

Between Social Philosophy and Technical Execution: Policy Advice by Economic Scientists

By Andreas Freytag* and Sebastian Schuhmann**

Abstract

Until recently, policy advice has been mainly a field for specialists who are familiar with the political economy of their field, have a profound theoretical understanding, and are familiar with the pertinent empirical evidence. That said, they do not necessarily have to be excellent scientists themselves. A new member of the German Council of Economic Experts has recently doubted this model and pointed out that it is good that excellent scientists will now have more influence in policy debates in Germany. This is a reminder of the need to embed policy advice in science without losing touch with the real world. We address two main topics, first, the very relation between science and policy advice and, second, the impact of advice on the formulation of qualified economic policy. The discussion is guided by four leading questions: Is there ideal policy advice, and an ideal model? What is excellent research? Does excellent research guarantee excellent policy advice? Do paradigms play a role?

JEL Codes: A11, D72, H11

Keywords: Policy Advice, Science, Politics, Economics

1. Introduction

Karl Mittermaier was driven by the desire to understand the philosophical underpinnings of economics, he seemingly was very interested in the role of an institutional framework for welfare and distribution (Stettler 2019). At the same time, he was a successful entrepreneur who thus combined a theoretical grip on economics with a practical understanding of the economy. He did not devote his time to policy advice, but his example shows that a good theoretical framework allows for both smart thinking and entrepreneurial success, i. e. good practical application of the first. This is also a good combination for political actors.

If they do not understand economics in greater detail themselves, they can make up for this deficit by asking for policy advice, which is the core of this paper. One way to organize policy advice is to institutionalize it. The German Council of Economic Experts (Sachverständigenrat, SVR), established by law in 1963, is such an agency, con-

* Faculty of Economics and Business Administration, Friedrich-Schiller-University Jena, Carl-Zeiss-Str. 3, 07743 Jena, Germany, and University of Stellenbosch, South Africa. The author can be reached at andreas.freytag@uni-jena.de.

** Institut für angewandte Informatik, Goerdelererring 9, 04109 Leipzig, Germany. The author can be reached at sebastian.schuhmann@infai.org.

sisting of five highly reputed professors who work for it part-time and a number of full-time junior staff. Since its establishment, the SVR has had an important voice in economic policy debates in Germany. It is independent and transparent in its working processes (German Council of Economic Experts 2023). Its main task is the provision of information to policymakers as well as the public to allow for sound and qualified decision making. In the last years, there have been some discussions in Germany about how to principally fill vacant professors' positions in the SVR – shall the members be first-class scientists with excellent academic publication records or is it preferable to hire colleagues with an outspoken policy understanding? Or are these skills automatically overlapping? Mittermaier did not seem to have cared much about the number of his publications; rankings of scientific success was probably of minor importance for him – we can only guess why he did not place an emphasis on this aspect of scientific relevance. According to his colleagues and students, he was nevertheless an excellent scholar (Stettler 2019).

Our contribution to this special issue picks up that puzzle and starts from there. First, we briefly introduce to the topic with some general remarks about the legitimacy of policy advice, particularly provided by science. Second, we plan to expedite the debate with four main questions that will guide the structure of the paper. Those questions are the following: (1) Is there ideal policy advice, and an ideal model? (2) What is *excellent* research? (3) Does *excellent* research guarantee *excellent* policy advice? (4) Do paradigms play a role? The article will reflect those questions against the background of the German experience and setting of policy advice, especially the SVR. The discussions will address the systemic level of markets for policy advice and potential inefficiencies that occur as well as problems that arise from individual incentive problems of both advisor and advisee.

2. The Purpose and Legitimacy of Policy Advice

Policy advice has been an institutional and significant part of policy debate and formulation, in Germany as in many other countries. First, it is important to recall the bare functions policy advice, especially advice originating from scientific actors, can have and whether these functions have a legitimate place in democratic systems.

There are different types of advice that can be divided into two main categories (Boston 1994). The first category is strategic advice which includes all activities concerning the production of knowledge on the respective policy matters as well as the range of policy options presented to policy makers, e. g. in the form of reports. The activities of the SVR can be classified into this category. Advice of the second category is operational. This comprises issues of administration and government programs, i. e. it is concerned rather with the implementation or amending, enforcement, and monitoring of regulation. The SVR has no mandate for this type of activity. In other institutional settings, the boundaries between the two categories can be more blurry (Boston 1994).

Policy advice fulfils a range of purposes. First, the provision of information to policy makers helps to improve their state of knowledge. Advisors (from economic sci-

ence) can help policy makers to understand complex issues that are subject to their regulation (Gluckman 2018). Government officials often face situations where decisions need to be made against the backdrop of incomplete information or on issues that depend on variables over which they do not have sufficient knowledge (Battaglini 2004).³ The provision of information can also be used to show a set of policy options as well as the effects of certain measures. This holds for policies applied in the past as well as assessments of prospect policies (Halffman and Hoppe 2005).

Second, the provision of information on a variety of policy options to the public, e. g. by making reports available or feeding into public discourses can facilitate democratic participation. Only when the public is sufficiently informed, it will be able to assess the quality of policy choices. By reducing the information asymmetry between policy makers and the public, the former can be disciplined and controlled much easier. When knowledge about relevant policy alternatives is available, the burden of proof is reversed, i. e. the government would need to justify critical policy choices that have been emphasized for their negative consequences by experts. By default, without expert knowledge at hand, this burden will stick with the public. This function is critical because, as Gluckman puts it, “policymakers always have options” (2018).

Other purposes are more conditional or strategic. Policy advice can be used to bring certain issues onto the political agenda (Kropp and Wagner 2010) as well as delaying or avoiding and legitimating policy choices, or convincing policy makers or the public of certain options. Advice can help to moderate between conflicting interests in policy disputes. Those functions hold especially for strategic advice while operational advice fulfils rather direct functions in processes and organization of policy design, implementation, and monitoring.⁴ The functions are either instrumental or legitimating for policy makers (Weingart 1999).

Due to the multitude of purposes and resulting potential impacts, one can ask the question about the legitimacy of policy advice. A general legitimacy can be based on the presumption or condition that the advice delivers relevant information, i. e. it is able to exert the aforementioned purposes (Freitag 1998). Concerns have also been raised with regard to the democratic legitimacy of advice and accountability of experts when those ultimately have an impact on policy makers. However, the processes through which expert knowledge becomes democratized have mitigated fears of an undermining of democratic processes (Weingart 1999).

The SVR consists of scientists of economic disciplines. Therefore, it can be critical to look at the contributions and legitimacy of advice particularly originating from economic scholars. Economic science claims that government activity is justified in the presence of market failure with the task of improving social welfare (Acemoglu and Robinson 2013).⁵ This means that government intervention is needed in situations, when individual rationalities and incentive structures do not assure socially optimal

³ This holds especially in situation when government officials enter offices that require knowledge that they have not obtained in a comprehensive manner during their education.

⁴ A more comprehensive list of functions of policy advice is provided by Boehmer-Christiansen (1995, 197 f).

⁵ Such as externalities, information asymmetries and natural monopolies that impair competition in markets.

outcomes (Basu 1997). This mainstream economic approach has often been criticized for the normative premise of requiring political action to solve economic problems as well as for a relatively naïve perception of the state as a benevolent dictator. Coase (1960) already opposes this view by providing solutions without government involvement but rather through private negotiations. Mainstream economic theory has also been criticized for insufficiently including analyses of market imperfections in the context of policy alternatives. This makes the inferences from the theory the credentials for institutional adjustments that can be misleading (Buchanan 2000). In this context, Mittermaier's (2019) interpretation of Smith's "invisible hand" as the absence of a (state-approved) predatory monopoly can have a guiding character. Furthermore, concerns similar to those expressed in the *determinacy paradox* (see Bhagwati *et al.* 1984) warn that the theory may fail if the behavior of all agents in a system is explained endogenously making the models self-determining.

Despite the merits or risks that come with advice, especially in economic matters, scientific advice can be a source of knowledge, help to catalyse the search for suitable policy solutions, and increase the understanding and accountability of other stakeholders. In that sense, scientific policy advice helps to facilitate competition in policy formulation and challenges the monopoly of public bureaucracy in policy advising. By filling in this role, science has played an important part in the *participatory turn* as discussed by Krick *et al.* (2019).⁶ At the same time, they invoke their rights, fulfil their political duties in democratic systems, and contribute to the debates to the best of their knowledge. To cite Basu, maybe economists sometimes simply "like to give advice" (1997).

3. Q1: Is There Ideal Policy Advice? Is There an Ideal Model?

The next step is to define the criteria ideal policy advice needs to fulfil, and the procedures for organizing and formulating advice. It seems obvious that good policy advice is based on economic theory, is tested against and confirmed by empirical evidence, considers the present institutional environment, and uses a language that is comprehensible to the recipient without over-simplification (Freytag 1998, 348 f).

To understand the exchange between science and politics in the context of policy advice, the economic approach suggests a model comprising a supply and demand side of such an advice market. As is usually the case, a model is a simplification of reality by emphasizing some factors and factoring out others. Nevertheless, such models can be useful to build a heuristic benchmark to improve the understanding of the actors involved and their interactions.

In their classic versions, models for policy advice have a linear nature. The demand side articulates a demand that scientific actors manage to meet by supplying their expertise. Later on, the politicians are supposed to implement the solutions suggested by the experts to solve a given problem (Böcher 2022).

⁶ The growing interdependencies between science and politics have also been illustrated by the debates about *expertization* or *scientification* of political life and *politicization* of science as the effect in the reverse direction (Weingart 1999).

The supply side in the models comprises a range of actors, such as scientists, think tanks, professionals, representatives of the regulated industries, and interest groups. The focus in this paper lies on scientific actors. The SVR is not the only scientific actor in policy advising in Germany. It is complemented by the scientific service of the Parliament and academies like the Leopoldina.⁷ The subject here will be economic policy consulting.

The tasks of the advisors is to increase – or at least maintain – economic knowledge in the public and inform policymakers about alternative policy measures and their expected positive and negative effects (Freytag 1998, 350). The multitude of tasks suggests that there can be merits to a division of labor. Theory constitutes the core of economics by establishing hypotheses and suspicions about causal relations. Those theoretical explanations must be tested empirically. The empirical specialists apply sophisticated statistical methods to support or falsify the hypotheses derived from theoretical considerations. Finally, the theoretical and empirical knowledge must be translated into policy options and conveyed into politics. Most likely, not all scientists are equally qualified in each of these activities. A specialization is, therefore, favourable for improving the quality at all stages. The specialization also needs to bear in mind that the three levels are interlinked which requires communication between the specialists to consider and address mutual repercussions (*ibid.*, 351).⁸

The demand side comprises policy makers and the bureaucracy.⁹ Politicians' demand for policy advice has often been interpreted as a rational investment decision under some degree of uncertainty (Heine and Mause 2004). That means that politicians usually demand advice if the expected utility is higher than the costs of acquiring this advice. The benefits may materialize in different ways and depend on the type of advice that is used. Page (2010) identifies four types of expertise relevant to policymakers, i.e. scientific expertise, policy expertise, process expertise, and instrument expertise.

This simplistic approach helps to have a first impression of the market for policy advice and the implications and consequences. However, it has been considered imperfect because the demand for policy advice may encompass judgements that go beyond what science can deliver, and it may not consider the mutual dependencies between the demand and supply side (Böcher 2022). Also, one needs to recall the other assumptions that are underlying. In this model, the policy advisor is considered a juncture between science and politics who is imparting in both fields but has his/her origin in science. The advisor provides advice with no incentive to misuse the information surplus for personal benefits but in perfect accordance with the assignment to identify suitable policy solutions. He is politically neutral and committed to share information truthfully without withholding any information (Kirchgässner 1998). Likewise, the

⁷ All active in specific field of expertise and different disciplines.

⁸ The division of labor may differ with regards to the research subject or include contributions from other disciplines (Freytag 1998). In the market for policy advice, economics usually competes directly with other social sciences, such as political science, sociology, or history.

⁹ It is also conceivable that groups, companies, media, and other public actors demand policy advice.

politician was seen as a benevolent dictator who is purely interested in maximizing social welfare.

These images of the ideal scientist and politician have been challenged later and replaced by a more critical approach. Public choice theory has contributed to relax those assumptions and entrenched egoistic motives, mainly on the side of policymakers. However, the supply side can be driven by similar intents.¹⁰ The theory of policy advisory systems follows a similar logic (see Halligan 1995). Over time, there has been a shift in interest from the individual level towards the macro-level putting a stronger emphasis on the interaction effects and accumulated level of policy advisory systems (Vesely 2017). The model considers three inherent groups of knowledge producers on the supply side situated in (1) academia and (2) research institutes, proximate decision makers on the demand side, and (3) knowledge brokers that serve as intermediaries between the knowledge generators and proximate decision makers. The third group closely resembles scientists specialized in policy advice in the conventional models. They play a critical role in the processes of policy formulation by reshaping and accommodating scientific information and translating it into policy options that can be utilized by policy makers (Lindvall 2009).

There are systemic issues that arise as an immediate consequence of the incentive schemes. The selection of experts for policy advice is usually based on their reputation as scientists. Building a reputation is determined by the internal rules of the scientific community, which may have little in common with those present in politics.¹¹ The reputation, commonly, depends on the quality and quantity of scientists' theoretical and empirical contributions. This creates incentives to specialize in research. Furthermore, scientific knowledge is usually available publicly, i. e. it can be classified as a public good. By contrast, policy advice constitutes a club good. This creates incentives for free-riding on theoretical and empirical works produced by other scientists. Both hampers a fully efficient division of labor and can lead to decompositions in the scientific community (Freytag 1998).

4. Q2: What Is Excellent Research?

After establishing an ideal scientific policy advice model as a heuristic benchmark, now it is expedient to look at the mentioned inefficiencies in more detail. To start with, it is critical to understand the limitations on the supply side of the market. The presumption is that good policy advice requires good science. The challenge now is to understand what characterizes *excellent research*.

Roughly outlined, science is the discovery and collection process of rules and regularities according to which the world, nature, and society work and act (see e. g. Heilbron 2003). Especially when looking at social phenomena and the outcome of human interaction, scientific work goes beyond "a collection of facts" (Gluckman 2018). Rather, "science is a collection of processes which are defined to eliminate bias to the extent they can. That's not to say that science is value free [...] the most important

¹⁰ This point will be discussed in more detail in the section on question 3.

¹¹ This point will be discussed in more detail in the section on question 2.

value judgement within science is the sufficiency of evidence on which to reach a conclusion” (*ibid.*, 92). If science is severely impacted by the underlying value judgements, scientists run the risk of compromising on objectivity and behaving as philosophers rather than executors of sheer technical valid science approaches. This does not mean that scientific practice is generally determined by scientists’ ideological backgrounds. Inherently, science has the characteristic to be critical, i.e. to be able to question everything and acknowledge uncertainties in knowledge. This consequentially instills a concomitant humility (Stiglitz 1999). Science, in principle, promotes openness and a free exchange of ideas and flow of information. Thereby, it also requires independence and freedom from restraints imposed by authorities.

Science is dynamic in the sense that both the methodologies as well as the consequential knowledge frontier evolve permanently. Scientific practices have changed substantially over the last decades with science being better able to appreciate and depict complex systems and shifting from deterministic to probabilistic science (Gluckman 2018). Especially in economics, there has been immense progress in applied econometric methods that allow the isolation of effects stemming from certain policy measures from those of all other factors, i.e. the identification strategy (Schmidt 2007). Attributing effects in observed outcomes to a specific treatment under the condition of holding all other variables constant enables deriving policy implications and developing policy recommendations. This, in turn, is based on the selection of a qualified research design and data availability (Schmidt 2007). Science is a relevant source of knowledge for policy formation. Unlike other domains, such as popular beliefs and social traditions, scientific knowledge is generated based on standardized procedures like peer review and replication of research results, making it less vulnerable to ideologies and value judgements (Gluckman 2014).

Despite the enhancements, a univocal opinion is less common for the scientific community in social sciences than for natural sciences (Kirchgässner 1998). Ambiguous empirical evidence and differences in remaining value judgements that underlie the research schemes pose constraints to the objectivity of scientists. Often, it is possible to find scientific support for a whole range of (contradicting) political positions. This is partly enabled by the characteristics of economic theory that allow the adjustment of parameters in the model. Likewise, empirical research is (still) difficult to conduct and results prone to some degree of interpretation (*ibid.*). This has made scientists more cautious in the choice of the study design (Schmidt 2007). Following innovations in empirical research and a better understanding of what it can explain, the understanding of its limitations and what cannot be accomplished has improved likewise. Developing scientific practices that are as objective as possible nevertheless remains a moral aspiration for individual scientists (Kirchgässner 1998).

The measurement of scientific quality follows the logics of the scientific community. Innovative ideas and new empirical knowledge are usually published in scientific journals. The editors of those journals define the criteria that must be met to publish in a specific outlet. Those criteria could exclude progressive research designs deviating from the conventional forms. One controversially discussed topic is the interdisciplinarity of research. Looking at social topics, it can be useful to consult the impetus from different scientific disciplines for covering a larger range of factors and drawing a

more comprehensive picture. This will be a problem when journals will preferably accept papers using only mainstream economic approaches. Pieters and Baumgartner (2002) find that economic arguments or methods are applied more commonly in other social sciences than conversely. This could mean that either the economic methods are superior to those of other disciplines or that there are restrictive constraints in place for publishing in journals for (mostly) economic research favouring applied methodologies.

The quality of journals is evaluated by establishing a ranking system. The criteria for the aggregation to establish the ranking are characterized by value judgements.¹² There are several ranking systems. The debates about and suggestions for alternative ranking criteria and methods are ongoing (see *e.g.* Kalaitzidakis *et al.* 2011; Kodrzycki and Yu 2006; Ritzberger 2008). As long as existing ranking methods bring a limited number of journals into prominence, the editors of these journals will be able to decide on the rules and regularities for publications and, thereby, establish a certain *fashion* in economics. Such fashion may be conducive for good policy advice or not (see below). Especially when the market for scientific journals is not contestable, the competitive pressure on the editors is confined. The number of scientific publishing companies that divide the reputable journals among each other is also limited. A cartelization of those companies is therefore conceivable. This can exert detrimental influence on research practices or at least create a bias in the type of articles that will be published (in the most prestigious journals). In such a narrow perspective, excellent research might be restricted to established models and methods, whereas scholars who are not in the centre of the mainstream may seem to be less excellent despite their potential to bring up new, innovative ideas.

The ultimate merits that economics as a social science discipline can bring about is the identification and structuring of social problems (Gluckman 2018). Regarding the research methods and results, science must disclose the underlying value judgements and be careful about interpreting results and deriving policy advice. Science must also safeguard the trust of the public, media, policy makers, and the peer scientists. (Gluckman 2014). Practising open communication and transparency of research methods can be useful to that effect. However, science must critically observe and consider the judgements that represent social values and reassure independence by avoiding being instrumentalized and becoming a “proxy for debates which are not about science” (Gluckman 2018).

5. Q3: Does Excellent Research Guarantee Excellent Policy Advice?

The presumption mentioned in the last section was that good policy advice is based on good research. However, the question is whether good research automatically translates into good policy advice. The relevance of this question is emphasized by the recent discussion about filling the vacant positions in SVR. This section aims to discuss

¹² This holds for the development of other types of indices of ranking as well. See Dörffel and Schuhmann (2022) as an example of developing an index for inclusive development. The value judgements are indicated explicitly.

potential drawbacks and inefficiencies, especially considering the relaxation of the assumptions of ideal-type scientists and politicians.

After already mentioning potential inefficiencies at a systemic level in the section on question 1, we present three main constraints that (could) impair the automatic translation of good research into good advice at the individual level:

a) There are differences in the type of discourses, cultures, methods, and epistemologies between economic science and politics (Gluckman 2018, 93). As a result, there can be problems of *misconceptions*, following false expectations, and *communication inefficiencies*. Policy advisors need to consider those differences when developing policy options. They need to be aware of the substance of the policies themselves as well as the existing set of practices and culture in government bodies (Speers 2007, 411).

Science is knowledge-oriented, and politics is action-oriented. Consequentially, conflicts can arise between what can be seen as scientific truth, political interest, topic-related public debates, political feasibility, and sound research on causal relations (Hey 2009, 189). Science looks to close knowledge gaps and shift the scientific frontier. This is a permanent process that rarely reaches terminal conclusions. Much of the knowledge depends on the methods applied. Contrarily, politics balances various value judgements and conceptions as well as partial interests in the ambition to form a suitable compromise to justify a final decision (Böcher 2022). The stakes for policy makers are high, dominating social values are debatable and adjustable. At the same time, decisions are urgent (Funtowicz and Ravetz 1993). Politicians' endeavour certainty to inform their decision making. Yet, often scientific knowledge is incomplete, contextual, and contestable (Gluckman 2018).

Due to the need for fast decision making in politics, science must find suitable means and forms of communication to provide their knowledge efficiently. When the style of presenting information is adequate, politicians have stronger incentives to embrace the advice (Kirchgässner 1998). This requires the application of a customized language and terminology whenever needed. Scientific jargon should be avoided. It also requires that all value judgements underlying the scientific knowledge must be revealed and all remaining uncertainties clearly pronounced, especially when deriving policy implications as a basis for formulating political recommendations. This is the case particularly if politics emphasizes the scientific validation of certain policy choices while disregarding feasible policy alternatives (Böcher 2022). Otherwise, science could be assigned to a specific political stance which can be subject to public contestation. When advising politicians, scientists secure themselves when explicitly distinguishing between scientific arguments and policy advice.

Freytag (1998, 348) notes that often the communication of policy advisers has been inefficient in the sense that they had been unable to explain and make many causal relations in economic matters comprehensible to the public. According to Basu (1997, 234), one of the reasons is an insufficient understanding of the transmission channels of scientific knowledge to politicians who are ultimately responsible for implementing policy reform.

Potential reasons for this observation can be reasoned theoretically with the narrow transmission mechanisms ranging from theory to empirics and policy advice as well as the incentive structure this mechanism brings about. Partly the expertise is segment-specific. This limits the mobility of the factor expertise. Such situations are described by a Ricardo-Viner-type model of policy advice with scholars having comparative advantage in either of the segments which can create distortions in the incentives and lead to inefficiencies in the allocation of scientists between the segments. Assume that the academic return is higher in theory and empirics than in policy advice, which on the other hand may be attractive for good publicity or extra income. The academically higher rated theorists and empiricists may be tempted to drive out those colleagues who are better at giving advice (based on the work of the former). Then, advice may be less convincing despite the expertise of the (non-specialist) advisors.

This may even lead to a different specialization pattern, in the fashion of the Vernon-type model of life cycles and changing comparative advantage over time (see e. g. Vernon 1969). The core idea here is that scientists start as theorists or empiricists and turn to policy advice at later points; their comparative advantage shifts. This may well hold for single, exceptional cases, but the anecdotal evidence indicates that the average scientist is specialized in one of the segments.

This also suggests that sources of knowledge and expertise can matter for political processes and decisions other than those that determine scientific approaches. Those, however, may have an impact on policy decisions. Religion as well as personal experiences, observations, and belief systems can also play a critical role, for instance, in explaining economic problems. These types of knowledge can even play a primary role in informing politicians (Gluckman 2018).

The discussed limitations do not completely rule out that it is possible to transfer excellent scientific research into qualified policy advice. It is imaginable that single outstanding scientists are capable of transmitting their expertise proficiently and comprehensively.

b) The relaxation of assumptions of ideal-type politicians and scientists has already been mentioned. When both are assumed to be primarily rationally selfish utility-maximizing individuals, they might be responsive to *incentive problems* in the policy advice market. There are several *conflicts of interest* on both the supply as well as the demand side, e. g. due to information asymmetries. These will be outlined briefly.

The role of scientists, i. e. the supply side, is ambiguous. They are the direct subject of their research. The type of advice given to policy makers can immediately impact the scientists themselves in financial and other ways. They may be aware or unaware of how the social context, their mood, and their values influence their research (Sutherland and Burgman 2015). If values lead to a research perspective that displays a false view of the world, the policy advice is at risk of failing to deliver desired results and can misguide (Basu 1997). This is critical in situations when the advice goes beyond the bare provision of knowledge and involves attempts to persuade policy makers of the personal inferences and solutions from the advisor (*ibid.*, 244).

The benefits or damages implied in their advice can create further incentive problems (Sutherland and Burgman 2015). The context of scientific policy advice has

changed over time. It has turned into a sort of value chain including the commercialization of advice, leading to intensified specialization and competition. When assigned to advisory activities, scientists can benefit from financial remuneration, budget allocation to hire scientific staff, as well as a boost in their scientific reputation (Heine and Mause 2004, 418). Politics is the funding source for science. This creates dependencies that could affect the type of research and results that will be published. Ultimately, the stakes are high for scientists and, consequentially, the incentives for strategic behaviour are strong. The SVR in Germany is independent. Therefore, this risk is limited.

The Downs model can help to explain the incentives for misstating preferences and strategic positioning of scientists to conform with the preferences of the median politician to increase the chances and maximize the number of appointments. Coughlin (1989), however, finds that the appointment is often based on expertise and accomplishments rather than the expressed ideological and political preferences. The information surplus within science could be used to strategically place or withhold information and, thereby, set the agenda of political debates (Weingart 1999, 157). Politicians could secure themselves by consulting several advisors to increase the number of signals received, aggregating them into a preference and agenda distribution and, hence, reducing the leeway and communication noise in policy advice (Bataglini 2004).¹³

The prospect for benefits could also incentivize scientists to strategically cooperate with politicians. This would not be a misuse of information surplus but a rational exchange of services. Scientific expertise can be used by politicians to justify unpopular policy reforms or justify a continuation of criticized policies. Science could, hence, become corrupted and issue reports that are favourable to the clients. Politicians claim that outside experts safeguard the neutrality and objectivity of policy advice and assessment (Speers 2007). It is conceivable, however, that scientists are “often paid for producing exactly the statements their clients want to hear, and that they know about this and put up with it” (Kirchgässner 1998). Commonly, this is denied by scientists who claim that their advice is “purely scientific and that their clients did not influence their results at all” (*ibid.*). A rational scientist will maximize utility over different time periods and hesitate to compromise their scientific reputation in the long-term for short-term financial compensation unless the discounted benefit of doing so outweighs the losses.

Incentive problems can also be determined on the demand side of the advice market. The stakes for politicians can also be exceedingly high. Once in an aspired office, a rational politician has an interest in securing this office considering the existing constraints in the political market. This can create biases towards the status quo. While different actors are engaged in the policy formulation process, the politicians are the ones ultimately being evaluated by the voters in light of the effects of implemented policies (and hopefully also relevant policy alternatives). During this process and due to the high opportunity costs, policy makers may hesitate to rely on outside expertise

¹³ An alternative would be to qualify politicians better, i.e. minimize the information asymmetry between science and politics. This option is probably more difficult to implement as scientific knowledge is highly specialized.

and rather favour their own knowledge and skills. This can hold especially in situations with high uncertainties and difficult bargaining (Halffman and Hoppe 2005). The transmission of knowledge from science to politics can be difficult, even when both have similar preferences and objectives (Basu 1997, 231). At the same time, scientific evidence is not the only source of information and rationalization for policy makers.

Rational self-interested politicians may treat the request for policy advice as an investment decision. They take action only when expected to increase their chances of re-election. So they will only demand advice when it is expected to increase their competitiveness in the political markets (Heine and Mause 2004). The demand for political advice is too low from the viewpoint of social welfare when the results of the advice are likely to be unpopular for politicians. However, it can also be too high if the advice content can be characterized as a private good, and politicians can establish a temporary monopoly for certain policy solutions. Neither option is socially preferable. To refer to our example, the SVR has a clearly defined assignment for the publication of periodical reports and the option for specific and reports on urgent political topics.

To increase the chances of winning elections, politicians need to secure the votes of those currently supporting them, and they must occasionally win new votes. When voters' preferences change, so likely does the position of the media and resulting political equilibria. The relation to science can be in both ways. On the one hand, it could contribute to those changes by informing the public and exerting pressure on policy makers. On the other hand, political equilibria could have an impact on the type of advice from science to politics. Advisers have been criticized for insufficiently considering political constraints. Dixit (1997) claims a stronger consideration and consistency of policy advice and political equilibria emphasizing the chance that policy makers will internalize advisors' objectives. In a naive perception, it was assumed that "good economics is good politics," meaning that advice for suitable economic policies will automatically lead to their implementation by politics when sufficiently expressed and reasoned (Acemoglu and Robinson 2013). That makes it difficult for advisors to reason policies that can disadvantage large voter groups. Good but inconvenient advice could, however, remain unheard and disregarded (Heine and Mause 2004). Governments usually follow advice only selectively, especially when advisors are not appointed by the incumbent government (Kirchgässner 2014). As an independent institution, we would expect a limited consideration of the advice provided by the SVR. Whenever policy advice is unconsidered, policy inefficiencies can be consolidated and have repercussions on the political equilibria in turn.

The resulting question is to what extent policy advisors need to consider politicians' constraints and the feasibility of policies that are advised. They face the trade-off between being heard in debates and choosing advice based on their expertise and research results. They may refrain from giving certain advice when acknowledging the politicians' objectives and realizing that the advice is not aligned. Otherwise, the advice can be considered futile (Basu 1997, 232). While maintaining elegance in formulating their advice, scientists need to keep track of the relevance of their advice. However, as advisors are not delegated to conduct policies, they should be careful with their judgement about the feasibility and at least expound all policy alterna-

tives (among them the first-best one) to both the public and policy makers. In addition, feasibility is endogenous and may depend on the quality of advice.

Policies usually create winners and losers. If the number of losers is sufficiently great, the political equilibrium will be challenged in a way unfavourable to incumbent governments. Already Tullock (1981) claimed that much of politics is determined by concerns about effects on income distribution and the defence of political rents. Acemoglu and Robinson (2013) find this as an explanation for why inefficient policies are maintained and governing coalitions secured against the backdrop of textbook economic advice for reforms.

As the opposite to the argument of reports from scientists made in courtesy, politicians could be incentivized to inquire about policy advice to legitimize unpopular policies. They may be able to refer to scientific experts as the ones primarily responsible for the policies (Weingart 1999). If policy advice is, in fact, qualified to maximize social welfare, this is not questionable. In the presence of value judgements, ideological background in science and uncertainties, however, it may well be possible to find scientific voices favouring a specific political preference.

c) Because both the supply and demand side as well as the public are aware of the incentive problems, it is possible that *trust* issues arise. Scientists should have a certain *cautiousness* when interacting with members of other groups.

Trust generally matters when there is incomplete information and uncertainty (Sako 1991). The disagreements between different economists on specific topics have impaired the reputation of the profession in the last decades (Kirchgässner 2014). When uncertainty is introduced in the debates, the public can cast doubts on the expertise and science's ability to explain phenomena. Making knowledge conclusive would allow an easier transmission into political processes (Kropp and Wagner 2010). Therefore, science needs to work on theoretical and empirical methodologies as a foundation for policy advice. Another source for eroding trust is the occurrence of crises and science's inability to solve them at times (Kirchgässner 2014). This can also translate into distrust towards the political institutions.¹⁴ Growing public pressure and de-legitimation of scientific knowledge can make scientists hesitate to publish reports that are expected to provoke public resistance (Weingart 1999). After providing or withholding information, scientists should – next to politicians – “be held accountable for their opinions” (Sutherland and Burgman 2015).

There are different types of trust that science ideally builds towards politicians and the public. It can be distinguished between contractual trust which is based on each party adhering to specific written or oral agreements, competence trust which is concerned with the likelihood of each party performing competently, and goodwill trust which is concerned with the willingness of the parties to go beyond the mere fulfilment of explicit promises or the satisfaction of certain standards of technical competence as well as to act in the interests of the other party including taking initiatives to assist and refraining from taking advantage of the other party (Boston 1994).

¹⁴ This problem is sufficiently recognized by policy makers which led to the formulation of official strategies that aim to reestablish the trust from the public (see European Commission 2001).

One of the critical aspects of building trust in science is probably increasing transparency.¹⁵ This can be done by increasingly opening scientific discourses and unfolding methods and results to a higher number of participants. However, this can also make science more vulnerable to the impact of external interests as well as their value judgements (Klintman and Kronsell, 2010). Hartley and Millar (2014) speak of a trade-off between scientific excellence and transparency in this context. Generally, and despite all criticism about biases and/or methodologic insufficiencies, scientists have enjoyed a fairly good reputation compared to other groups (Kirchgässner 1998).¹⁶ With the already-mentioned advances in applied (empirical) methods, economics has improved explanatory power as well as empirical knowledge which could contribute to a boost in credibility and confidence towards expertise (Kirchgässner 2014).

To conclude this chapter, it can be claimed that excellent research is required but not sufficient and no guarantee of excellent policy advice. Efficient processes in science at all stages need to be safeguarded, transparency and outbound communication cultivated, and the methodologies constantly improved. That will increase the chances for an efficient transmission of knowledge into political decision making.

6. Q4: Do Paradigms Play a Role?

The uncertainties and prevalence of value judgements in economics have already been mentioned. These value judgement and their ramifications for scientists' way of thinking and their view on the world can be conflated as a paradigm. This can have an impact on the type of questions they ask and the research approaches applied. In this section, we aim to shed light onto the question to what extent paradigms matter for an assignment for policy advice. Also, we discuss general merits or risks that come with a paradigmatic background.

Paradigms enable scientists to structure their perspective according to a specific set of rules and presumptions. It can help to derive research questions from observations and interpret results. Therefore, paradigms can be of great value to scientists. If paradigms are contestable or whilst no single paradigm claims monopoly status suppressing competing paradigms, a competition between different schools of thought can be beneficial to advance scientific knowledge.

However, a paradigm can have spurious impacts. If it prevents economists to apply certain assumptions, work on certain questions or accept certain results when they are in contradiction to the premises, the paradigm can be an obstacle for scientific advancements.¹⁷ Coughlin (1989) finds that this had been the case in certain fields

¹⁵ It is not by chance that the issue of "science communication" has become ever more important for universities and other research organizations.

¹⁶ It is possible that scientists from certain disciplines benefit from the reputation of scientists from other disciplines (Kirchgässner 1998).

¹⁷ For instance, Gwartney and Shaw (2013) find that prominent textbooks in economics do not mention government failure and treat the government as benevolent (and obviously extremely knowledgeable) social planner.

of economics. He further claims that paradigms and associated preferences can be the main reason for ambiguous results on certain issues. It is why scientists have occasionally been perceived as “quarrelsome folks who [...] have strong ideological biases” (Rivlin 1987, 5), which leads to an incompatibility between proponents of competing paradigms.

Implications for scientists are that a paradigmatic approach requires great cautiousness regarding the value judgements, cognitive and ideological priors, and resulting biases. Whenever possible economic science should confine itself to weak value judgements. It is difficult or even impossible to avoid all sorts of value judgements. Scientists’ political views can be a predominant source for them (Coughlin 1989). The political preferences can change over time. It also means that paradigms and, ultimately, research results and contents of policy advice can change. Often, we observe that single scientists make different, occasionally contradictory, statements on one topic. An alternative to the existence would be a complete void of paradigms. In that case, scientists – probably particularly in social sciences – have a more difficult job to put their research and results into context and derive policy conclusions. In that case, a stronger focus would need to be laid in the empirical works with data and real-world observations that reflect high objectivity.

There are certain paradigmatic approaches in economics that differ concerning how prevalent or contested they are. A vast majority of economists follows the mainstream economic microeconomic approach, including a certain set of presumptions about human behaviour. When looking at macroeconomic theory, which results as the consequence of aggregation of microeconomic units, there is a much higher degree of disagreement (Schultze 1985). The SVR provides advice mainly on macroeconomic issues. Therefore, it is helpful to look at the evolution of paradigms in Germany that have had a predominant influence. The paradigms receive increased relevance when considering the risks that politicians have incentives to appoint scientists only according to the alignment with a certain paradigm (Freytag 1998). Three main paradigm shifts in economic policy have taken place in Western countries, among them in Germany. In the 1960s, there was a shift towards Keynesian politics emphasizing the role of the state to moderate markets and balance out business cycles with countercyclical economic policies. The 1980s were characterized by deregulation and a shift towards supply-side economics where the state focuses on creating an economic environment in which private actors have incentives to invest (Freytag 1998). Since the 2000s, and in the light of several economic crises, the shift has been going back towards a more active role of the state accompanied by increased regulation pressure and a growing public sector.¹⁸ At the same time, economics as a science has become more technical and deterministic, leaving less room for philosophical analysis as done by Mittermaier (e. g. 2019) or Stettler (2019). From an efficiency point of view, any neglect of qualified scientists based on their paradigmatic background can cause deprivation of expertise and quality of the advice. Eggertsson (1995) makes an interesting distinction in this context. He observes (in 1995) that most colleagues perceive value-free technical research as “good” economics, whereas “bad” economics is based on

¹⁸ This is just a general assessment. It does not explain and apply to every policy measure implemented.

institutional analysis and paradigmatic foundations. As a consequence, he concludes that many economics departments have moved from being good in “bad” economics to becoming bad in “good” economics.¹⁹ This might rather be a drawback for policy advice in general.

It becomes obvious that paradigms can play a role for scientists to develop a personal perspective on the world that helps to guide their research activities. The paradigm can backfire if they are a determinant of the assignment of advisors that replace the bare qualification of the scientist.

7. Trends and the Current State of Scientific Policy Advising

This section aims to portray some empirical observations and conclusions about current trends and the current state of policy advising. Policy advice practices have undergone substantial changes over time. At present, there are several major shifts observable. This includes tendencies for externalization, i. e. the growing reliance on advice from outside the public service, and politicization, i. e. an increasing linking of advice with political factors (Craft and Howlett 2013). Along with involving (a larger variety of) external advisors goes a trend for liberalization in the market for policy advice (Halffman and Hoppe 2005). This observation does not apply everywhere. In some countries, advice is still mainly rolled out by public bureaus (Hustedt 2013). Another major trend in the reverse direction is the scientization of policy advice, i. e. a stronger reliance on expertise by economists with publications in prestigious scientific journals that are appointed to commissions (Christensen 2018). This can be done with the aim of improving representation, salience, and credibility of policy choices (Veit *et al.* 2017).

Economic science has turned into a relevant informant for policy makers due to the characteristics and qualifications ascribed to arguments voiced by scientists for different matters, including economic matters. Partly this may be facilitated by parts of the politicians and bureaucratic staff themselves who were trained and qualified in economics (Hirschman and Berman 2014). However, styles of reasoning are only partly related to the scientific paradigms, which are rather related to matters of value judgments and methodological approaches.

Scientists are in direct competition with other providers of policy advice. Yet, most of policy advice remains in the realm of public institutions (Gornitzka and Sverdrup 2011). The certain impact that economists exert on policy makers through their advisory activities remains difficult to assess (see e. g. Gornitzka and Sverdrup 2011).²⁰ There is first empirical evidence showing that the scale of impact is positively associated with institutional proximity to the authorities responsible for decision making (Craft and Howlett 2013). The contributions of economics have had an impact rather on the choice of policy instruments rather than the formulation of economic policy

¹⁹ The authors claim to observe a move back to a more paradigmatic research agenda.

²⁰ For relieving research limitations, there are suggestions to consider the supply and demand side as well as the terms of their interactions and systemic factors in policy advisory systems more jointly (Vesely 2017).

goals (Lindvall 2009). This is not surprising, considering the limitations to economic science in defining value judgements, e. g. with regards to distributional fairness and other matters of social justice. The effectiveness and efficiency of advice in informing and shaping policy choices may also depend on the type and duration of advisory assignments. Long-term contractual partnerships can help to increase trust and mutual acknowledgement of what the partner needs and expects. A strong specialization can, however, decrease the contestability of advisory markets and increase risks for the opportunistic behaviour of advisors. Distributing the advising activities to a higher number of partners can be associated with higher transaction and coordination costs and confine specialization effects (Boston 1994).

8. Conclusion

Policy advice from economics is a common practice in many modern democracies. Science has a legitimate position in promoting the understanding of real-world observations and in informing different social groups and politics. This can help to increase the quality of decision making and contribute to keeping different vested interests involved in political processes at bay. This is especially true when considering actors in politics as well as science as rational, selfish, and utility-maximizing.

The answers to the guiding questions have suggested that the processes of scientific policy advice are complex and require economists to consider both scientific as well as political factors. The supply side of the market is divided in economists specialized in theoretical, empirical and policy advice work. The demand side of the market comprises governments as well as other institutions and the public. Promoting communication between these groups on the one hand and allowing for specialization according to the specific skills of individuals and safeguarding a high level of competition within the market on the other hand will maximize social welfare and make policy advice effective and efficient.

However, science and politics differ substantially with regards to the modes, requirements, and expectations. Policy advisors serve as a connecting link between both fields. This may require them to adjust the communication and language whenever needed and generally balance the interests of both. They need to consider the existing rules of the *scientific game*, *political game*, and *policy advice game* (Kirchgässner 1998). It also means that economists may fail to transmit their expertise and knowledge if they think and argue in purely technical and abstract terms with insufficient applicability of the knowledge to the very problems at the hands of politicians. Likewise, they may fail when they engage too strongly with political problems which often involve value judgements which cannot be derived from economic theory and empirical findings, especially in positive economics.

Rather it is important to balance the adequacy of scientific methodologies with the requirements of the type of decisions that need to be enforced by politics. Usually, some weak value judgements are unavoidable. Political decisions usually involve both the application of value judgements and the best knowledge available (Hustedt

2013).²¹ Policy advice needs to rest on sound theoretical reasoning which considers the social, political and economic environment. The advancements in data availability and applied statistical methods help to increase the explanatory power in empirical works, increase the quality of knowledge and, hence, resolve legitimacy and trust issues that economists and scientists from other disciplines have been facing. Promoting transparency has been identified as one way forward. However, an opening and increasing medialization of science may hamper scientific expertise and pave the way for mass-mediated expertise (Petersen et al. 2010). More informal ways of knowledge communication can dilute scientific discourses or be a promising path to increase pressure on politics by reversing the burden of proof.

History shows that economic reasoning and advice have been available and, yet, politics has failed to implement it.²² This means that the constraints in the political markets must not be underestimated and can be powerful explanations for remaining social inefficiencies that rest on the rationality of single individuals. It will be critical to reflect and consider those restrictions and come up with ideas to overcome them. As one of the prerequisites “hubris must be avoided” by policy advisors (Gluckman 2018). Rather it is imperative to be aware of the own position and opportunities to influence policy making. For this ambition to be successful, a philosophical underpinning of economics such as that offered by Karl Mittermaier is essential.

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²¹ Compare Max Weber’s rationalization argument.

²² One example is environmental policy and the long history of theoretical instruments suggested by economics.

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