

A Normative Analysis of Externalities

Summary in English

Just like Odin in Norse mythology, the topic of this thesis goes by many names: externalities, external effects, spillover effects, external economies and diseconomies, social costs and benefits, neighbourhood effects. It goes by so many names that there is a legitimate question if they all describe the same underlying social phenomenon. From chimney smoke polluting a city to the aesthetic effect that a carefully attended garden has on passers-by and from the development of antibiotic-resistant bacteria to emissions of greenhouse gases and climate change, this shapeshifting product of social interaction can be identified at the root of numerous social and political problems. The name that is standardly used in the current literature for the underlying phenomenon in all these cases is that of *externality*. For the purposes of this introduction and until further conceptual clarification is provided, I will be following the prevailing economic orthodoxy in defining externalities as costs or benefits that “occur whenever the actions of one party make another party worse or better off, yet the first party neither bears the costs nor receives the benefits of doing so” (Gruber 2009, 122). Although many distinctions between different types of externalities can be found in the literature, the fundamental distinction is the one between negative (the imposing of costs on unwilling others) and positive (the conferring of unpriced benefits to others) externalities.

Traditionally, the study of externalities has been the domain of economics. From Marshall’s (2013 [1920]) distinction between internal and external (dis)economies at the end of the 19th century¹ to Pigou’s (1932) classic account of externalities and corrective taxation and to Coase’s (1960) fundamental reframing of the debate, economists’ interest in externalities have varied from intense controversy to marginalization of the topic to an obscure corner of the profession. As Medema observes: “Externalities were conceived very differently in the welfare theory of the 1950s than they had been in Pigou’s treatise. It was only when economists began to turn their attention to environmental and urban problems that we see a return to a conception of externalities as real, policy-relevant phenomena” (Medema 2020, 136). Currently, externalities represent a key part of the theory of market failure, being seen as prime causes of the market’s failure to achieve an efficiency distribution of goods and services (Bator 1958). It is a matter of ongoing debate how central of a place does the problems posed by

¹ It should be noted that externalities as a distinct problem for markets have been also discussed before Marshall by leading liberal economists and philosophers such as John Stuart Mill and Henry Sidgwick. This will be covered in the first chapter.

externalities occupy in the theory of market failure. In their seminal study of public goods and externalities, Cornes and Sandler (1996) argue that the fundamental phenomenon at play is that of externalities with public goods being “thought as special cases of externalities – special cases that lend themselves easily to analysis” (Cornes and Sandler 1996, 6). As such, externalities may represent a very large set of market failures that are bound together by a similar incentive structure in which private voluntary exchanges fail to create a market for some commodity (Cornes and Sandler 1996, 63-67). Others, however, see this manner of thinking about the relationship between externalities and public as fundamentally misguided (Baltzly 2024).

Market failures have a central place in normative economic theory as they are typically seen as *prima facie* reasons for state intervention in an otherwise well-functioning market. In other words, wherever we encounter externalities, collective goods in their different variants (public, common and club goods) or asymmetric information (to cite only the main instances of market failure), there is a case to be made for public policy interventions, even if market failures don’t exhaust the whole array of reasons for state activity (Kleiman and Teles 2008, 624-650). This approach to the justification of government activity has a long tradition in classical liberalism, from Adam Smith to more contemporary advocates of limited government intervention, such as Milton Friedman (1962) and Joseph Heath (2014). However, as Friedman and other economists stress, the introduction of the term *prima facie* in the justification of state intervention as a result of market failures is a necessary condition when discussing the policy implications of the standard theory of market failure. This is because an all-things-considered judgement must include comparative institutional analysis that takes into account the very real possibility of governmental failure. Thus, the basic economic question regarding market failures becomes one that stresses the imperfect nature of both types of institutions – as Buchanan puts it: “Under what circumstances will collective governmental supply be more efficient than private or noncollective supply?” (Buchanan 1999, 128).

In the context of neoclassical and welfare economics, externalities are, from a historical viewpoint, the first of the classical market failures. Pigou’s analysis of so-called divergences between private and social net products started a tradition in which public policy under the form of taxes and subsidies is seen as the preferred institutional response to cases in which external costs and benefits are not automatically internalized by the agent producing them. As a general point about the limits of the market, Pigou’s insight will prove to be influential for liberal theorists in their post-war effort of redefining classical liberalism. Take, for instance, the young Milton Friedman’s discontents with classical liberal theory on the subject of externalities: “A different kind of threat to strictly voluntary exchange arises from the so-called

“neighbourhood effect. This occurs when the action of one individual imposes significant costs on other individuals for which it is not feasible to make him compensate them or yields significant gains to other individuals for which it is not feasible to make them compensate him” (Friedman 1955, 9).² Although representing at times a marginal topic for economic analysis, the study of externalities will need Coase’s (1960) seminal contribution on social costs to counterbalance the Pigouvian appetite for quick state intervention with the aim of correcting externalities. There are many ways in which the two approaches diverge, but the main divergence resides in Coase’s use of transaction costs in the analysis of externalities, a move that casts a long shadow on the state’s ability to deal with externalities through corrections better than a market in which property rights are clearly defined. It is typical now to speak of a Pigouvian approach and of a Coasean approach to the problem of externalities and to simplify the matter by saying that first is focused on state intervention, while the second is more market-oriented, stressing the capacity of individuals to bargain themselves out of situations in which they face externalities, once property rights are defined. As it is always the case with such simplifications, the simple state/market dichotomy that is represented by this view misses both the point of Coase’s article and the limited prescriptive value of the Coasean approach.

Relevance for the field of study

The economic research on externalities has found its way into political science through neo-institutionalism, the public choice tradition and the Virginia and Bloomington schools of thought developed around the works of Buchanan, Tullock and the Ostroms. It is in this extension that another type of approach to the problem of externalities can be discerned. While Ostrom is known especially for her empirically oriented study of the commons and the different institutional arrangements developed for the management of localized common goods, she was also interested in large scale externalities, theorized as *nested externalities* (Ostrom 2012). Nested externalities arise when “actions taken within one decision-making unit simultaneously generate costs or benefits for other units organized at different scales” (Ostrom 2012, 356), such as the externalities related to climate change or global pandemics. In studying these externalities, Ostrom and her followers depart from the simple market versus state dichotomy and study alternative institutional arrangements that make use of instruments specific to both

² On this topic, see Biebricher’s discussion of Friedman’s early views and the importance of neighbourhood effects in his view on classical liberalism (Biebricher 2018, 35-37).

state and market mechanisms³. In recent years, there has been an uptick of interest in this approach to the study of externalities, materialised in a special issue on externalities in the *Public Choice* journal. Paniagua and Rayamajhee (2024) use insights from the works of Buchanan and Ostrom in order to offer a novel conceptualization of externalities and a taxonomy that highlights the possibility of institutional rules that don't fit the standard 'market versus state' dichotomy, while others discuss nested externalities with respect to the role of political institutions and specific public policies of regulation (Trantidis 2024; Hazlett et al. 2024; Goodman and Lehto 2024; Cowen and Schliesser 2024).

If economics do have a rich history of study for this topic that spilled into questions that are deeply relevant for the concerns of political science, the normative component of the theory of externalities has received less attention. Efficiency has been taken as the guiding normative principle in most studies of externalities, with the main research questions being focused on how the market departs from efficiency in the presence of externalities and on how exactly is efficiency to be restored through public policy. For example, political philosophy has a limited contribution to the analysis of externalities. This comes despite the fact that externalities are central to the justification of state intervention in a host of domains (*e.g.* environmental policies) and are riddled with normative concepts. This state of affairs is especially surprising given the attention that normative theorists have offered to other moral issues raised by markets, such as the provision of public goods or the problem of exploitation in market transactions. Nevertheless, while the economic analysis of externalities may tend to hide this point, externalities pose significant problems that fall into the purview of political philosophy. One exception to this longstanding neglect is Hausman's (1992) article "When Jack and Jill Make a Deal". Hausman prefers the term "spillovers" to that of "externalities", but the moral phenomenon that he discusses remains the same: "an unintended and not fully voluntary effect of some agent's actions on others" (Hausman 1992, 97). His article is concerned with the problems of justice raised by such spillovers, not with their mere inefficient character. However, Hausman is focused only on a type of externalities, so-called pecuniary externalities in which the external effects of one's actions are mediated via the price system. In economics, this particular type of external effect is by now relegated to a historical relict from times in which the concept of externalities wasn't sufficiently clarified, as pecuniary externalities do not raise any problems of efficiency *per se*. Besides this discussion, in the most methodical

³ As I will discuss, this is similar to Coase's initial recommendation for the study of externalities in real world setups with transaction costs.

treatment of externalities in the philosophical literature, Claassen (2016) engages with the implications of the harm principle on the question of externalities. While other contributions have been made in recent years to the normative aspect of the debate on externalities, much remains to be said, especially in respect to the use of efficiency as the sole normative criterion in the analysis of externalities.

Aims of the thesis, research questions and contributions

The main aim of this thesis is to fill the normative gap in the literature on externalities by offering a novel account of externalities that takes into consideration both the efficiency and the distributive and rights-related concerns raised by externalities and is able to serve as a framework for the analysis of specific cases of externalities that are relevant for domestic and international public policy. In doing this, the thesis is situated in the broad domain of politics, philosophy and economics. While the political part is paramount, given the fact that guiding public policy on the topic of externalities is the ultimate goal, my approach makes use of research from both contemporary analytical political philosophy and economics in studying externalities as a complex phenomenon that lays at the core of some of the most pressing contemporary issues. As such, the main research question can be stated as follows:

Q_{MAIN}: How should institutions dealing with externalities be designed?

Admittedly, this is a broad research question and some caveats are in order. In framing the main research question in this manner, my aim is to follow recent research on the interrelated problems of market and government failure. Furton and Martin (2019), following and clarifying in this respect the Ostromian approach to the problem of market failure, argue that researchers should largely abandon the concepts of market and government failure given the existence of an “entangled political economy in which market and government activity are interconnected” (Furton and Martin 2019, 1). Instead, they should focus on *institutional mismatch*, which “occurs when the rules governing an economic problem are inferior to a feasible alternative set of rules” (Furton and Martin 2019, 2), with these rules being “the result of private choice, public choice, or (most frequently) some combination of the two” (Furton and Martin 2019, 11). The “mismatch” part of their concept refers to comparative differences between the workings of existing institutions and the ideal manner in which these institutions should work. This manner of framing the challenges of institutional design that goes beyond separate discussions about public and market mechanisms is able to accommodate normative

ideals that recognize other considerations than mere efficiency. Thus, thinking in this manner about institutional design in the problem of externalities can better include insights from political science and political philosophy in a general account of externalities and their governance. This is recognized by Furton and Martin (2019, 14-15), when observing that: “Mismatch talk can be combined with any number of normative standards and, most importantly, places primary emphasis on a key feature of the world: the institutions that govern an action situation. Whatever normative standard an analyst wishes to bring to bear on a question, focusing on questions of institutional design provides a shared starting point for such discussions to take place across normative frameworks”.

In asking this question, I also recognize the existence of social cooperation as the condition and, to a certain degree, the cause of externalities. The type of human interdependence that is made possible by large-scale social cooperation is directly tied to both positive and negative externalities. While they may be inescapable in any system of social cooperation, they are not incorrigible and some institutional arrangements fare better than others in the face of external effects. The aim is to better understand these institutional arrangements and to have a clear picture of what “faring better than others” can mean when efficiency is not the sole consideration. My strategy for answering this main research question is to divide it into three smaller particular questions that seek to clarify the scope of the externality phenomenon ($q_{\text{CONCEPTUAL}}$), the different normative standards that can be employed when analysing externalities ($q_{\text{NORMATIVE}}$), the policy options (q_{POLICY}). These three particular research questions can be more thoroughly formulated as such:

$Q_{\text{CONCEPTUAL}}$: What is the adequate descriptive concept for an externality?

$Q_{\text{NORMATIVE}}$: What should be the normative standard for evaluating externalities?

Q_{POLICY} : What policies should be adopted in order to respond to problematic externalities?

Structure of the thesis

The research questions are answered in a logical manner and inform the structure of the thesis. The first four chapters engage in an analytical manner with the main answers found in the literature on these three questions and assess their relative strengths and weaknesses. For the economic debate on this topic, there are already some reviews of the relevant literature, such as Medema (2020), Lagueux (1998), Livernois (2019), McClure and Watts (2016), Demsetz (1996), Barnett and Yandle (2009), Boudreaux and Meiners (2019). However, most of these reviews share a common approach to dealing with the voluminous literature on the topic.

Namely, they present the main developments in the economic debate on externalities, typically in a chronological order, and then they discuss the common points and the differences of the Pigouvian and Coasean approaches. Some are more policy-oriented, while others are interested in the changing definition of externalities and the relationship with other key economic concept, primarily the market as a place of voluntary transaction. Moreover, none of these works engage in any serious manner with the philosophical issues raised by externalities or with the admittedly scant literature of political philosophy on the topic. Of course, there isn't anything wrong with this more historical approach to the literature on externalities and most of the works cited above are insightful and offer a clear perspective on the main developments in the theory of externalities. However, for the purposes of this thesis, a more analytical approach to the literature review is in order. I am less concerned with textual analysis and the refinement of certain viewpoints and differences between economists working on this topic; rather, I am interested in a clear mapping of the main theories and positions on some key issues pertaining to the topic of externalities.

In the first chapter, "Public policy, market failure and efficiency", I set the stage for the rest of the thesis by examining the theory of market failure, its use in public policy analysis and its crucial relationship with the concept of efficiency. I begin by discussing the public interest theory of regulation and focus on its economic variant, according to which the public interest demands that public policies are used in order to correct market failure. Afterwards, I discuss the standard theory of market failure as a particular instance of a wider problem in political and economic thought: the conflict between private interests and the interests of society. The theory of market failure is understood as a reformulation in the framework of neoclassical economics of this recurring dilemma in economic thought. However, this reformulation is not neutral with respect to how the public interest is understood: in the course of developing the standard theory of market failure, older concerns with rights and distributive effects have been replaced by the sole concern of efficiency. After I discuss different conceptions of efficiency and how market failures are understood according to each of them, I focus on the related problem of governmental failure and describe the methodology of comparative institutional analysis that is used in the rest of the thesis.

In the second chapter, "Externalities: a reconceptualization", I formulate an answer to the contested questions of how externalities should be defined. After I review the main conceptualizations of externalities in the economic literature and highlight the continuing controversy regarding the exact meaning of externalities, I argue that most of this controversy stems from the use of both descriptive and normative elements in the conceptualization of

externalities. Developing the arguments of Buchanan and Stubblebine (1962) and Hudik (2024), I argue in favour of entirely descriptive concept of externalities that is compatible with multiple normative frameworks. On the proposed conceptualization, externalities are to be understood as the unintended costs and benefits imposed by an agent on an unwilling other in conditions of interdependence.

In the third chapter, “A pluralistic account of externalities”, I draw on the argument made in the previous chapter in order to show that not all externalities are problematic and need to be tackled through public intervention or other mechanisms. I begin by distinguishing between two ways in which we can think about what should be the normative standard when asking what is wrong with externalities: monistic and pluralistic theories. Monistic theories identify a single value that is used as a normative criterion when assessing situations in which we encounter externalities, while pluralistic theories argue that we should accept different values in our overall normative framework and, thus, that some externalities are problematic according to one value, but entirely acceptable according to another. After this distinction is introduced, I discuss the main monistic approaches to externalities found in the literature. The dominant one is found in the standard economic theory of externalities, according to which the problem with externalities is their inefficient character. I use the discussion about efficiency from the first chapter in order to explain exactly how externalities can bring about inefficiency and then highlight the limits of this approach. The second monistic approach uses harm as its normative criterion. By drawing on the works of both supporters and critics of the harm principle, I argue that it constitutes an unsatisfactory standalone normative criterion. The third monistic approach uses rights as its normative criterion, while the fourth understands externalities as problematic only when they result in unjust distributions. In the last part of the chapter, I highlight some *desiderata* for a pluralistic theory of externalities that accepts all the already mentioned criteria (efficiency, rights-violations and distributive effects) as valid concerns and manages to offer guidelines for how these criteria should be ordered in a hierarchy when formulating particular policy prescriptions.

In the fourth chapter, “Institutional design and externalities”, I discuss the main answers found in the literature to the issue of policy and institutional design in the presence of externalities. The standard distinction follows the ‘market versus state’ dichotomy, with the Coasean approach favouring market-based solutions and the Pigouvian approach favouring public intervention in the form of corrective taxes and subsidies. I argue that, despite their differences, the Coasean and the Pigouvian approach share some similarities, especially when it comes to the evaluative/normative criterion that are employed in order to justify one type of

policies or another. The Coase Theorem and the recognition that its results don't hold in condition of non-trivial transaction costs have represented the backbone to the approach towards social costs developed in the field of law and economics. However, this is not the only way in which policy solutions can be formulated in the presence of significant transaction costs. Following Paniagua and Rayamajhee (2024), I present a different approach that combines the insights of Coase (1960), Ostrom (1990) and Buchanan (1973) in an empirical approach to the question of externality policies.

In the fifth chapter, “A framework for externality analysis”, I put together the three elements developed in previous chapters – the conceptual, the normative and the institutional – in a general theory of externalities that is able to guide policy prescriptions in specific cases of externalities. I present a method of balancing the different considerations raised by a specific externality in an overall framework and then show how this method is to be used with regard to real-existing externalities. The central claim of this approach is that there isn't one universal solution to externalities and an adequate analysis of each situation must come to terms with all the relevant normative considerations and the challenges raised by property rights attribution and the scale of externalities in each specific case. The main contribution of this thesis rests in formulating this method of thinking about externalities and their policy implications.