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A Public Choice

Perspective on Mission- Oriented Innovation Policies and the Behavior of Government Agencies

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A Public Choice Perspective on Mission-Oriented Innovation Policies and the Behavior of Government Agencies

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Abstract: Mission-oriented innovation policies put government and state agencies at the forefront of the innovation process. Presently, little is known about the interests of the government agencies in charge of implementing mission-oriented innovation policies. In this chapter, we set out to explore the incentives and behavior of such government agencies. We do so by analyzing 30 annual reports from three different government agencies in charge of implementing innovation policies in Sweden over a ten-year period: Sweden's Innovation Agency (*Vinnova*), the Swedish Energy Agency (*Energimyndigheten*) and the Swedish Agency for Economic and Regional Growth (*Tillväxtverket*). First, we track all cases in these annual reports where an evaluation is mentioned. Identifying 654 instances, we subsequently make a sentiment analysis and code whether these statements are positive, neutral or negative. Our findings show that 84 percent of these instances are positive, 12 percent are neutral and four percent are negative. Second, we relate these results to more critical evaluations and show that these agencies often ignore research that generates more critical results. In sum, our results suggest that government agencies in charge of implementing mission-oriented policies benefit from the enlarged role they are given and that they act according to their own self-interest.

Keywords: Mission-oriented; Innovation Policy; Evaluations; Public choice

JEL codes: O25, O31, O38, O44, Q42, Q55

Introduction

Over the past two decades, the Western world has witnessed an increasing implementation of interventionist innovation policies. The focus of innovation policy has evolved beyond creating favorable conditions for firms and enhancing the supply of research and development, which can lead to positive spillovers and economic growth. Scholars like Mariana Mazzucato (2014, 2021) have elevated the European Union, national governments, and regional policymakers to the forefront of the innovation process. Consequently, a plethora of policies with larger budgets and higher expectations regarding their contribution to innovation and renewal have been launched.

These policies, which explicitly recognize the state as the primary driver and initiator of innovative change, necessitate further scrutiny. While existing research has primarily concentrated on firms and specific industries, limited attention has been given to the government agencies that now play an increasingly important role in steering the innovation process. As budgets expand at both the EU and national/regional levels, it becomes imperative to empirically study the behavior of these government agencies. What incentives drive these agencies, and do they act in their own interest or in the best interest of society at large?

In this chapter, we delve into an examination and explanation of the conduct exhibited by government agencies responsible for implementing mission-oriented policies and advocating for the state as an important entrepreneurial force in society. Our analysis centers on the annual reports of three Swedish government agencies—*Vinnova* (Sweden’s Innovation Agency), *Energimyndigheten* (the Swedish Energy Agency), and *Tillväxtverket* (the Swedish Agency for Economic and Regional Growth)—spanning a full decade. By scrutinizing the content of these 30 annual reports, we identify 654 instances where specific evaluations are mentioned. Utilizing sentiment analysis, we demonstrate that an overwhelming majority of these instances (84 percent) feature positive statements, while 12 percent remain neutral, and four percent can be considered negative or critical. Intriguingly, only 12 of these 654 instances (1.8 percent) are substantiated by references, making it challenging to locate original sources supporting these claims. Our findings align with the theory of public choice, which posits that government agencies act in their own self-interest.

The subsequent sections of this chapter are organized as follows. We begin by introducing the concept of mission-oriented policies and the notion of the state as the driving force in the innovation process. We also discuss relevant public choice literature and

associated theories that elucidate the incentives and behaviors of government agencies. Then we present our methodology and data, followed by a comprehensive discussion and concluding remarks.

Background: Innovation Policy and Missions

While numerous scholars have proposed more directed innovation policies, no one has been more effective in disseminating and conveying these ideas to policymakers than Mariana Mazzucato (2014, 2021). Drawing on examples such as the Apollo Project and the Manhattan Project, Mazzucato argues that the state should embark on bold endeavors in uncharted territories, acting as a guide and driver of societal change towards social and economic progress. In her own words:

The key insight of this report is that missions are both a means of setting economic growth in the direction of where we want to be as a society and a vehicle we can use to get there (Mazzucato 2018, p. 28).

From this perspective, policymakers assume a prominent role as the primary agents responsible for bringing about desirable transformations. As stated by Kattel et al. (2021, p. 18):

Moving towards a greener, low carbon economy entails redirecting all sectors and actors—public, private, and civil society—towards sustainable and inclusive economic growth.

The fact that the aforementioned publication by Mazzucato serves as an official document of the European Commission underscores the growing popularity of mission policies among policymakers.

Missions and the state

With few exceptions, literature on mission-oriented policies asserts that governments possess both the capability and the altruism necessary to effectively implement specific missions. These assumptions are clearly articulated in numerous reports, book chapters, and academic papers authored by Mazzucato and her colleagues. Here is an illustrative example (Mazzucato 2022, p. 93):

Governments are the only actors capable of underwriting the scale of investments required; of coordinating multiple actors around the common goal of decarbonization; and of ensuring the costs and benefits of a green transition are distributed equitably across society so that social injustices are tackled alongside environmental crises.

Furthermore, in the mission-oriented literature various government initiatives are often invoked to support its arguments. In these instances, government actors are portrayed as both competent and motivated by good intentions (Sachs et al. 2019, p. 811): “Lessons should be learned from mission-oriented organizations like DARPA and ARPA-E in the U.S., Yozma in Israel, SITRA in Finland, and Vinnova in Sweden. ”

Public Choice Theory and Mission-Oriented Policies

While policymaking is often perceived as an altruistic process free from self-interest, there exists a body of literature that challenges this notion. James Buchanan and Gordon Tullock (1965), in their work *The Calculus of Consent*, posited that politics is an ongoing process occurring amidst distributed agency. In other words, stakeholders are assumed to have diverse and sometimes conflicting incentives when seeking to influence the policy-making process.

In their efforts to expand upon the public choice aspects discussed in *Questioning the Entrepreneurial State* (Wennberg and Sandström, 2022; Bergkvist et al., 2022), Muldoon and Yonai (2023) provide a comprehensive analysis of how policymaking in innovation policy can lead to suboptimal outcomes due to divergent incentives and the influence of interest groups on the policy process. Stam and Vogelaar (2023) also underscored the importance of regarding government as a collection of groups and actors and that referring to the state as one homogenous entity would be an oversimplification.

Public choice scholars assume that actors in the policy-making process behave as economic agents, aiming to maximize their own utility. Powerful and concentrated interest groups, such as large corporations, labor unions, and industry associations, leverage superior relational and financial resources, often combined with asymmetric knowledge, to influence policies. As a result, they shape regulations, compensation schemes, and tax structures to their advantage.

Applying the public choice perspective to Mazzucato's ideas about an entrepreneurial state, Muldoon and Yonai (2023) summarize their argument in the following manner:

She [Mazzucato] fails to recognize that increased government involvement will lead to rent-seeking and unproductive entrepreneurship (Kirzner 1985, p. 144–245). This oversight is problematic because rent-seeking erodes support in institutions, politicians, and the larger society, leading to the decline of a nation (Olson 1982). We argue that scholars should pay closer attention to the Public Choice literature in economics when analyzing the partnership between governments and business. (p. 2)

Muldoon and Yonai further state that the notion of an entrepreneurial state:

conjures an image of disinterested and competent technocrats who make decisions based on knowledge, with their sole motivation being the common good. In addition, because these technocrats are nonpartisan and not self-interested, their motivation will be in the long-term good. (p. 3).

Hence mission-oriented policies are according to Muldoon and Yonai based upon the idea of the entrepreneurial state as “a dynamic, thoughtful body that makes decisions based on relevant information.” (p. 3).

Remarkably, Mazzucato briefly acknowledges the critique posed by the Public Choice literature in the chapter titled *Bad Theory, Bad Practice* within her book *Mission Economy A Moonshot Guide to Changing Capitalism* (2021):

But just as MFT [Market Failure Theory] is a theoretical construct, so is its alter ego, public choice theory. The axiom underlying public choice theory is that bureaucrats and politicians behave like free-market actors: they rationally seek to maximize their ‘utility’. Self-interested bureaucrats and politicians are effectively entrepreneurs who compete to gain control of a monopoly, the state.¹ But, rather as with MFT, no empirical evidence was advanced to support his idea. It was just assumed that social, constitutional and ethical concerns never motivated bureaucrats and politicians. (p. 33–34)

The detailed examination of the lack of empirical research on public choice, a field of study that has gained significant importance over the past 70 years (c.f. Mueller 2003), falls beyond the scope of this paper.

Public Choice and the incentives of government agencies

Public choice scholars often posit that reducing government expenditure is challenging. Attempts by a government to cut funding for an agency are met with resistance, as the agency presents persuasive arguments highlighting the societal significance of their operations. A recent study by Bednarczuk (2022) yielded similar findings, demonstrating that government officials tend to support increased government expenditure when their own agencies receive more funding.

¹ A. Innes <https://blogs.lse.ac.uk/europpblog/2018/09/29/the-dismantling-of-the-state-since-the-1980s-brexit-is-the-wrong-diagnosis-of-a-real-crisis/> (accessed 2 January 2020).

Synthesis and research problem

As previously mentioned, there has been limited research on the specific role of government agencies in the implementation of mission-oriented policies. Existing literature on mission-oriented innovation often portrays these agencies as competent and driven by altruistic motives. A notable example of this perspective is evident in Mazzucato's description of NASA, where she portrays the agency in the following manner:

Running a mission-oriented system of innovation requires leadership that – like NASA – encourages risk-taking and adaptation and can attract the best talent. It is important that agencies carrying out missions have sufficient autonomy to take risks without their authority being questioned. (Mazzucato 2021, p. 74–75)

Furthermore, Mazzucato depicts the role of the government driven by altruism in mission-oriented innovation as follows:

The point is: to think in a mission-oriented way is revolutionary because it requires rethinking the role of government in the economy, putting purpose first and solving problems that are important to citizens. It means transforming government from being merely an ‘enabler’ or even a ‘stifler’ of innovation to becoming the engine of innovation. (Mazzucato 2021, p. 123)

Upon reviewing Public Choice literature, Mazzucato succinctly summarizes the Public Choice view upon government:

In public administration, the lack of competitive pressure leads to ‘bureau-maximizing’ behavior, whereby departments and agencies look after their own survival rather than the ‘common good’. (Mazzucato 2021, p. 33)

In summary, the alignment of government agencies with public choice literature remains an empirical inquiry. A deeper understanding is required regarding the actual conduct of government agencies responsible for implementing innovation policies. Hence, the objective of this paper is to investigate the motivations and actions of these government agencies that are put in charge of mission-oriented policies.

Method

We conducted an analysis of the annual reports spanning a period of 10 years from three of Sweden's innovation agencies: *Tillväxtverket* (The Agency for Regional and Economic Growth), *Vinnova* (The Innovation Agency), and *Energimyndigheten* (The Energy Agency). These reports were obtained from the agencies' websites (or webshop in the case of the Energy Agency), covering a total of 30 annual reports published between 2011 and 2021.

The use of annual reports as the unit of analysis offers several advantages. Firstly, these reports are a mandatory requirement for all agencies, ensuring compliance with legal obligations (as stipulated in SFS 2000:605 and SFS 2019:577 after January 1st, 2020). This guarantees a certain level of comparability between annual reports, both within and across agencies over time. Importantly, annual reports are expected to:

[...] provide a brief basis for the government's follow-up, examination or budgeting of the agency's activities.²

In addition, the annual reports are supposed to provide a *fair representation* of the agency's activities according to § 6 in the ordinance SFS 2000:605:

The elements of the annual report shall be established as a whole and give a 'fair representation' of the results of the activities as well as of costs, income and the financial position of the agency.³

These two requirements are significant for our study. Firstly, they provide us with insights into the utilization of these annual reports, such as their purpose in budgeting. Secondly, the legal obligation to provide a fair and accurate representation of their activities ensures the reliability and validity of these reports. Hence, we can confidently assert that the utilization of annual reports as a unit of analysis is justified and valuable for our research.

Data analysis

Our analysis involved a comprehensive two-step approach. Firstly, we employed a systematic coding scheme to examine the material. We reviewed all 30 annual reports, specifically focusing on sections where statements related to evaluations were mentioned. To ensure inclusivity, we utilized the Swedish search term "utvärld" (equivalent to "evalua" in English) to identify relevant passages. Each statement was assessed within its context and evaluated for its relevance to our research objectives. A statement was deemed relevant if it pertained to evaluations of the agency's activities. These pertinent statements were then documented in an Excel spreadsheet and coded based on the following criteria:

1. Positive, negative, or neutral tone

² *Handlingarna ska kortfattat ge underlag för regeringens uppföljning, prövning eller budgetering av myndighetens verksamhet. Förordning (2017:862). Note: This requirement both annual reports and budget documents (budgetunderlag)*

³ *6 § Årsredovisningens delar skall upprättas som en helhet och ge en rättvisande bild av verksamhetens resultat samt av kostnader, intäkter och myndighetens ekonomiska ställning."*

2. Presence of a source for the evaluation

The first criterion aimed to capture how evaluations were portrayed in the annual reports and how they impacted the agency's activities. The second criterion sought to determine whether the mentioned evaluations were properly attributed. Additionally, we recorded the title of the annual report, the respective agency, the year, and the name of the evaluation if referenced.

Initially, one researcher meticulously reviewed all 30 annual reports and compiled the Excel spreadsheet following the aforementioned methodology. Subsequently, two separate researchers independently coded the recorded statements from the spreadsheet, applying criteria 1) and 2), without any knowledge of the initial researcher's coding. This process resulted in a total of 665 observations. Out of these observations, 11 were found to use the term “evaluation” without discussing evaluations, and therefore, they were excluded from the dataset. The final dataset comprised 654 observations. The coding performed by the two researchers yielded the following discrepancies:

Table 1. The coding results of the three different researchers.

	Researcher 1	Researcher 2	Researcher 3
Positive	554	528	530
% positive	85	81	81
Neutral	78	96	101
% neutral	12	15	15
Negative	22	30	23
% negative	3	5	4
Total	654	654	654

In cases where there was a discrepancy in the coding of statements among the three researchers, the coding was based on the consensus of two researchers' perceptions. Overall, the three researchers reached a mutual agreement in 88 percent of the cases. In the remaining 12 percent of cases (113 observations), one researcher's coding differed from that of the others.

Results

This section commences with a concise depiction of the empirical context of innovation policy in Sweden. Subsequently, we delve into a review of pertinent research that explores the evaluation of government agencies' endeavors by various groups of evaluators. Within this

review, we also examine research that adopts a more cautious stance toward the effectiveness of innovation support. Following that, we present our findings regarding the utilization of evaluations by government agencies and their self-assessment of their work as documented in their annual reports.

Empirical background

In Sweden, innovation policy is primarily administered through a few prominent and independent state agencies, which aligns with the typical structure of Swedish public administration. Notable agencies in this realm include the Innovation Agency, the Agency for Economic and Regional Growth, and the Energy Agency, collectively responsible for a significant portion of the allocated resources. The remarkable growth of these government agencies over the past decades is evident from *Figure 1* and *2*. Expenditure related to innovation policy has grown rapidly, with state grants alone (excluding EU, regional, and municipal investments) surpassing one billion euros annually (Karlson et al., 2019). The corresponding U.S. figure exceeds 13 billion dollars (Hunt and Kiefer 2017).

Figure 1. The budget of Sweden’s Energy Agency, 2003–2021 (billion SEK).

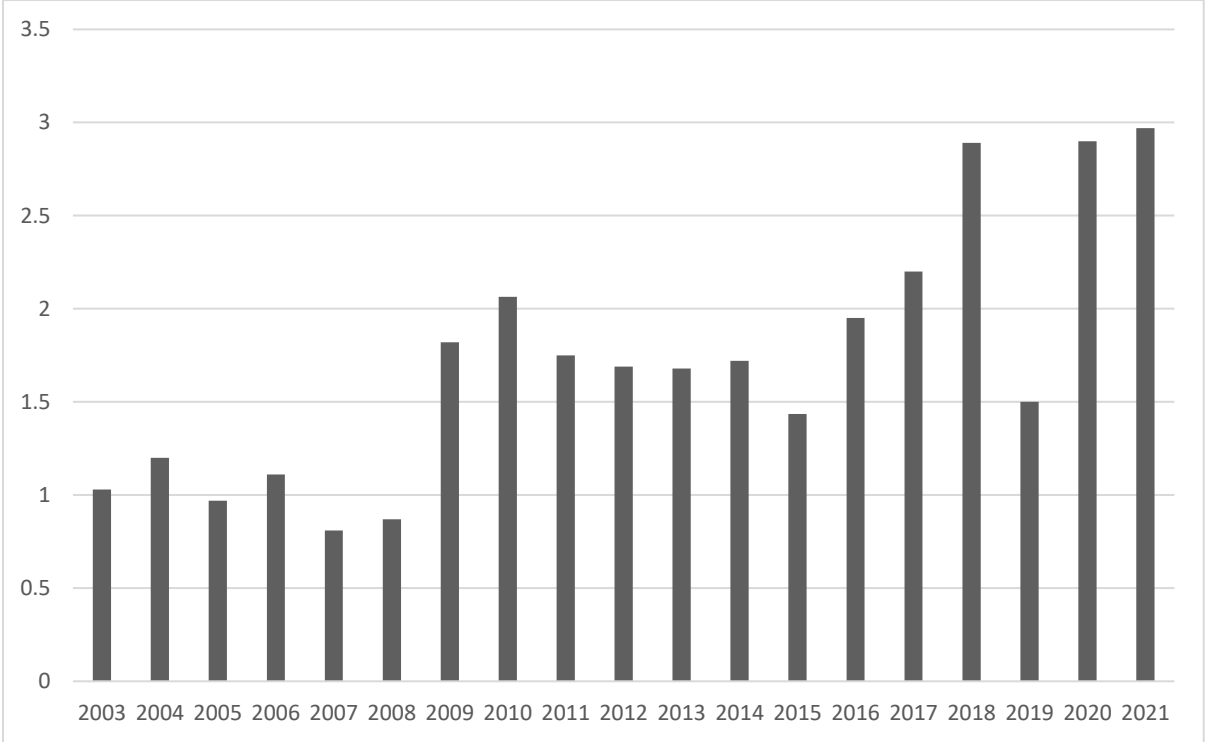
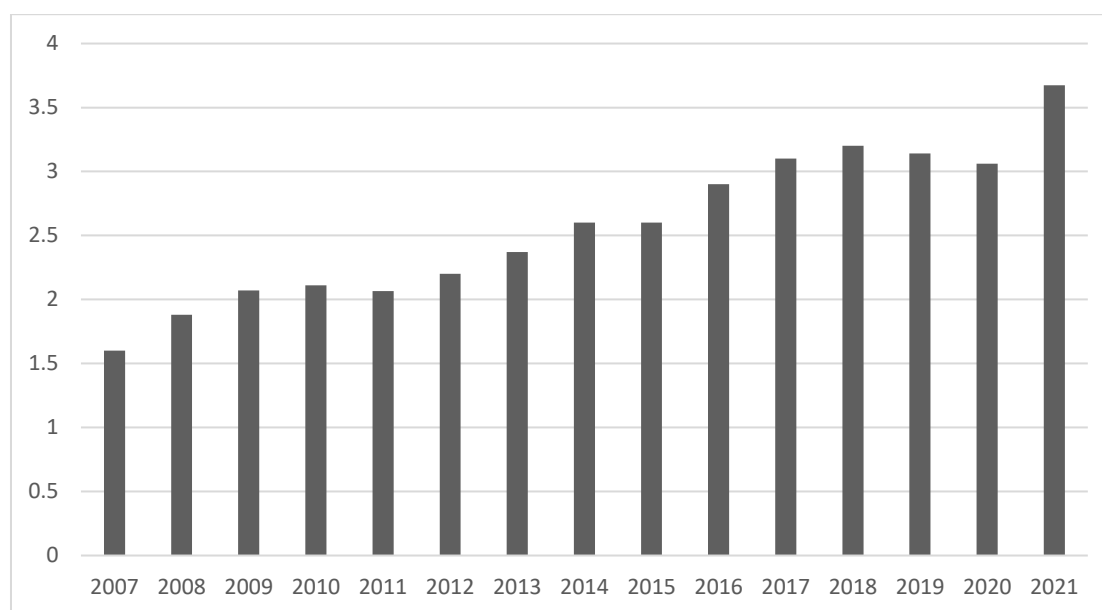


Figure 2. The budget of Vinnova, 2007 2021 (Billion SEK)



Evaluations of innovation policies in Sweden

In Sweden, as in many other Western countries, evaluations are conducted extensively across the entire public sector, including within the domain of innovation policy. Two independent agencies, namely *Tillväxtanalys* (the Swedish Agency for Growth Policy Analysis, henceforth SAGPA) and *Riksrevisionen* (the Swedish National Audit Office, NAO), are responsible for performing evaluations in this field. Additionally, evaluations are carried out by researchers and consultants who are specifically hired to assess particular tasks or initiatives.

A comprehensive study conducted by Collin et al. (2022) examined two key aspects of 110 innovation policy evaluations: 1) the entities responsible for conducting the evaluations and 2) the findings and conclusions derived from these evaluations. Out of the 110 evaluations analyzed, 67 were categorized as positive, 37 as neutral, and 6 as negative. 51 percent of the evaluations were conducted by consultants, 28 percent by auditing agencies, 13.5 percent by researchers, while 7.5 percent were self-evaluations. *Table 2* shows that 61 percent of the evaluations were positive, 33.5 percent neutral and 5.5 were negative or critical. When looking at different categories of evaluators, it is clear that consultants and self-evaluations are more positive.

Table 2. Share of positive, neutral, and negative evaluations of innovation policy per evaluator type.

	Total	Evaluations by evaluator type			
		Other agencies	Consultants	Self evaluation	Academic Researcher
Positive	61%	51%	73%	50%	53%
Neutral	33.5%	33%	27%	50%	40%
Negative	5.5%	16%	0	0	7%

Examples of critical policy evaluations

While the majority of evaluations and research papers tend to overlook failures, there are a few notable exceptions. Daunfeldt et al. (2016, 2022) conducted a counterfactual study using a matched control group, which showed that several support schemes had no significant effects on employment, turnover, or profits. In a subsequent study, Gustavsson Tingvall and Videnord (2020) documented a difference between rural and urban areas. Positive but weak effects were found for cities, while a statistically significant negative effect was found for rural regions (Gustavsson Tingvall and Videnord 2020).

Gustafsson et al. (2019) examined the long-term performance of firms after receiving innovation grants. Contrary to popular belief regarding the substantial long-term benefits of such grants, the effects were only initially observed. The primary cause of these effects was an initial boost of investment. However, the positive effect was not sustained. The authors aptly referred to this phenomenon as a “sugar rush” effect due to the absence of sustained long-term effects.

Gustafsson et al. (2020) studied “subsidy entrepreneurs,” defined as firms that received multiple grants and R&D subsidies from government agencies (. During the period 1997–2013, they found that out of 14,205 firms receiving support, 3,624 had obtained more than one grant, with some even receiving more than 10 different grants. Interestingly, these subsidy entrepreneurs, on average, paid higher wages but exhibited lower productivity compared to non-recipients of support. Apart from this disparity, no significant effects were identified.

In a subsequent study, SAGPA examined 15 innovation programs that collectively amounted to SEK 1.8 billion disbursed to firms between 2001 and 2010. The results of this analysis are summarized by SAGPA (2019):

No significant connection between receiving support and firm turnover could be found in the short or long term. The absence of effects on turnover holds regardless of whether we compare with the firms' own past development or a control group of similar firms that have not received support. (p. 28)

The researchers found significant effects only for one category: firms with fewer than 250 employees. However, they were unable to identify any indirect effects in terms of investments or the number of employees. SAGPA further asserts:

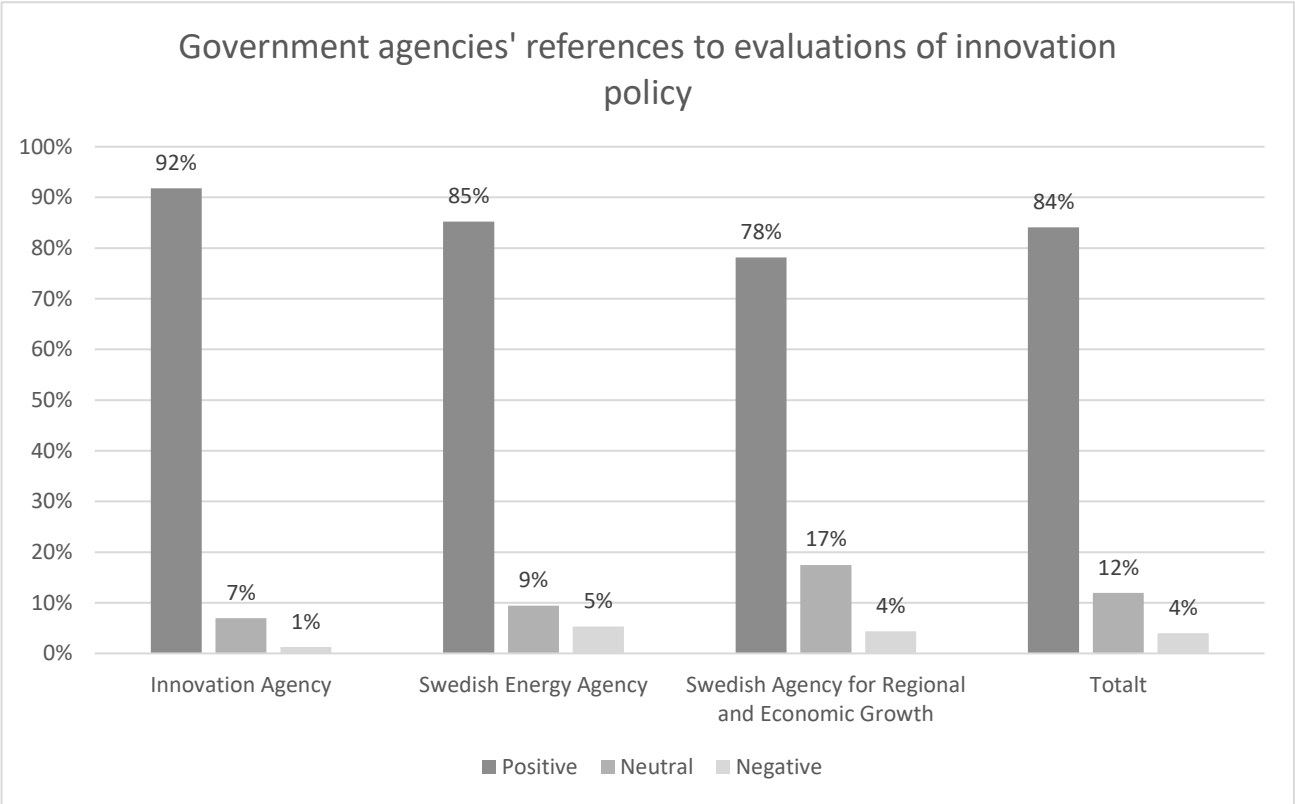
Regardless of controlling for city or countryside, manufacturing or services or different definitions of growth-oriented support, the result is the same. No effect on firm turnover can be found. (p. 28)

In summary, prior research has demonstrated that a significant portion of evaluations of innovation policy is conducted by actors who are reliant on government agencies, and these evaluations often yield positive conclusions, despite limited scientific evidence supporting such positivity. Furthermore, we note that these actors, including consultants and self-evaluations, who depend on government agencies, tend to exhibit a more positive outlook. In the following section, we will present our empirical contribution, which examines how government agencies responsible for innovation policy utilize evaluations and provide commentary on their own operations.

How government agencies use evaluations

After examining the evaluations of the three innovation agencies (the Energy Agency, the Innovation Agency, and the Agency for Economic and Regional Growth) and comparing them to evaluations that emphasize effects and employ a counterfactual approach, we will now delve into how these government agencies incorporate evaluations into their annual reports. *Figure 5* illustrates the distribution of positive, neutral, and negative statements made by these agencies in their annual reports. To provide a clearer understanding, *Tables 3–5* offer illustrative examples of positive, neutral, and negative statements.

Figure 5. Share of positive, neutral, and negative statements regarding evaluations of innovation policy in the annual reports of the three agencies (2011–2021).



Across all three agencies, a consistent pattern emerges with a prevalence of positive statements, a limited presence of neutral and negative statements. The Innovation Agency stands out by having the highest proportion of positive statements (92 percent) and the lowest proportion of negative statements (1 percent), while the Agency for Regional and Economic Growth exhibits the lowest share of positive statements (78 percent). In contrast, the Energy Agency records the highest percentage of negative statements (5 percent).

Table 3. Illustrative examples of positive statements made by government agencies concerning evaluations.

Annual report	Quote
The Energy Agency (2020)	“Thereby, the program contributes to energy efficiency improvement that otherwise would not have occurred within the Swedish industry.”
The Energy Agency (2015)	“An evaluation conducted in 2015 shows that the program is a pioneering effort, both nationally and internationally.”
The Agency for Regional and Economic Growth (2016)	“Furthermore, it was revealed that the program strongly contributed to saving companies and jobs, and that the survival rate is high among the companies that have received counseling via the Business Emergency Line.”
The Agency for Regional and Economic Growth (2013)	“The impact and the ability to reach customers improved and also became greater than if the company had carried out the initiative on its own.”
The Innovation Agency (2011)	“A preliminary study also shows that companies participating in <i>'Produktionslyftet'</i> have shown better growth than companies on average, even during the financial crisis.”
The Innovation Agency (2010)	“The evaluators conclude that TSS has performed exceptionally well in connecting various actors in Sweden with an interest in demonstration and testing activities of vehicles.”

Table 4. Illustrative examples of neutral statements made by government agencies concerning evaluations.

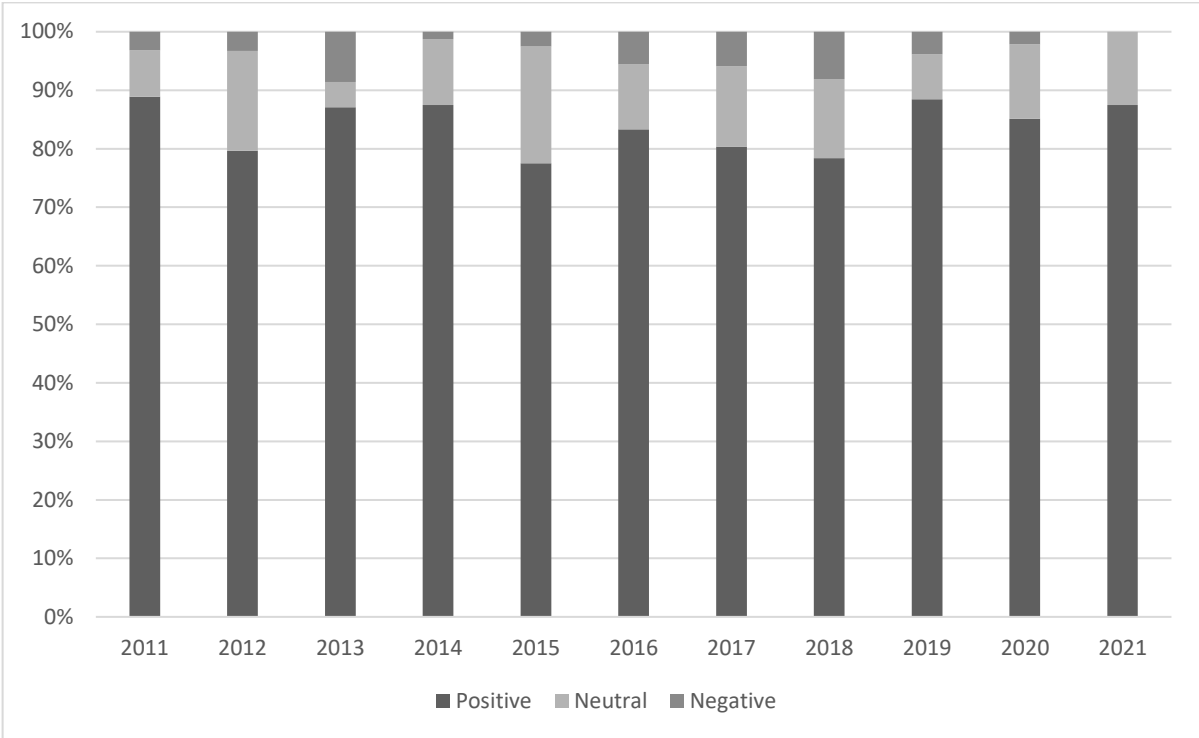
Annual report	Quote
The Energy Agency (2020)	“The evaluation points out that there is a continued need to work on energy efficiency among SMEs, but that the support needs to be differentiated and adapted to different industries.”
The Energy Agency (2019)	“However, the program has only partially contributed to increasing companies' opportunities to spread their innovations”
The Agency for Regional and Economic Growth (2019)	“Based on these evaluations, The Agency for Regional and Economic Growth concludes that the content can generally be considered relevant. However, it is clear that a certain target group demands some form of knowledge exchange that is more specialized and advanced”
The Agency for Regional and Economic Growth (2020)	“The evaluation showed that the results and effects of the mission are visible primarily in the long term.”
The Innovation Agency (2012)	“After conducting an employee survey and a 360-degree evaluation in 2011, improvement areas were identified and action plans were established.”
The Innovation Agency (2014)	“Evaluations during the year, on the other hand, have given a mixed picture of the programs' effect on the companies.”

Table 5. Illustrative examples of negative or critical statements made by government agencies concerning evaluations.

Annual report	Quote
The Energy Agency (2012)	“Regarding the agency's processing, some criticism was raised concerning long preparation and decision-making processes”
The Energy Agency (2011)	“The Energy Agency's role and involvement in the course need to be developed”
The Agency for Regional and Economic Growth (2019)	“Kontigo also pointed at a lack of program ownership in the form of organizations that take long-term strategic responsibility in the border region, and who can work across boundaries.”
The Agency for Regional and Economic Growth (2017)	“The evaluators pointed out that the implementation can be improved, for example through clearer prioritization among policy documents and through clearer description and consensus on how each program is expected to achieve its goals.”
The Innovation Agency (2014)	“The authors of the previous report argued that no significant effects on, for example, growth and employment from the Innovation Agency's investments could be identified with the method applied.”
The Innovation Agency (2018)	“However, the programs should strengthen their work on internationalization and enhance communication efforts, as well as further develop their work on gender equality and diversity.”

Figure 6 presents how the share of positive, negative, and neutral statements have evolved over time. Here, no significant differences can be identified during the studied time period.

Figure 6. Share of positive, neutral, and negative statements regarding evaluations of innovation policy in the annual reports of the three agencies (2011–2021).



Discussion

In this section, we delve into a discussion and interpretation of our findings. A concise summary of our results is provided in *Table 6* on the following page. The data indicates here and in *Tables 2-5* that both evaluations themselves and the way government agencies reference these evaluations lean towards a positive perspective. As a result, government agencies are portrayed in a favorable light.

These outcomes align with the principles of public choice theory, which asserts that policymaking occurs within a framework of distributed agency, wherein the involved actors strive to maximize their own interests. According to public choice theory, government agencies typically prefer to avoid budget cuts and instead aim for budget expansion. With a growing budget, each manager's relative importance expands, enabling the agency to undertake more activities it deems important. Armed with asymmetric information and motivated to advocate for additional resources, government agencies are typically capable and willing to take actions that sustain their revenues and promote organizational growth. We discuss various aspects of this behavior in the coming sub-sections.

Table 6. Share of positive, neutral, and negative references to evaluations made by government agencies. The first column contains overall results and the following columns show results for different evaluators.

	References to policy evaluations	The Energy Agency	The Innovation Agency	The Agency for Economic and Regional Growth
Positive	84%	85%	92%	78%
Neutral	12%	10%	7%	17%
Negative	4%	5%	1%	4%

Evaluations are positive but lack evidence

Starting with *Table 2*, we see that the vast majority of evaluations of innovation policy are positive (Collin et al. 2022). As reported in Collin et al. (2022), the National Audit Office made the following statement about these evaluations of innovation policy:

There are considerable weaknesses in the effect evaluations of industrial policy that have been carried out by government agencies: only 2 out of 37 studied evaluations fulfill all three elementary criteria set up by the NAO regarding credible evaluations. (NAO 2020, p. 4)

When combining this statement with the fact that a collection of publications utilizing counterfactual evaluations presents a significantly less positive impression (e.g., Daunfeldt et al. 2016; Gustavsson et al. 2015; SAGPA 2019), it suggests that the positive impressions conveyed in these evaluations might be exaggerated. However, assessing the extent of this exaggeration falls beyond the scope of this paper. It can be argued that government agencies have an interest in receiving positive evaluations of their various innovation support programs.

Dependent evaluators are more positive in their evaluations

From *Table 2* it is clear that the few negative and critical evaluations are published by research groups and other government agencies responsible for conducting evaluations. The data in Collin et al. (2022) does not clarify whether researchers receive funding from the agencies they evaluate or not. Nevertheless, it is evident that both consultants and self-evaluations are reliant on the government authority being evaluated. These two categories did not publish any negative reports at all. Consulting firms that work for an agency assigned to evaluate are dependent on the government agency for ongoing business, while self-evaluations are conducted by employees who are reliant on their employer. Hence, these

results are also consistent with the assumption of government agencies acting in their own self-interest.

Evaluations are referred to in a positive way

Regarding references to evaluations, our study of 30 annual reports yielded a total of 654 instances where government agencies refer to evaluations. As indicated in *Table 6* and *Figure 5*, the overwhelming majority of these statements are positive (84%), with very few being neutral (12%) and only a small percentage being negative (4%). Once again, it is noteworthy that evaluations are utilized to portray the agencies' activities as efficient and effective, further reinforcing positive impressions among policymakers and other stakeholders.

One could argue that annual reports of government agencies, much like corporate annual reports, tend to convey a more positive impression as a means to present a holistic view of the organization. In the same way that firms utilize annual reports to explain and legitimize their business, government agencies may also do so. It should come as no surprise that such reports tend to be more positive than negative, serving to provide a favorable impression of the organization.

Some of the statements found within the annual reports are notably strong and excessively positive to the extent that they could be deemed unrealistic. The Innovation Agency's (2014) annual report from 2013 presents three such examples:

An evaluation of companies with financing from the *VINN NU* program shows that they have increased their turnover and employment more than twice as much as companies in a control group. (p. 40)

To summarize, the evaluation shows that the companies granted funds attract more capital (14–15 times), increase their turnover (3 times) and the number of employees (2.5 times) more than a control group, 7 years after they have been granted *VINN NU* funds. (p. 40)

An evaluation of the companies financed in 2002–2004 under the *VINN NU* program, which is aimed at start-up companies, shows that they increased their turnover 19 times on average between the year of financing and the measurement point in 2012. (p. 11)

Critical evaluations receive little attention

As previously mentioned, a range of evaluations conducted during the study period indicates that innovation policies and the various support programs implemented by these three government agencies have yielded limited positive effects (Daunfeldt et al., 2022; Gustafsson, Tingvall, and Videnord, 2019; Gustafsson et al., 2016; Gustafsson et al., 2020; Gustavsson,

Tingvall, and Deiacco, 2015; SAGPA, 2014; SAGPA, 2015; SGPA, 2019). However, in the examined annual reports of these government agencies, we find virtually no mention or discussion of these evaluations. Instead, greater attention is given to positive evaluations conducted by hired consultants and self-evaluations.

It becomes clear that evaluations are utilized in the annual reports to defend government agencies against criticism. In cases where critical evaluations are indirectly or directly referenced, it appears to be done with the aim of safeguarding the government agency's reputation. One such instance pertains to the evaluations indicating that the Innovation Agency's support programs *VINN NU* and *Forska & Väx* have had no discernible impact on employment, turnover, growth, or innovation. In the Innovation Agency's 2014 annual report (2015), these evaluations are briefly mentioned and discussed:

In 2014, two impact evaluations of *Forska & Väx* were completed. One was conducted by the research institute Ratio on behalf of Growth Analysis and the other by the Innovation Agency. (p. 37)

The authors of the former report believed that no significant effects on, for example, growth and employment of the Innovation Agency's initiatives could be established with the method applied. (p. 37)

While these government agencies often seem to ignore evaluations that are not positive, evaluations that have received a lot of attention may necessitate a statement. In the same annual report, the Innovation Agency also defends its programs:

The Innovation Agency's assessment is that the evaluation was carried out too shortly after the end of the projects, and did not take sufficient account of either company dynamics or the functioning of innovation processes to be able to draw clear conclusions. (p. 37–38)

Subsequently, the Innovation Agency also asserted that when analyzing other material, positive returns could be identified:

At the project level, the evaluation indicated a positive return on the Innovation Agency's investments that exceeds the Innovation Agency's costs for the projects. (p. 38)

A similar discussion can be found in the Agency for Regional and Economic Growth's (2016) annual report from 2015:

The study presented in 2015 shows that the companies that were granted regional investment aid in 2010 have a worse profit development than both a control group and the group of companies in Sweden. (p. 43)

On the same page, this observation is countered using the following statement:

However, the value added in the supported companies improved more than in the other groups.
(p. 43)

In other annual reports, government agencies argue that their innovation grants function as a quality stamp. The Energy Agency (2016) made one such assertion in an annual report from 2015:

The case studies show that the support from the Swedish Energy Agency acts as a quality stamp and makes other actors dare to participate or co-finance. (p. 75)

A similar claim can be found in the Innovation Agency's (2014) annual report from 2013 concerning its support program *VINN NU*:

VINN NU gives companies a quality stamp and signal value that makes it easier for them to attract customers, capital and talent than for those who have not received it. (p. 40)

A series of initiatives funded by the Energy Agency have resulted in significant failures. One notable example is the well-documented case of Sekab in Örnsköldsvik (extensively discussed in Sandström and Alm (2022)). This case sparked a major scandal in Sweden, as a small municipal company engaged in the construction of factories in Hungary and Poland while establishing sugar plantations in Tanzania for ethanol production. These endeavors were supported by approximately SEK one billion from the Energy Agency.

In their 2011 annual report, the Energy Agency (2012) provided the following statements concerning Sekab: The evaluators recommend additional support from the owners and from the Swedish Energy Agency on a level and with a timeframe that makes it possible to finish negotiations with partners and potential investors. The report from the scientific evaluation states:

It was an excellent program and a continuation at least on the same level as during the past years is strongly recommended. (p. 42)

In those instances, the Energy Agency affirm that these conclusions are based on a scientific evaluation, yet they do not provide any specific source to allow for easy access to the evaluation. Considering that the Sekab case had already gained significant notoriety in Sweden by 2011–2012, one could infer that the aforementioned statements in the annual report were aimed at shielding the government agency from criticism.

Summary: Government agencies as special interests

Our findings are consistent with the predictions that can be derived from a public choice perspective. The overall impact of these evaluations and the way they are mentioned in the 30 annual reports we analyzed is that a positive image of the government agency's endeavors is conveyed.

Echoing the sentiments expressed by Muldoon and Yonai (2023, p. 3), the mission-oriented innovation policies and the research conducted by Mazzucato and her colleagues:

Conjures an image of disinterested and competent technocrats who make decisions based on knowledge, with their sole motivation being the common good. In addition, because these technocrats are nonpartisan and not self-interested, their motivation will be in the long-term good. (p. 3)

Also, the government is depicted as “a dynamic, thoughtful body that makes decisions based on relevant information.” (p. 3)

Upon uncovering how government agencies responsible for implementing mission-oriented innovation policies utilize evaluations and present their own activities, our findings raise doubts about the assumption of competent and altruistic government agencies. The behavior we observe aligns with the conclusions by Bednarczuk (2022), who demonstrated that government officials favor increases in the government's size as long as their own agency receives more funding.

Applying the public choice perspective, we propose that part of this behavior can be attributed to the fact that these three government agencies operate under the Department of Enterprise and, in a sense, compete for the same budget. If one agency were to hire evaluators who are significantly more critical and subsequently report these critical findings extensively in their annual reports, they would appear less capable and significant compared to the other agencies, consequently facing the inherent risk of receiving fewer resources.

Our findings carry significant implications for the implementation of innovation policies that place the government at the helm of the economy. As government agencies overseeing innovation support programs acquire greater funding and resources, their relative status and influence also grow. Consequently, more resources will be allocated to legitimizing the presence of mission-oriented policies, particularly since these innovation agencies often sponsor academic research. Conversely, scholarship that question mission-oriented policies and scrutinize them is likely to be met with hostility from both the government agencies

benefitting from a magnified role in the economy and from politicians who put these policies in place.

Conclusion, Implications and Future Research

In this chapter, we have delved into the actions and motivations of government agencies responsible for implementing mission-oriented innovation policies. While prior literature has generally portrayed these actors as competent and altruistic (e.g., Mazzucato 2021), there has been limited exploration of their incentives and behaviors. Our contribution lies in unveiling the inner workings of innovation agencies and examining their incentives and actions.

Through our analysis of 654 instances where government agencies reference evaluations in their annual reports, we find that the majority of these references are positive (84%), some are neutral (12%), and very few are negative (4%). This pattern remains consistent over the ten-year period, with no significant differences observed among the three agencies under study. Notably, the Innovation Agency stands out with a higher proportion of positive statements (92%), but the overall trend of predominantly positive content, minimal neutral content, and scarce negative mentions of evaluations holds true across all three organizations.

Our findings align with the tenets of public choice theory, which posit that government agencies primarily pursue their self-interest rather than the public interest. According to this theory, revenue maximization serves the agency's interests. With a substantial number of positive statements from government agencies regarding evaluations, the combined effect of hiring evaluators who come up with positive results and subsequently referring to these evaluations in official documents, such as annual reports, enhances the legitimacy of the respective organizations.

In summary, it appears that government agencies employ evaluations and references to create a positive image of their activities rather than conducting an inquiry into the efficiency and effectiveness of resource utilization for the government and taxpayers. These findings suggest that government agencies exhibit behavior more in line with self-interested and revenue-maximizing actors (Niskanen 1994) than with altruistic and competent organizations working for the collective welfare of society (Mazzucato 2021).

Our results highlight the contextual factors and diverging incentives surrounding the implementation of mission-oriented policies (Muldoon and Yonai 2023). Government agencies entrusted with administering funds for these purposes are also driven by self-interest, which appears evident in their inclination to present a positive impression of these activities.

Furthermore, evaluations are referenced in a manner that justifies the allocation of resources toward these objectives. The overall implication is that critical reports and evaluations receive less attention, thereby creating an illusion of higher efficiency and effectiveness in mission-oriented innovation policies than may actually be the case. As mission-oriented policies place the state and government agencies at the helm of the economy, it is likely that government agencies will support these policies. In many countries, including Sweden, government agencies responsible for mission-oriented innovation policies also finance research on innovation policy and industrial dynamics. We encourage further research into the content of this research and its contribution to legitimizing mission-oriented policies and the operations of these government agencies.

While our chapter provides an initial exploration of government agencies tasked with implementing mission-oriented policies, we acknowledge several limitations in our research and welcome further scholarly endeavors in this field. This study relies solely on secondary data from annual reports. Future research could benefit from a combination of interviews, secondary data, and other archival sources. Specifically, exploring the relationship between government agencies and government departments in the resource allocation process would be of great interest for further investigation.

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