finance transactions:

"We have expanded our support significantly, and loans (...) are important for us. For example, we provided our first clean growth direct loan last year" (Participant 26).

Although previous research describes ECAs and EXIM as export finance or trade credit insurance providers, our findings suggest that *seed money* is an up-and-coming model applied by ECAs and EXIMs. Seed capital is financing used to start a business or project, typically for early-stage operations. Relevant institutions include the Export-Import Bank of Korea (KEXIM). Our research confirms previous findings from (Kim and Yoo, 2019) that Asian institutions such as KEXIM promote direct investments, fund investments and bond financing in addition to guarantees, insurance, and export loans. Furthermore, EDC collaborates with venture capital or private equity investor to increase the capital available to exporters. Participants mentioned that EDC started to invest independently or to collaborate with institutional investors in recent years. These investments focus on cleantech and inclusive trade and are made under standard industry terms, conditions and return expectations.

"Of course, we co-invest as well. Our aim is to level the playing field for diverse (exporters) by improving capital access" (Participant 4).

Diversification of service models such as the inclusion of *waivers* is often motivated by societal objectives. Waivers in financial institutions refer to the voluntary relinquishment of certain rights or obligations granted by the lender to a borrower. Based on climate finance-related mandates, many ECAs and EXIMs introduced ambitious climate strategies in recent years. Several institutions are pledging commitments to net zero and are members of the UN-convened Net-zero Export Credit Agencies Alliance (NZECA). Our results show that waivers apply for several highly industrialized countries: Austria provides an enhanced quasi-guarantee to exporters investing in green CAPEX such as new production lines or new machinery. Waivers in Belgium for green transactions include more flexible eligibility criteria and increased insured percentages. Bpifrance also introduced a climate bonus to support sustainable projects and green technologies.

"(We) introduced a climate bonus to support sustainable projects and green technologies. The idea is to maximize the insured financed portion and to waive some fees for project finance transactions" (Participant 8).

Furthermore, small and medium-sized exporters are a substantial success factor in many economies. Innovative small and medium-sized enterprises (SMEs) engaged in the export economy often have a higher growth rate and are seen as main actors of both domestic and regional development. Some banks and agencies therefore started to provide specific waivers or incentives for small and medium-sized exporters. The rationale is, for example, that SMEs have low barriers to use

officially supported export credits. 30% of ECAs and EXIMs in the assessed countries promote these specific tasks always or often by *waiving* eligibility requirements or reducing fees.

As a result, our findings confirm previous research from (Jennekens and Klasen, 2023) and Oramah (2020) that the product range has evolved consistently in recent years. Several ECAs and EXIMs are providing funding support at a much earlier stage, focusing on “trade creation” or “trade promotion” not only for existing but also for potential exporters. The funder role is particularly strong in Hungary, South Korea, Turkey and Finland. This is because the first three countries have limited commercial offerings and therefore very strong EXIMs that provide significant volumes of finance. In Finland, Finnvera is not only active in export financing, but also in providing domestic solutions where there is a market failure. Some service models may be attractive from a business perspective, but they are not allowed. As an example, *subsidies* do not play a significant role for ECAs and EXIMs. Government subsidies are financial assistance or incentives to promote economic activity, achieve specific goals or reduce financial burdens. This is no surprise as a subsidy is per se prohibited if it is conditional upon export performance according to Article 3 of the *Agreement on Subsidies and Countervailing Measures* (ASCM) of the World Trade Organization (WTO). The countries participating in this study are WTO members and thus not able to provide financial contributions by public ECAs and EXIMs which make an exporter “better off” than it would otherwise have been, absent the support.

### *Innovation through ECAs and EXIMs as yield shapers*

ECAs and EXIMs are usually driven by additionality and catalytic effects (Wright, 2011). Although most ECAs and EXIMs are also part of or funded by governments, they are developing new service models to generate additional income or collaboratively create a public service. The role of the yield shaper attains comparatively higher prominence in highly industrialized countries such as Japan, France, and Finland. Looking at the full sample, 52% of the participants always or often apply a *revenue sharing* model. Revenue sharing is the sharing of profits or income between different parties, such as companies, governments, or individuals, typically based on predetermined agreements. Interviewees mentioned that revenue sharing not only with public but also with private partners has become the norm for most assessed ECAs and EXIMs without discernible size-related or geographic patterns. On a single transaction basis, reinsurance can be found via facultative reinsurance arrangements. Facultative reinsurance is a type of insurance arrangement where individual risks are underwritten separately, allowing the ECA or EXIM to transfer specific risks to a reinsurer on a case-by-case basis. On a portfolio basis, treaty reinsurance is often regarded as a superior approach. Treaty reinsurance is a contractual arrangement whereby the reinsurer agrees to cover a predetermined portion of the primary insurer’s risks across a defined class or portfolio of policies. The concept of reinsurance became critical for capital management, as reinsurance can be seen as a kind of shadow capital according to interviewees. Several interviewees mentioned that this innovative public service model is now very important, crowding in commercial actors in the foreign trade universe:

“Reinsurance is a strategic approach for us, and nearly half of our guarantees or loans are reinsured with the private market or other ECAs; we share (premium revenues) to limit our risk” (Participant 6).

Data are the new oil, and so they are for ECAs and EXIMs. Many assessed institutions apply the model *leverage customer data* and share their data with a variety of public institutions, or make data available to the public. This public service model is on the rise. 48% of the participants mentioned that their ECA or EXIM has started to always or often generate data from their offerings that is made available for others.

“We are a core actor in “Team Finland” (to) accelerate (...) internationalization of firms. In the team, we cooperate closely with others, for example Business Finland; we further develop customer relationship with this service path” (Participant 7).

In Botswana, Canada, Japan, South Africa, and the United Arab Emirates, the use of data from exporters is often part of a strategic cooperation approach. The same is true for Bpifrance in an integrated institutional model. In addition, some banks and agencies, such as Atradius Dutch State Business in the Netherlands (Atradius DSB) and the Export-Import Bank of the United States (US EXIM), share non-confidential information with the public. For example, Atradius DSB regularly publishes economic forecasts and industry reports. In addition to case studies, US EXIM publishes a comprehensive annual report on global competitiveness. As there is no discernible geographic or size-related pattern, this appears to be a global innovation trend in the ECA and EXIM environment.

In addition, 56% of the ECAs and EXIMs have introduced more innovative approaches through *flat rates* for specific customer groups such as SMEs, or for some product elements. Flat rates refer to a fixed rate charged on insurance, guarantees or loan elements that remain constant throughout the term of the financial arrangement. Flat fees are common in many countries such as Botswana, Malawi, and South Africa. Although this is the case in some industrialized countries as well, flat fees are mainly visible in emerging markets and developing economies.

“We follow risk-based pricing, also because of our regulations; but we often use flat application fees for small exporters” (Participant 15).

*User-pays* is another relevant public service model for foreign trade promotion instruments. 44% always or often charge fees for extraordinary burdens caused by exporters. The main example of use are transactions with an Environmental and Social Impact Assessment (ESIA). Exporters must bear costs for ESIA reports, along with travel expenses for EXIM/ECA personnel and consultants for site visits.

“This is something to be borne by the exporter or the bank; we see this in a number of large transactions” (Participant 9).



### *Activator as an additional innovation approach*

The activator role seems to bear some potential for innovation in the field. Our findings reveal that ECAs and EXIMs increasingly focus their efforts on letting others participate in the facilitation and creation of foreign trade to deal with a divisive global environment and a new economic landscape. There is a need for exporters to deal with disruptive change because of multipolarity and regional competition. The activator role assumes considerable significance, for example, in the Middle East with Oman and the United Arab Emirates as prominent examples. The same applies for South Africa which developed a joint programme together with the multilateral African Export-Import Bank, facilitating the expansion of South Africa's trade to promote regional economic integration. This confirms previous research results from Oramah (2020) and [Turguttopbas \(2013\)](#) that ECAs and EXIMs creating network effects and coordinating different groups in developing countries are a crucial response to economic and external sector developments. Through appropriate measures such as the provision of *platforms* or the *orchestration* of de-risking and export financing activities, institutions focus on the mission to contribute to economic growth through trade. Interviewees mentioned that foreign buyers, investors, and commercial banks have become very active in structuring large projects, but also requesting support for smaller transactions.

56% of institutions in the assessed countries therefore have a much more relevant role as a *platform* now in comparison to previous years. This applies not only to developing economies but, as an innovative approach, also to Nordic countries such as Finland and Sweden creating special platforms. For instance, "Team Sweden" is a network of public organizations, agencies and companies that promote Swedish exports. Another example is the innovative pathfinding initiative of the Swiss export credit agency SERV. SERV connects Engineering, Procurement and Construction (EPC) contractors for large projects with Swiss exporters:

"Pathfinding gives Swiss SMEs access to EPC projects. We organize matchmaking events with S-GE (i.e., Switzerland Global Enterprise, the Swiss consultancy, promotion and platform organization for export and investment promotion) and try to act as a "Team Switzerland" platform" (Participant 23).

For complex projects, some agencies also started to orchestrate different stakeholders. For project finance off-balance sheet transactions which generate operating costs and debt repayment only out of the proceeds of the project, ECAs increasingly take on responsibility for structuring the deal, giving evidence that the public service model of an *orchestrator* is on the rise. 44% of the ECAs and EXIMs in the sample always or often follow a market-oriented course of action, taking an outside-in perspective as an orchestrator and looking at market and customer needs first. This innovative service model is often fundamental for complex transactions where EXIMs and ECA play a very active role:

"We often orchestrate different parties; yes, we often do this in project finance" (Participant 20).

Interviewees also mentioned that *crowdsourcing* has gained importance as public service model for agencies and banks. Institutions in 44% of the surveyed countries involve a large number of external actors in their value creation, in innovation processes or in the generation of knowledge. However, ECAs and EXIMs are usually not doing this in a structured and systematic way:

“We do this often, discussing with partners, consulting with many others, such as banks and exporters. But we don’t do it in a structured way” (Participant 21).

### *Innovative ECAs and EXIMs as performance designers*

In addition, the government and its institutions focus their efforts on the question of how services are to be designed to achieve the best effect on the target groups. Our results show that several public service models as part of a performance designer role have become important for most assessed ECAs and EXIMs. Strong performance designations are attributed to South Africa, Oman (both in a dominant capacity), Canada, and the United Arab Emirates. Previous research has shown that governments promote trade by providing exporters with access to market intelligence, legal advice, and other forms of support such as equity, loans, and insurance. In line with insurance demand theory (Braun and Fischer, 2018), several interviewees mentioned that exporters’ main motives for purchase are risk aversion and balance sheet protection. The willingness of exporters to pay for certainty is well documented in business and economic literature. If commercial banks use public export credit guarantees or insurance, capital relief is a main driver for demand. Applying the *experience selling* model and providing emotional value to this offering through clever labelling became much more relevant in recent years according to interviewees. The public service model of experience selling is thus key for ECAs and EXIMs:

“Our next marketing campaign is based on that: the motive is a “stress ball”. We had a similar campaign some years ago where we mentioned that “you can sleep well at night” with our insurance (...) with a pillow as a motive” (Participant 21).

Service model analysis reveals some practices that have not been discussed before. In the existing body of knowledge in the field, not much is available about other relevant models related to the role of ECAs and EXIMs as performance designer. According to 67% of the participants, they always or often act as a *solution performance designer*:

“We know (...) that global trade competitiveness needs a boost. We think about customer needs first, we facilitate trade (...), we promote trade” (Participant 4).

All participating banks and agencies confirmed that customer-orientation drives their activities and that this means they must be highly flexible in timely offers. Thus, they apply the model *Standby* always or often for foreign trade support:

“We do have our governance, we cannot disregard this; but when the case is ready, within a few days, there is a meeting with decisions. If it is an urgent transaction, we are very quick” (Participant 13).

Many banks and agencies recently started to follow the principle of “one face to the customer”, combined with a comprehensive service package in specific situations. Some countries offer other services in the same infrastructure, such as Credit Oman. The shop-in-shop approach in France is that a public development bank has pooled its know-how while combining the various financing techniques for SMEs in one organization: In addition to the ECA role, Bpifrance supports businesses from the seed phase to transfer to stock exchange listing through loans, guarantees and equity. It also provides support for enterprises’ innovation projects and emphasizes all aspects of company access to international markets. Interviewees also describe the approach of integrated services in Finland as successful. It combines government services to support SMEs under one roof, allowing Finnish companies to have contact with only one organization in the sense of a “one-stop-shop”. It also enables the Finnish ECA to “hand-over” clients between members of Team Finland. 44% of participating ECAs and EXIMs now always or often follow a *shop-in-shop* concept.

Furthermore, 81% of the interviewees mentioned the high importance of the service model *digitalization* for their positioning in the market. Surprisingly, many mature ECAs and EXIMs, such as EDC and the German ECA, have implemented smart technologies for digital applications recently. Credendo in Belgium was the first ECA to launch a blockchain application. While these agencies have been around for decades and may have been more bureaucratic in the past, there is a clear understanding that digital is a necessary way forward to improve customer service and client engagement.:

“We are always digital. We are paperless, our clients can use a digital portal. And yes, we launched a blockchain-powered application” (Participant 2).

*Outsourcing* is also key for institutions. While their ECA or EXIM is usually responsible for the handling of underwriting reports, credit analyses and claims assessments, the researched institutions purchase inputs from external suppliers such as law firms and consultants:

“A typical example environmental and social risk assessment, we use external consultants for large projects and (...) we do internal assessments for small projects (Participant 7).

### *Guardian of public goods*

Our data suggest that there is a fairly large amount of service models that have no or hardly any relevance for ECAs and EXIMs. The role of the guardian of public goods does not manifest with particular prominence in any country. It is primarily those models that either involve the distribution or the defense of public goods (*permits, concessions, registrar*).

Service model analysis thus not only takes account of highly relevant models, but it also demonstrates that a large amount of service models is not in use in this policy field.

## Conclusions and limitations

This research delved into the nuanced application of service models within a specific policy sector – officially supported export credits – examining the motivations and practical experiences that shape their utilization in the field. Our inquiry revolved around the central question: *How do Export Credit Agencies and Export-Import Banks adopt public service models to support exporters?* Conducting a multiple case study spanning 27 countries, we scrutinized agencies and banks, revealing that ECAs and EXIMs, as public foreign trade promotion entities, exhibit distinct fingerprints in the application and evolution of service models. While we observed a limited number of traditional service models with significant relevance, our findings underscore a rising diversity that signifies innovation and the broadening scope of these organizations' activities. While ECAs and EXIMs traditionally were passive institutions in the past focusing on their role as funders, they now often develop, implement, and improve state-of-the-art processes to generate increasing value for exporters and other stakeholders. Exporters request agile transformation, improvement, and adjustment of processes. Innovative ECAs and EXIMs respond with public service models related to new roles as yield shapers, activators, or performance designers. The analysis of service models emerges as a transformative method, offering interviewees a fresh perspective on their own operations. Dealing systematically with the 45 identified models presents a challenge yet proves stimulating for the actors involved. Post-interview, some participants expressed a keen interest in delving more intensively into the models, recognizing their potential for driving further innovation within their organizations. It became evident during interviews that thinking in terms of service models is novel for most ECAs and EXIMs, but after a brief familiarization phase, they perceive it as highly valuable.

In essence, this study introduced a novel dimension to the literature on service models in public administration. By elucidating the myriad factors and drivers influencing the adoption of specific service models, we addressed a research gap in the realm of foreign trade promotion. The paper provided a systematic analysis of public service models applied to export finance and insurance instruments, augmenting existing research that predominantly focuses on legal, economic, financial, and sustainability aspects of ECAs and EXIMs. Our results contribute to a dynamic understanding of government value creation, offering a holistic view of the respective services and examining the evolution of these models. In addition, our findings shed light on the interplay between public service provision and overarching policy objectives, enriching the scholarly discourse on the role of ECAs and EXIMs in promoting economic development and global competitiveness. Our study thus advances the field by offering nuanced perspectives on the complexities inherent in government-led initiatives, thereby contributing significantly to the theoretical underpinnings and practical applications of export credit and insurance mechanisms. The practical implications of our study extend to policy makers and public sector executives, enhancing their comprehension of the relevance of service models for task fulfillment. By

identifying the strengths and limitations of different service models, our research provides them with actionable recommendations to streamline policies, allocate resources effectively, and navigate regulatory frameworks. In addition, our findings enable industry practitioners to adapt and innovate their approaches to using government-backed export finance and insurance instruments. Through interviews with ECA and EXIM leaders, we observe a shift from initial unfamiliarity to increasing excitement and perceived profitability as they embrace the approach. Recognizing and structuring one's own service models constitute the first step, paving the way for innovation as organizations explore alternative models to enhance their impact. The standardized models also facilitate benchmarking with similar organizations, fostering a comparative perspective.

However, our study has limitations, primarily relying on qualitative data. The sample selection may introduce bias towards ECAs and EXIMs with high visibility, potentially limiting generalizability. Additionally, the focus on informants at the policy and managerial level, rather than beneficiaries such as exporters, narrows the scope. Future research could delve into the application and enhancement of existing models, exploring their impact on officially supported export credits. Further investigations into the role and relevance of ECAs and EXIMs in economic ecosystems would contribute to filling gaps in public administration research in this domain, expanding beyond legal, regulatory, macroeconomic, financial, and environmental considerations.

### **Declaration of conflicting interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### **Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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