

The Politics of Numbers:
How Problem Indicators and Party Competition
Influence Political Attention

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Aarhus, December 2020

Thomas Artmann Kristensen

Preface

This summary report is part of the PhD dissertation “The Politics of Numbers: How Problem Indicators and Party Competition Influence Political Attention” carried out at the Department of Political Science, Aarhus University. The dissertation consists of this report as well as three single-authored papers. The summary report gives an overview of the dissertation, its theoretical argument, empirical strategies, main results and overall contributions. Moreover, it presents new theoretical expectations and empirical tests of these that go beyond the individual papers. Finally, it provides venues for future research. The papers included in the project are:

- A. Kristensen, T.A. (n.d.). Do politicians devote attention to problem indicators? *Invited for revise and resubmit in Journal of Public Policy*
- B. Kristensen, T.A. (n.d.). Avoiding or engaging problems? Problem indicators, party preferences and issue competition. *Working paper*
- C. Kristensen, T.A. (2020). When international indicators disrupt party competition: How standardized school tests and preferences affect parties’ issue emphasis. In E. Neveu & M. Surdez (Eds) *Globalizing issues: How claims, frames and problems cross borders*. New York, NY: Palgrave Macmillan.

Chapter 1:

Introduction

In 2010, Danish MPs debated whether or not to create the first official Danish poverty threshold. At the time, center-right parties, led by the Liberals, had been in government for more than nine years, during which the Social Democrats had been the main opposition party. At the first reading of the proposal, Mette Frederiksen, who at the time was the Social Democrats' spokesperson for social affairs, argued:

It is incumbent upon every society to fight poverty. Poverty and great social inequality are fundamentally unfair and we know that they can be destructive to people—not least to children... To get better at fighting poverty, it is important that we make decisions on a proper, enlightened foundation, and therefore we today want to seek a broad political majority for determining a poverty threshold in Denmark (Frederiksen, 2010; my translation).

The center-right government, however, was against an official poverty line. Instead, the government's view was that "poverty should be fought through a strong economy," as argued by the Liberals' Minister of Social Affairs, Benedikte Kiær (Kiær, 2010). Although Benedikte Kiær underlined that there was a need for establishing more knowledge on the causes of poverty and how to measure it, she argued that a poverty threshold would not measure anything meaningful, stating that the complexity of poverty could not be measured using a single number. As a consequence, the opposition's proposal was rejected by the center-right majority. However, the tide turned a few years later, and in 2013, after two years in power, the center-left enacted Denmark's first official poverty line. Its creation immediately followed the report of an expert committee which had been created in 2011 when the center-left entered government to make a recommendation for a poverty threshold. The official poverty threshold, however, did not last long. When the center-right reentered office in 2015, one of the first things they did was to abolish it. The Minister of Social Affairs, Karen Ellemann, argued that "we cannot use a poverty line for anything in our social policy, so therefore I will not use resources on it" (Ellemann as cited by Nielsen, 2015).¹

¹ It should be noted that three years later, in 2018, Denmark developed a new indicator on relative poverty due to UN demands to keep track of the first of the 17 sustainable development goals (the elimination of poverty). In a press release by the Danish Bureau of Statistics (Statistics Denmark), it was underlined that the indicator was not intended to work as a new poverty threshold (Danmarks Statistik, 2018).

What was all the fuss about? Why did Danish MPs seem to care so much about a single number that they went to great lengths in fighting over its creation and later its survival? This dissertation provides one answer to that question: because, once in place, problem indicators such as the poverty threshold tend to demand political attention.

Major parts of the papers in this dissertation and much of this summary report are dedicated to investigating how political logics such as opposition and government battles or fights between parties with and without issue ownership condition how parties respond to problem indicators. Most often, the dissertation finds that party competition pervades the influence of problem indicators; but despite this variation, it also finds that there is an influence of information from problem indicators across all the conditional variables that it studies. It thus finds an influence of problem indicators for both government and opposition parties, for parties with and without issue ownership, and for indicators of problems that vary in terms of controversy, visibility and the number of people affected. These findings bring attention to the core message of this PhD dissertation: that problem indicators bring forward information which tends to demand and claim political attention from parties and on the political agenda.

Had the center-left been able to successfully establish a poverty line in Denmark, they would have had an annual, reoccurring occasion when the numbers were released to bring poverty and inequality onto the political agenda (at least if inequality were high or on the rise). Rightist parties would then, once a year, have to say something about poverty, even though in reality they would prefer to devote little attention to it. Devoting attention to a problem indicator is not without consequences. First, it can have important electoral effects. Research shows that parties fare much better at elections if issues that voters view them as most competent in handling are salient at the time of an election. Since leftist parties hold a clear advantage over rightist parties in terms of improving social policy in Denmark (Stubager et al. 2020), devoting attention to poverty would most likely be something that parties to the right would want to avoid. Second, devoting attention to a problem indicator can have important policy consequences. Discussing a problem on the political agenda is a prerequisite for any further policy change, and research shows that there is a relationship between what is on the political agenda and later policies (Mortensen, 2010; Seeberg, 2013). The items on the political agenda thus tend to transform into policy and therefore make a difference in terms of the policies that will be implemented and in turn who gets what, when and how.

For these reasons, and as pointed out in seminal works within political science (Schattschneider, 1960; Bachrach & Baratz 1962), the battle over the allocation of political attention is a key component of politics. This underlines

the importance of studying the drivers of political attention. The overall purpose of this dissertation has been to advance our understanding of the relationship between problem indicators and the issues that receive political attention.

1.1 Why study problem indicators?

Studying the consequences of problem indicators is imperative in a world that has seen an explosion in the sheer number of problem indicators available. Driven by the paradigm of evidence-based policymaking, which suggests that systematic, scientific information is crucial to making sound policy decisions (Sanderson, 2002; Maynard, 2006), public organizations produce more and more problem indicators. These now provide evaluations of performance across most policy areas ranging from economics to health care and education (Moynihan, 2008). Examples include waiting lists for hospital treatments, pesticides pollution and students' well-being in schools. The development of a data infrastructure intended to support policy decisions has not been limited to national politics. In an increasingly globalized world, international organizations such as the OECD and the IMF publish more and more international ratings and rankings that provide parties with information about domestic policy problems, with the Programme for International Student Achievement (PISA) as a prominent example (Bandura, 2008).

There is thus more information available to political decision-makers than ever before (Walgrave & Dejaeghere, 2017). Unfortunately, not a lot of research has gone into investigating whether those in power to make decisions—parties and politicians—devote attention to information from problem indicators. The lack of interest in the topic is problematic, as even the most well-recognized problem indicator is “just” a number that does not speak or generate attention for itself. Although indicators are powerful constructs on their own, even the most stubborn fact depends on some political actor investing resources in carrying it onto the political agenda. This dissertation is focused on political parties, because in parliamentary democracies they continue to be the most important political actors that organize political interest and drive the policy process through the parliamentary system (Dalton et al., 2011). In such systems, in other words, parties must devote attention to problem indicators in order for those indicators to have consequences. Based on existing research on party behavior, it seems most likely that parties' response against the backdrop of poor numbers is likely to be shaped by their strategic considerations, created by party competition dynamics. Yet we know little about how problem indicators feed into party competition, as existing research on parties has only recently started to devote attention to this question.

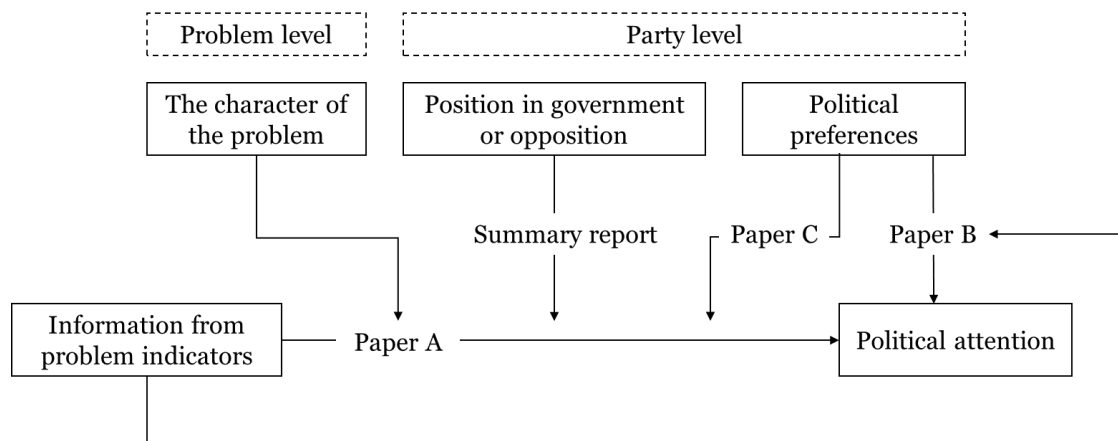
The aim of this dissertation is to improve our understanding of the relationship between problem indicators and parties' political attention. More specifically, it asks the following research question: *How and when do problem indicators influence political attention?* It studies how the content of problem indicators, i.e. the information they bring forward, shapes the issues that receive political attention.² With respect to the conditions that may moderate this main relationship, it first investigates how problem indicators interact with party competition dynamics in shaping parties' attention. Second, it explores how the character of problems matters for political attention to problem indicators.

1.2 Integrating the issue competition and agenda-setting perspectives

In answering the research question, the project integrates insights from two literatures that share a common interest in political attention: the political agenda-setting literature and the issue competition literature. Although a handful of studies have begun integrating them in recent years (e.g. Vliegenthart et al., 2013; Green-Pedersen & Mortensen, 2015), both streams of work have remained relatively self-contained. In line with these studies, this dissertation argues that it is both possible and beneficial to combine both traditions, as they in practice focus on the two different main independent variables of this dissertation to explain the same phenomenon: political attention. While the issue competition literature implicitly holds the view that parties' political preferences are the most important factor driving attention, the agenda-setting literature argues that information about problems is most influential. Whereas the issue competition literature thus contributes with a strong agency perspective, the agenda-setting literature brings its understanding of the importance of the ebb and flow of information (about problems), which adds a dynamic (and, as argued by this dissertation, realistic) element to party competition (Seeberg, 2013; Green-Pedersen & Mortensen, 2010).

² "Political attention" is used as a common term to describe the issues that are salient on the political agenda and about which parties communicate (the concept is also used for this purpose by Green-Pedersen, 2019). Chapter 2 provides a more detailed definition of these concepts.

Figure 1.1 Overview of theoretical framework



Building on this framework, Figure 1.1 above illustrates the causal model that is under study in the dissertation and how the individual papers contribute to answering the research question. Paper A examines the main relationship between problem indicators and the political agenda. Based on statistical analyses of parliamentary questioning across seven Western countries, it studies how information about the severity of problems such as unemployment, environmental pollution and crime influence the issue composition on the political agenda. It furthermore explores whether the character of the measured problems moderates the impact of this information. This study is followed by two papers (Papers B and C) that rely on statistical analyses of party manifesto data to investigate how problem indicators interact with parties' political preferences in shaping their attention. Paper B studies how problem indicators influence the overlap in the issues that parties with and without issue ownership emphasize. Paper C relies on a case study of PISA to examine how parties who have strong commitments to an issue (in this case education) react to a problem indicator (in this case PISA) in terms of political attention if they dislike its depiction of an issue. Finally, a section of this report is dedicated to investigating how government and opposition parties fight over the saliency of problems and their indicators. This section is based on statistical analyses of parliamentary questions and executive speeches.

1.3 What the dissertation tells us about problem indicators and party competition

The findings of the dissertation make two central theoretical contributions to the literature. First, the dissertation shows that parties devote attention to problem indicators and that they do so even if it favors their opponents. This finding contrasts with the main hypothesis of issue competition theories (Budge & Farlie, 1983; Petrocik et al., 1996; Simon, 2002), which suggests that

parties, in the effort for votes, focus on issues that are favorable to them—for instance if they enjoy issue ownership—whereas they ignore non-favorable issues. The dissertation shows that this depiction of party competition is clearly insufficient to describe how parties compete in reality. Since voters also reward parties that are attentive to problems, parties' ambition for more votes also means that problem indicators impose constraints on parties' avoidance and engagement of issues. Therefore, it is problematic that many issue competition scholars have tended to theorize about party competition as though it unfolds in isolation from society and its problems. Party competition happens in a context with many different problem indicators, such as crime and unemployment rates, that demand attention, as parties are expected to have something to say about the world in which they work. Whereas issue competition theories describe party competition as characterized mostly by stable dynamics once firm issue reputations are established—because the same issues favor the same parties—an important contribution of this dissertation is thus to show that constantly changing problem indicators make party competition much more dynamic than depicted by issue competition studies.

Second, the dissertation develops a new theoretical argument that improves our understanding of the type of information that generates political attention. As pointed out by this summary report, we do not know much about the type of information that is considered relevant by parties, since research on the impact of information on political attention has been disjointed and has generated limited accumulated knowledge. The dissertation fills out this gap by arguing and demonstrating empirically that both levels of problem indicators as well as how they change over time influence political attention. Furthermore, it demonstrates that relative comparisons to other countries generate attention, suggesting that much of the power of problem indicators comes from the fact that they facilitate comparisons across political entities, creating an air of competition between those being measured. Thereby, the dissertation offers new insights on what motivates parties to focus on different issues. Moreover, the finding that parties consider and respond to many different types of information suggests that they are quite sophisticated in terms of how they use problem indicators to assess the severity of problems. It supports the argument advanced by agenda-setting scholars that problem indicators are important informational shortcuts that parties and actors within them use to reduce the abundance of complex information which society is otherwise characterized by.

Finally, the dissertation also makes important empirical contributions. In general, studies on problem indicators and political attention have suffered from being limited to a few issues and/or a few countries. Although much of this has had to do with a lack of comparable data on both problem indicators

and political attention, studying only a few issues in a few countries is problematic in terms of ensuring generalizability. By studying how problem indicators relate to political attention to 19 different issues across ten different countries, the dissertation is by far the most comprehensive study on the topic to date in terms of the number of issues and countries covered. Furthermore, it is highly diverse in terms of the data sources on political attention that it analyzes. The dissertation thus studies political attention based a number of different communication channels that vary in saliency to parties, the media and the public such as parliamentary questions, executive speeches and party manifestos.

The remainder of the summary report is structured as follows: Chapter 2 defines the key concepts of the dissertation. Chapter 3 reviews the existing literature on problem indicators. It presents and highlights the gaps in the issue competition and agenda-setting literatures that work as the departure point of the dissertation's theoretical claims. Based on these literatures, Chapter 4 presents the theoretical expectations that are tested throughout the dissertation. Chapter 5 presents the data sources and empirical strategies that it relies on for the investigation. Chapter 6 presents the key empirical findings, while Chapter 7 discusses the contributions as well as limitations of the results and lays out suggestions for future research.

Chapter 2: Defining political attention and problem indicators

Before continuing into the study of how problem indicators affect political attention, it is important to define the key terms that will be studied and how they relate to each other. This will avoid any misunderstandings arising from the use of similar (but in reality different) terms. For instance, in general, the term *agenda* has had many uses, and scholars generally take some freedom to define the concept differently. Likewise, there is no agreed-upon definition of what a problem indicator is. The purpose of this chapter is not to provide an encompassing discussion that lays out the standard for years to come, but to briefly lay out the terminology of the dissertation. The first part defines what is meant by the dependent variables under study in the dissertation: the political agenda and the attention of parties. The second part defines the main explanatory variable—problem indicators—and discusses reasons why problem indicators are likely to exert a strong influence on political attention.

2.1 The political agenda and parties' political attention

In this dissertation, the political agenda refers to the issues that are the focus of policy makers at a given moment in time (Bevan & Jennings, 2019).³ This can be anything politicians consider relevant, but prominent recent examples include the COVID-19 virus, racial disparities or immigration. Agenda-setting is then the process whereby issues rise onto the political agenda. Devoting attention to or emphasizing an issue (the two terms are used interchangeably throughout the dissertation) by asking a parliamentary question or publishing a press release about an issue are some of the most important tools that individual parties have at their disposal in this process. There is, however, no guarantee that this will work. An important feature of the political agenda is that it has a limited capacity, which means that not all issues that merit attention make it onto the agenda. Attention is a scarce resource and an increase in attention to one issue necessarily happens at the expense of other issues. Issues

³ Paper B also refers to the related “party-system agenda,” which is a term often used within the party competition literature to refer to how much attention different issues receive throughout the party system (Green-Pedersen & Mortensen, 2010; Spoon et al., 2014; Grande et al., 2019).

therefore have to battle over the top spot. The attention of a party, which is typically studied by party competition scholars, thus mirrors each party's own agenda, whereas the political agenda is a systemic quantity that reflects the issues that win out over other issues in terms of gaining attention.

It is also worth noting that the political agenda is separate from the public agenda, which consists of the issues that are atop the public's mind (Bevan & Jennings, 2019: 219), and the media agenda, which refers to the issues that the media considers important and reports on. The sum of all these different agendas, the concerns that are prevalent in the broader social milieu, is what Cobb and Elder (1972) referred to as the systemic agenda, defined as "all issues that are commonly perceived by members of the political community as meriting public attention" (Cobb & Elder, 1972: 86).⁴

2.2 Problem indicators

Problem indicators are the second key concept of the dissertation. The best way to understand what problem indicators are is to define the two concepts that comprise them: *problems* and *indicators*. The dissertation relies on Davis et al.'s (2012: 6) definition of an indicator:

An indicator is a named collection of rank-ordered data that purports to represent the past or projected performance of different units. The data are generated through a process that simplifies raw data about complex social phenomenon. The data, in this simplified and processed form, are capable of being used to compare particular units of analysis (such as countries or institutions or corporations), synchronically or over time, and to evaluate their performance by reference to one or more standards.

This is a broad definition that includes many different well-known indicators published by national statistical agencies such as the unemployment rate, the inflation rate and the Gini coefficient. It also subsumes indexes, rankings and compilations of other indicators often published by international organizations or interest groups. In fact, most numbers that are not simply raw data are encompassed by the definition, as long as they simplify data, for instance through filtering or aggregation.

The definition itself hints at one of the attractive features of indicators: They provide numerical simplification of complex social phenomena. This is much needed in politics, where there is an overload of often uncertain information about problems originating from many different sources such as the

⁴ Contributing to the confusion, McCombs and Shaw (1972) refer to what Cobb and Elder (1972) call the systemic agenda as the public agenda.

media, interest groups, think tanks and other political actors. All of this information competes for the attention of politicians. In this context, indicators are helpful because they provide easily accessible and understandable information that is often aimed specifically at parties and politicians. Indicators can be used to compare the performance of different political entities or the same entities over time, providing parties an account of how current policies fare. Assuming that parties want to address a problem, indicators are one of the premier tools that they have at their disposal to identify it.

An indicator is in this way a variable that measures more or less objectively the degree of severity or risk of a problem (Dearing & Rodgers, 1996: 28). In fact, most of parties' interest in indicators stems from how (or how it is believed) these indicators connect to problems. When referred to in this dissertation, problems are conditions or situations regarded as unwelcome or harmful by electorally relevant groups of people who believe that they need attention, should be dealt with and must be solved. In a similar definition, Robertson (1976: 4-5) argued that "a problem exists where some aspect of reality is not fitting with our values or desires and where we either expect there to be a fit or believe that it is both possible and proper to change the world to make it accord with our desires."

Scholars have long claimed that indicators exert a strong influence over which problems come to be viewed as demanding political attention. As Stone (1988) argued, indicators are influential symbols that tell stories that politicians must pay attention to, because the relative accessibility and simplicity of numbers in comparison to other sources of information just speaks to people. Furthermore, Stone (1988: 188) argued that "measuring a problem creates subtle pressure to do something about it." Furthermore, there is almost always some party that can use an indicator to, for instance, justify attention to their pet issue or legitimize certain policy solutions. When trying to draw attention to a problem, Davis et al. (2012) have suggested that indicators are powerful tools because they bring transparent and impartial information that also has a great deal of scientific authority. The implication is that indicators of problems are likely to have agenda-setting consequences.

The fact that problem indicators are powerful in politics does not mean that agenda-setting can be reduced to a process where parties rationally respond to the most severe problem indicator out there. Problem indicators do not speak for themselves. There is a perceptual element in the process of defining which problem indicators deserve attention. Robertson (1976: 4) suggested that "problems inhabit an illusive terrain somewhere between illusion and objective reality. They must be defined obviously enough, in terms of human values and expectations, and equally obviously they owe their existence

to both real conditions and human perception.” The same goes for the indicators of those problems. Parties may acknowledge a problem but disagree that it is a matter for the government to devote attention to. In other cases, parties may disagree whether an indicator measures a problem at all or whether the indicator is a good measure of a problem. In reality, there is no objective formula for calculating commonly accepted problem indicators such as the unemployment rate, pesticides pollution or crime rates, and problem indicators will inevitably focus on some (measurable) aspects of reality and leave out others. One prominent example is the OECD’s PISA investigation, which is under study in Paper C. It is often argued that it focuses on pupils’ abilities in reading, math and science but fails to account for skills such as democratic participation or artistic talent.

Although many problem indicators in this way have some kind of political bias, this political bias is often lost or forgotten over time. Mügge (2016: 412) has argued that “Indicators specify what counts as, for example, growth. When policy-makers and citizens accept these particular constructions of macroeconomic concepts, the ideas that inform them solidify power relations by legitimizing some courses of action and delegitimizing others.” When politicians or the media cite indicators such as unemployment rates or crime rates, these numbers are rarely questioned and are used without disclaimers: “unemployment becomes an objective property of people, not a politically loaded ascription” (ibid.: 412). In a similar vein, Kingdon (1984: 93) argued that “the countable problem sometimes acquires a power of its own that is unmatched by problems that are less countable.” Or, as one of Kingdon’s interviewees stated, “it helps for a problem to be countable.”

In sum, problem indicators are powerful constructs in politics that are attractive from the position of parties, because they provide simple and scientific information about problems that work as the perfect ammunition for setting the political agenda. They may to some extent be biased constructs that are based on flawed data and how they are calculated may be contested, but this is often forgotten in politics. This means that they are likely to have important consequences for political attention. The next chapter reviews our existing knowledge about how parties respond to and utilize problem indicators in terms of political attention.

Chapter 3: Existing literature on problem indicators

The purpose of this chapter is to take stock of the literature on the link between problem indicators and political attention and lay out the gaps that the dissertation aims to fill. The chapter focuses on the two main strands of literature that the dissertation contributes to, namely the issue competition and agenda-setting literatures, but it also draws in a number of recent studies on problem indicators from other research perspectives.

3.1 Problem indicators and issue competition

The attention of parties has been the subject of a large literature on parties' issue competition, which has been one of the most influential perspectives on party competition (Petrocik et al., 2003; Green & Hobolt, 2008; Wagner & Meyer, 2014; Breeman et al. 2015; Green-Pedersen, 2006; 2007). It has argued that parties have certain issues that they benefit from emphasizing, either because voters associate them with the issue due to a history of attention to it (Walgrave et al., 2012) or because voters view them as most competent at handling problems related to that issue (Petrocik, 1996). Empirically, studies have found that voters generally consider left-wing parties best at handling problems on issues such as unemployment, the environment and social politics, whereas right-wing parties are considered best on issues such as economic growth, immigration and crime (Seeberg, 2016). A central claim of issue competition scholars is that parties try to increase the saliency of these so-called owned issues, while they at the same time downplay the importance of non-owned issues.

In general, the issue competition literature has not shown much interest in problem indicators. Problem indicators are notable by their absence from most work on issue competition. The few studies that do account for variation in problems mostly consider problem indicators as control variables (e.g. Spoon et al., 2014; Abou-Chadi, 2016) but do not theorize much about the conditions under which they become relevant to the issues that parties emphasize. In fact, in its simplest form, issue ownership theory assumes that parties are free to pick and choose the issues they favor unconstrained by the real world and its problems. In fact, if issue ownership theory is taken literally,

parties are basically seen as uninterested in problems once a firm issue ownership is established. They are expected to stick to their own issues no matter what happens out there in the real world.

The lack of interest in problem indicators amongst issue competition scholars is surprising given the importance of problems to seminal work within the literature. One of the founding fathers of the issue competition literature, Robertson (1976: 5), argued that “in a competitive democracy political parties have to identify and offer solutions to social problems, and the governing of the state, the making of social decisions, consists ultimately in the electorate accepting one or other’s list of problems-and-solutions.” Moreover, Petrocik (1996) built his issue ownership theory on assumptions about the median voter, who Petrocik argued is primarily interested in solving problems rather than the specific choice of solution. According to Petrocik, the median voter is therefore inclined to support the party which he believes is most competent at and devoted to handling problems. This is the party with issue ownership, produced by a history of attention, initiative and innovation towards issue-related problems. Hence, with the median voter mostly looking at who is most competent and dedicated to handling problems, parties should also have a strong incentive to devote attention to severe problems to strengthen their reputation on an issue.

Recently, there has been a burgeoning interest in the how parties adjust their emphasis to problems such as economic crises (e.g. Greene, 2015; Bremer, 2018; Borghetto & Russo, 2018; Traber et al., 2019; Pardos-Prado & Sagarzazu, 2019a; Calca & Gross 2019), immigration (Green-Pedersen & Otjes, 2017; Grande et al., 2019) and social inequality (Tavits & Potter, 2015). Most of these studies find a positive influence of indicators of these problems and thus confirm that problem indicators matter to parties’ political attention. However, none of them investigates how parties’ political preferences matter to this relationship (Tavits & Potter, 2015 being the only exception). Instead, most have focused on how government and opposition parties respond to especially economic problem indicators. The lack of interest in parties’ political preferences is potentially problematic. Although parties want to adjust their attention to problems, it is most realistic to assume that they, at the same time, will want to pursue their preferences by drawing attention to preferred issues while deemphasizing other issues. Problem indicators are likely to affect parties’ incentives to devote attention to their preferred issues or engage with non-preferred issues and thereby they interact with the existing commitments that parties have to different issues. The problem, however, is that we lack knowledge about the interplay of problems, parties’ political preferences and issue competition.

Much of the research deficit outlined above connects to the fact that the issue competition literature has been, paradoxically, surprisingly “issue-blind” (see Green-Pedersen, 2019 for a similar argument). Scholars have mostly studied the diversity of parties’ issue attention (Greene, 2015) or parties’ attention to general issue dimensions such as all economic or non-economic issues (Tavits & Potter, 2015; Ward et al., 2015; Pardos-Prado & Sagarzazu, 2019b; Calca & Gross, 2019). Aggregate issue categories are, however, ill suited for investigating the link between problem indicators, parties’ political preferences and political attention for two reasons. First, it is difficult to assess the importance of issue ownership on broad issue categories since no party enjoys ownership, for example, over the whole economy. The economy consists of many different “minor” issues, where leftist parties typically own unemployment while rightist parties own issues such as economic growth and inflation. Second, it is difficult to evaluate the influence of problem indicators when studying aggregate issues because it is impossible to operationalize and have confidence in the relevance of problem indicators in the context of broad issue dimensions. No single indicator, for instance, summarizes attention to all non-economic or economic issues.

Studying how issue attention relates to problem indicators presupposes studying individual issues. Moreover, issues are the level that is important in actual party competition. Parties do not compete on broad issue dimensions but on individual issues such as health care or immigration policy (Green-Pedersen, 2019). This is also the case when parties respond to problem indicators. For instance, a party (primarily) responds to a problem like social inequality by discussing social policy and not in terms of other economic issues like inflation or the budget deficit. Similarly, a party reacts to increasing pollution of ground water by discussing the use of pesticides and not by discussing other environmental issues such as global warming or air pollution.

Because of its attention to issue-level dynamics, the political agenda-setting literature provides a good theoretical and analytical framework for developing and testing a model of how and under what conditions problem indicators affect political attention. To develop the theoretical model, the dissertation therefore incorporates a number of important insights from the agenda-setting literature, which supplements the issue competition literature very well. These are presented in the next section.

3.2 The literature on political agenda-setting

In contrast to the issue competition literature, political agenda-setting studies have long highlighted problems as an important factor determining why issues gain political attention. A central argument of the agenda-setting literature is

that problems are at the core of issue attention and that devoting attention to an issue therefore entails devoting attention to problems. The argument is that when parties emphasize more or less abstract issues such as health care, the environment or the economy, who is responsible for solving or how to solve specific problems such as hospital waiting lists, environmental pollution or unemployment are in reality a major part of what they are actually talking about.

More specifically, two problem-related factors have been argued to influence political attention. The first is *information* about problems. According to Kingdon (1984), troubling information from problem indicators creates “windows of opportunity” that can be used to justify attention to an issue. The simple idea is that it is easier to bring attention to, for instance, education policy if a country is in the bottom half on international league tables such as PISA than if it is a top performer. The former will simply be more difficult to ignore by political opponents if they want to appear responsible in the eyes of voters. On the one hand, problematic information thus provides some parties with opportunities to politicize their preferred issues. On the other hand, it constrains other parties who come under pressure to attend to them. Furthermore, Kingdon suggests that a *lack* of problematic information will limit parties who want to attract attention to an issue. For instance, it will be difficult for a left-wing party who want to justify attention to unemployment if the unemployment rate is historically low. In this way, parties’ selection of issues to communicate on depends on the problems that are available to them, i.e. the content of problem indicators.

Despite the great theoretical interest in the relationship between problem information and the political agenda, there are surprisingly few empirical studies within the agenda-setting literature that include problem indicators in their models (see Liu et al., 2009; Jenner, 2012; Van Noije et al., 2008; Vliegenthart & Mena Montes, 2014 for a few examples). Those that do take problem indicators into account tend to find some effect, although it varies across issues, countries and time (Jones & Baumgartner, 2005; Vliegenthart & Mena Montes, 2014).

One explanation for the somewhat mixed findings is that scholars have theorized little about *what kind of information* politicians consider relevant to devote attention to. Empirically, it varies whether scholars focus on absolute levels (Jones & Baumgartner, 2005; Van Noije et al., 2008; Jenner, 2012), changes (Soroka, 2002; Delshad, 2012) or relative changes (Seeberg 2017). Few include more than one or discuss why they choose to focus on one over another. As argued below, this is unfortunate, because each relies on different assumptions about what motivates parties or politicians to respond to problem indicators. Moreover, it is problematic if studies conclude that problem

indicators do not matter to political attention (Grande et al. 2019) by only looking at changes or levels. Investigating what kind of information matters to political attention, however, is not just important because of a theoretical research deficit. If politicians mostly focus on changes in problem indicators but systematically disregard levels (or vice versa), i.e. if a high but unchanging unemployment rate fails to attract attention, it would suggest that problems with severe impacts on the welfare of citizens fail to attract attention at the expense of other less severe but changing problems.

Another shortcoming that is common to the issue competition and agenda-setting literatures which may account for some of the variation in the effects of problem indicators is that studies have looked little into cross-national variation. In fact, the majority of agenda-setting studies have focused on one or two countries. Studies that cover multiple countries within both literatures mostly account for comparative differences statistically by including country fixed effects. Yet there are few studies that explore comparative variation in the influence of problem indicators across political systems. The few studies that look into this tend to find considerable country variation (Vliegenthart & Mena Montes, 2014; Borghetto & Chaqués-Bonafont, 2019).

The second feature of problems that have been pointed to by agenda-setting scholars but overlooked in the issue competition literature is problem characteristics. Agenda-setting scholars argue that issues are different in terms of the character of problems involved and that attention dynamics are connected to these to stable features of problems (Green-Pedersen, 2019: 33). This has been described in a rich literature which has pointed at a number of characteristics with agenda-setting implications, such as the number of people that a problem affects, its visibility and the intensity of its effects (Cobb & Elder, 1972; Rochefort & Cobb, 1994; Soroka, 2002; Jones & Baumgartner, 2005; Peters, 2005). These characteristics are likely to influence how parties respond to problem indicators, since problems that have intense effects on a significant group of voters create a strong incentive for vote-motivated parties to attend to indicators of those problems. However, few studies on issue competition explore cross-issue variation. In fact, few studies include more than one issue in their empirical analysis. The few agenda-setting studies that explore issue variation provide mixed results in terms of how problem characteristics matter to political attention. The most systematic attempt to look at issue variation in the influence of problem indicators is Soroka's (2002) analysis of agenda-setting dynamics in Canada. To describe issue variation, Soroka developed a typology based on the obtrusiveness and concreteness of an issue. Soroka's as well as most other typologies have however turned out to have only limited empirical success with respect to explaining the relationship between problem indicators and political attention. Findings indicate that problem

characteristics matter for agenda-setting dynamics, but no typology has successfully managed to travel across issues or countries.

The lack of broad empirical studies covering multiple issues and multiple countries is, furthermore, problematic to the external validity of previous findings. If problem indicators are likely to vary in prominence depending on the character of problems at stake and the political institutions and party competition dynamics created by the party system, it means that previous studies focusing on one or two issues in one or two countries have mostly studied something particular, on the basis of which it may be difficult to say something general. This underlines the importance to generalizability of studying multiple issues that vary on important problem characteristics as well as countries that have different political systems (see Chapter 5 for a longer discussion of these points).

3.3 Recent literature on problem indicators

Whereas there has been a limited scholarly attention to how problem indicators affect political attention, it should be pointed out that problem indicators have recently become a key topic of other branches of the political science literature. Before presenting the theoretical framework of the dissertation, it worth devoting some brief attention to these literatures to highlight how the dissertation contributes to them.

Recently, a large and growing literature within public administration has studied the consequences of problem indicators from an implementation perspective, focusing on how managers (Nielsen, 2014; Rutherford & Meier, 2015; Holm, 2018) and street-level bureaucrats (Petersen et al., 2019; Petersen, 2020) respond to performance information. This literature has also looked at whether and how the users of public services—citizens—use performance information (Bækgaard & Serritzlew, 2016; Olsen, 2017; James & Van Ryzin, 2017). Puzzlingly, those in power to make decisions, namely parties and politicians, have not received much attention from this literature. A few recent studies look at how politicians evaluate performance information (Bækgaard et al., 2017; Nielsen & Bækgaard, 2015; Nielsen & Moynihan, 2017), but this research has relied on survey experiments, not providing any evidence of whether politicians actually take action on problematic performance information.

Another recent group of seminal studies within the field of international relations has provided evidence that problem indicators can have strong policy consequences (Kelley & Simmons, 2015; Kelley, 2017; Doshi et al., 2019). These studies have shown that international problem indicators such as the

Ease of Doing Business Index and the U.S. Annual Trafficking in Persons Report have triggered many countries to adjust domestic policies in order to improve their ratings and rankings. While these contributions are novel in terms of describing the policy consequences that problem indicators may have, however, they tell us little about the political struggles that precede these policy adjustments intended to improve a country's scores. This is an important research deficit as there is no direct transmission of problem indicators onto the political agenda. Problem indicators are always dependent on some political actor, such as parties, seeing and vesting their interests in them. As the most important actor in parliamentary democracies, parties play an important role in defining which problem indicators get attention, which means that understanding whether and how they respond to problem indicators is fundamental to understanding their effects. Yet, how parties battle over decreasing or increasing the saliency of problem indicators remains a black box in existing studies.

To summarize, although literature on parties has only recently begun devoting attention to problem indicators, the topic of this dissertation—the link between real-world problems, their indicators and political attention—is not entirely new. Yet, this chapter has illustrated that existing research has been scarce and fragmented at best and that very little accumulated knowledge has been generated across research perspectives. At the very least, the theoretical interest in problems has thus not been matched by a similar empirical interest in problem indicators. This suggests that the challenge is not a lack of scholarly interest in the topic *per se* but rather a lack of systematic theorizing and rigorous empirical examination of concrete theoretical expectations. Addressing the theoretical research deficit will be the topic of the next chapter, which presents the main arguments of the dissertation.

Chapter 4: Theoretical framework

Several gaps in the literature that should be accounted for in a model of how problem indicators affect political attention were highlighted in the previous chapter, including what kind of information is considered relevant to devote attention to as well as the role of parties' political preferences. Furthermore, such a model should preferably say something about how features of different political systems as well as problem characteristics moderate the influence of this information. This chapter lays out the theoretical framework of the dissertation, which aims to address this research deficit.

To develop the theoretical argument visualized in Figure 1.1 in the introduction, this chapter first presents the assumptions about what motivates parties to care about problem indicators. Doing so is important because the dissertation relies on these motives as underpinnings of the argument. The second part of the chapter then focuses on the main effect of problem indicators on political attention and develops an argument about the type of information that matters to political attention. The remainder of the chapter is dedicated to theorizing about the conditioning variables of this main relationship. The third part of the chapter discusses how party-level factors such as a party's political preferences and a party's position in government or opposition play together with the problem-information environment. The fourth and final part of the chapter presents an account of how factors related to the characteristics of a problem and of political systems moderate the impact of information. Most of the theoretical arguments are also present in the articles, but the sections about opposition and government parties (Section 4.3.3) and variation across political systems (Section 4.4.1) were written for this report and do not figure in any of the papers. For these new parts, the summary report dives a little more deeply into the theoretical arguments.

4.1 Why parties care about problem indicators

The theoretical arguments start from the assumption that parties first and foremost are concerned about getting as many votes as possible and ultimately winning elections. This desire to gain reelection thus drives their behavior. Obviously, parties are also motivated by other underlying goals such as the advancement of specific policies (Strøm & Müller, 1999), and they may go to great lengths in pursuing their policy preferences, but the argument in this dissertation is that they care most intensely about reelection (Robertson,

1976), as holding power entails having the ultimate authority to decide policy. Policy, votes and office aspiration need not be mutually exclusive goals. As illustrated by Paper C in this dissertation, pursuing policy, votes and offices are often perfectly compatible. Yet whenever they are not, the expectation is that parties prioritize votes and (re)gaining office. The implication is that parties are sometimes willing to give up their policy preferences in pursuit of reelection and that parties will abstain from either ignoring or devoting attention to an issue if doing so puts their reelection chances at stake.

In a party model where parties are concerned about reelection, problems and their indicators must be at center stage, as research suggests that parties must be responsive to problems in order to win elections. This is evident from the economic voting literature, which has shown that economic performance is a strong predictor of election outcomes (Abramowitz, 1988; Lewis-Beck & Paldam, 2000; Lewis-Beck & Stegmaier, 2007; Marsh & Tilley, 2009). Studies have found that voters tend to reward positive economic performance and sanction negative performances. This kind of economic voting behavior is a well-established finding that has been found in many different countries and elections (Lewis-Beck & Paldam, 2000). Moreover, recent research suggests that the connection between problems and the reelection chances of parties is not only limited to economic voting. Seeberg (2017; 2018) shows that problem indicators related to issues such as health care, crime and immigration affect voters' competency evaluations of government parties on those issues. In sum, there is strong evidence that parties' electoral prospects depend on the development of problem indicators, creating a strong incentive for parties to pay attention to them (this assumption is discussed in Chapter 7).

4.2 Levels, changes and benchmarks

Building on these assumptions about parties, the first claim of the dissertation is that information from problem indicators matters to political attention. Paper A focuses on the political agenda and looks at the relationship between different kinds of information from problem indicators and the issues that are salient on the political agenda. The core argument is that parties and actors within them rely on comparisons of performances, both over time as well as across political entities, to assess the severity of problems. It argues that three kinds of comparisons of information are likely to be made and subsequently catch political attention. First, it is likely to matter whether a problem indicator is worrisome compared to its historic (i.e. previous) levels, as parties come under pressure to say and do something when a problem indicator shows that the level of a problem is severe relative to other years. For instance, it will be

considered more problematic if the inflation rate is historically high at 10 percent than if it is 2 percent. In the former case, prices raise much faster, which is likely to generate widespread dissatisfaction amongst voters and generate demands for action. Similarly, a large number of burglaries or assaults are likely to be viewed as more worrisome than if there are few.

However, another important argument of Paper A is that it can be difficult to evaluate whether a performance is good or bad solely by looking at national numbers. One needs someone to compare oneself against. For instance, a country may have a historically low unemployment rate, but if neighboring countries fare much better, the national numbers may seem less impressive. At the same time, even very problematic numbers may not look as bad if the international context is much worse. Therefore, a country's performance relative to other countries is a second type of information that is likely to affect the assessment of problems (Kayser & Peress, 2012; Hansen et al., 2015; Traber et al., 2019). If the numbers look bad in comparison to other countries that are normally used as benchmarks, this is likely to be a hot topic on the political agenda. For instance, research suggests that one explanation for why PISA generated so much attention in Denmark despite an average performance was that Denmark was outperformed by some of its closest neighbors, namely Sweden and Finland (Breakspear, 2012). The individual-level mechanism underlying this behavior has been hinted at by social comparison theory, which suggests that people have an urge to compare their abilities with others (Festinger, 1954). This tendency to benchmark has been reinforced by the fact that, in an increasingly globalized world, there are more and more international problem indicators that enable for comparable scoring across countries.

Paper A argues that changes in problem indicators are a third type of information that is likely to affect political attention. That parties have an incentive to compare the level of a problem with the numbers in the previous year, quarter or month can be derived from literature that has looked at how the media and voters respond to problem indicators. Research shows that the media tend to be tuned in to changes in problem indicators (Soroka et al., 2015) because novelty is a key criteria of newsworthiness. Moreover, the economic voting literature has shown that voters tend to cast their votes depending on how the economy develops (Abramowitz, 1988; Bartels & Zaller, 2001). At the individual level, this behavior has been explained by work within social psychology, which suggests that people are averse to change because of the uncertainty that comes with it (Bailey & Raelin, 2015). Considering that parties have to accommodate the pressure to attend to changes in problems from the public and the media and that politicians within parties are themselves constrained by such aversion to change, it seems likely that changes in problem indicators will generate political attention.

Finally, the paper investigates whether the political agenda is more responsive to negative than to positive information (i.e. negative and positive changes and performances relative to other countries). Psychological literature suggests that there may be an asymmetrical response to negative and positive information. According to work on the negativity bias, negative events stand out as more salient, potent and efficacious than positive events (Rozin & Royzman, 2001). Evidence of a negativity bias has also been found by studies on public opinion (Nannestad & Paldam, 1997) and the media (Soroka, 2006), which have shown a greater importance of negative information to vote choice and media attention. Yet whether the negativity bias also extends to agenda-setting is something that has not previously been studied.

To summarize, the basis for the dissertation's theoretical argument is that parties care about problem indicators because of how they (may) affect public opinion. By attending to information from problem indicators, they aim to appear well-informed about the most severe problems in society, because doing so is likely to be a vote-winning strategy. In this pursuit of votes, they utilize problem indicators to assess information about the levels and changes of problems as well as to assess how the numbers look in comparison to other countries. The next question that this chapter turns to is how problem indicators influence parties' issue competition.

4.3 Party competition and problem indicators

This part of the summary report presents an account of the interplay of problem indicators and parties' issue competition. The first two sections, which are based on Papers B and C, discuss how problem indicators affect parties' incentives to engage with preferred and non-preferred issues, i.e. given their issue ownership. The last section focuses on how problem indicators feed the continuous battle between opposition and government parties. The theoretical argument starts from different parties' relationships to problems given their institutional position (in opposition or government) and political preferences (e.g. as issue or non-issue owners): What are their incentives and opportunities when problems are severe? How do government parties navigate the dilemma between being deemed incompetent if they are unresponsive to problems on the one hand and bringing attention to those same problems, thereby risking being associated as their source on the other? How do parties deal with important problems that are owned by their opponents and to which they do not want to bring attention while still appearing in touch with the severity of problems? Do they ignore problems or devote attention to them? These are some of the questions that the subsequent sections ask.

4.3.1 When problem indicators make issues unavoidable

Paper B investigates how problem indicators influence the attention of parties with and without issue ownership. It studies whether parties across the board attend to a worrisome problem indicator or are more selective in their responsiveness depending on their relationship to the issue at hand.

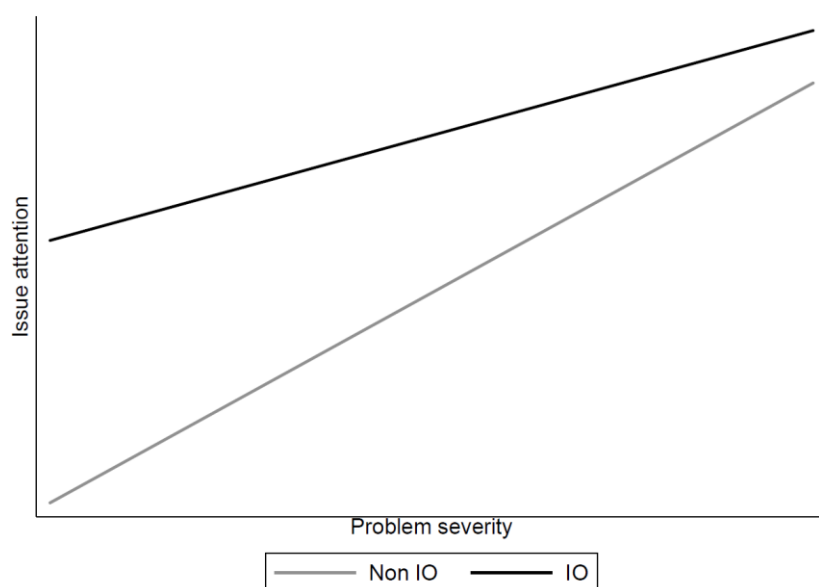
The literature on issue ownership (Petrocik, 1996) and the selective emphasis thesis (Budge & Farlie, 1983) would suggest the latter. In general, issue competition scholars have mostly argued that parties have little incentive to focus on issues other than those they own. Devoting attention to issues owned by their opponents will prime voters to base their vote decisions on issues where the party's opponents are viewed as most competent, which is likely to benefit them electorally. Consequently, this literature expects parties to develop very distinct issue profiles with little issue overlap (Simon, 2002; Petrocik et al., 2003). If following this line of reasoning, parties should primarily respond to problem indicators that they find attractive from an issue ownership logic. Hence, leftist parties would respond to unemployment, CO₂ emissions and social inequality, over which they enjoy issue ownership, whereas rightist parties would focus on immigration, crime and inflation. If that is the case, any positive effect of problem indicators on the attention of parties could be entirely driven by parties that enjoy issue ownership.

Paper B, however, argues that it is unlikely that parties will want to avoid issues owned by their opponents in times of severe problems. It argues that parties may have a stronger interest in some issues over others, and the incentive to stay with those issues may be strong, yet it is strongly countered by the severity of problems. When problems are severe, there is no way around an issue for parties if they want to keep some traction on that issue. In fact, a number of empirical studies suggest that parties are not afraid to engage with their opponents' issues (Sigelman & Buell, 2004; Kaplan et al., 2006). Plenty of studies have thus found a non-negligible overlap in parties' issue emphasis, meaning that parties more often than not focus on the same issues—which should be a rare phenomenon according to issue ownership theory.

The core argument of Paper B is that the severity of problems accounts for some of this variation in amount of issue overlap between parties with and without issue ownership. Problems, in other words, are one factor which can bridge the gap between the elaborated theoretical argument of issue avoidance within the issue competition literature and the contradictory yet persistent findings of a high degree of issue overlap found by the studies mentioned above. Figure 4.1 illustrates this. When indicators show that problems are moderate, parties without issue ownership have little to worry about, as there

is no pressure to engage with an issue. Consequently, it is only the most dedicated parties (the issue owners) that are likely to push an issue forward. Parties thus selectively focus on different issues given their issue ownership when problems are moderate. However, as problems get worse, parties across the board increasingly pick up on an issue and the difference in political attention between parties with and without issue ownership becomes smaller. Obviously, parties that enjoy issue ownership will seek to capitalize on a problem by politicizing it, but the gap between parties with and without issue ownership is likely to shrink, as there are also many other problems that demand the scarce attention of issue owners. Considering that issue owners are already devoting a sizeable share of their attention to the issue at hand, they are unlikely to have much available space on their political agendas to increase attention to the issue. Therefore, as problems become severe, non-owners will slowly catch up to them, increasing the overlap between them.

Figure 4.1 Illustration of the relationship between problems and political attention for parties with and without issue ownership



4.3.2 When parties fight back

Whereas Paper B investigates how parties respond when a problem indicator supports the party that already benefits from devoting attention to an issue, Paper C looks at how parties behave when a problem indicator disrupts party competition by changing the dominant portrayal of an issue, challenging parties that prioritize an issue the most. By doing so, the paper explores the

boundaries of problem indicators' power over parties and provides an illustration of how party competition dynamics may interfere in the political reception of problem indicators.

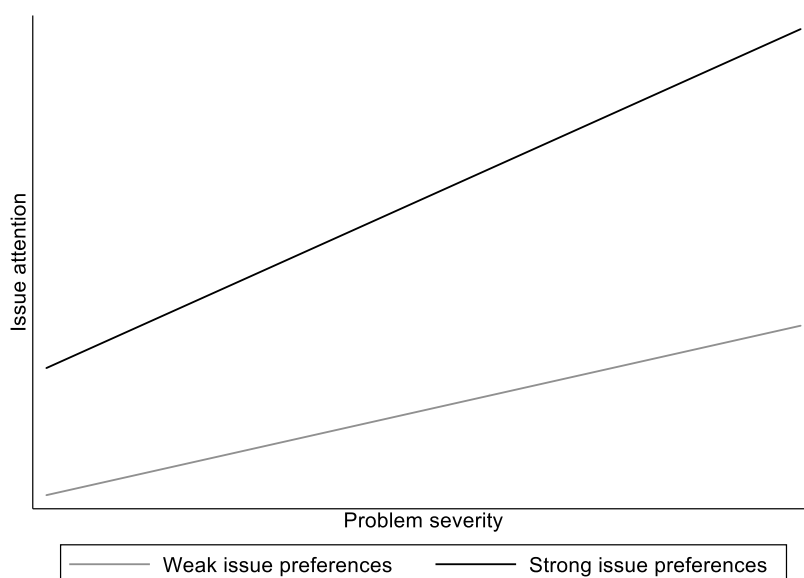
Problem indicators may disrupt party competition in several ways. As already argued, parties have strong commitments to the issues that they have tended to dominate in terms of political attention and policy initiative. Problem indicators may bring attention to problems with existing policies and thereby challenge the parties who created those policies. Moreover, often problem indicators more or less explicitly point towards new policy solutions that have to be adopted to improve performance on a problem indicator. Sometimes the policy recommendations come from the publisher of a problem indicator. At other times, they spread indirectly through so-called best practices that are derived from top performers. New solutions, however, may not be embraced by parties with a strong issue focus who typically have designed existing policies and who are therefore satisfied with them. To illustrate, it may be international crime statistics which suggest that longer and stricter sentences generate not less but more crime, while preventative measures and financial support after imprisonment prove to be more effective. It may be international environmental statistics which illustrate the high costs of reducing CO₂ in Western countries and instead suggest that the money would be better spent in developing countries or on mitigating the effects of climate change by building higher dykes and moving urban areas that are close to the sea. While the former clashes with the "tough on crime" approach of rightist parties who tend to prioritize crime the most, the latter challenges leftist parties who have the strongest commitments to sustainable environmental development (Egan, 2013; Petrocik, 1996). Paper C studies one of these scenarios, about which we know little in terms of how parties respond. For instance, do parties whose issue stronghold is challenged ignore the problem indicator? Do other parties take advantage of the situation to challenge the status quo?

The paper argues that for parties who want to challenge other parties' dominance on an issue, it makes perfect sense to take advantage of the window of opportunity that problematic information creates to generate some disruption in party competition. By highlighting deficiencies of existing policies and the incompetency of the dominant player on an issue, over time a party may even overtake their opponent's position on an issue (Tresch et al., 2013). For the challenged parties with strong commitments to an issue, the paper suggests that the decision is not so easy. At first, it may seem attractive to ignore a disadvantageous problem indicator and focus on other less problematic issues (Tavits & Potter, 2015). Yet, as already argued, it is a risky strategy for parties to ignore a problem indicator if it brings forward problematic information—and even more so if they have a history of devoting attention to the

issue at hand. If it does not take more than a little adversity for a party to surrender an issue, voters will be inclined to turn their backs on the party. Moreover, it may be difficult for parties that historically have had strong policy commitments to an issue to forget about that issue from one day to the next. At the very least, party leaders will have a difficult time convincing partisans, who are often a strong source of parties' issue priorities (Egan, 2013), to abandon an issue completely. Avoiding an issue leaves a party with no say in whether and how a problem is defined, meaning that their opponents can reign freely over the issue. The argument is that this is not a strategy that will seem attractive for parties with strong commitments to an issue.

Often in party competition, offense is the best defense. As a lesser evil, Paper C hypothesizes that parties whose strong position on an issue is challenged by a problem indicator will seek to defend themselves by going on the offensive and increasing their attention to the issue. They may, for instance, criticize the validity of an indicator and their opponent's policy proposal to try to force them to back out of the issue. This strategy is not unlikely to succeed, considering that the party has the history of being the most devoted and competent on the issue. Therefore, such parties may have the necessary leverage to pursue an offensive strategy. In light of a counter-offensive, it is also likely that their opponents will be prone to withdraw since they are not dealing with their first choice of issue. As illustrated by Figure 4.2, the implication is that parties who prioritize an issue the most exhibit the strongest response to problematic information from an indicator that challenges their views.

Figure 4.2 Illustration of the relationship between problems and political attention for parties with weak and strong prioritization of an issue when an indicator challenges the latter



4.3.3 Feeding the fight between government and opposition parties

Parties in government and opposition are not equally exposed to the pressure to respond to problem indicators, and problem indicators are therefore likely to be center stage in the continuous attack and defense game that opposition and government parties play (Thesen, 2013). Whereas government parties possess the means to initiate legislation, such power also comes with a responsibility for policies (Green-Pedersen & Mortensen, 2010; Seeberg, 2013; 2017). When in government, parties thus have a policy record that they have to defend towards voters and the opposition. They are therefore vulnerable to blame for problems such as long hospital waiting lists or rising crime rates that highlight ineffectiveness of their recent policies. Since voters tend to treat elections as referendums on government performance, poor numbers are likely to be costly for governing parties (Fiorina, 1981; Van der Brug et al., 2007). Plenty of research within the economic voting literature suggests that government parties are especially prone to losing votes in elections (Lewis-Beck & Stegmaier, 2007; Powell & Whitten, 1993) if the economy is performing poorly.

Assuming that governments seek re-election, the question about how to handle unsolved problems is a central challenge when in government. However, researchers disagree both theoretically and empirically over how government parties go about handling this challenge. One line of research suggests that government parties have a strong incentive to shift focus away from issues when problems arise (Vavreck, 2009; Greene, 2015; Pardos-Prado & Sagarzazu, 2019b; De Vries & Solaz, 2019). The argument is that in times of trouble such as stalling economic growth, environmental pollution or crime, government parties attempt to draw attention to other issues in order to distract voters from those problematic issues. By doing so, government parties aim to escape the blame for poor performance and avoid damage to the party's issue reputation (Petrocik, 1996) that could occur if voters come to believe that the party is incompetent at handling issue-related problems. Furthermore, the idea is to shift voters' issue priorities away from unfavorable issues to decrease the importance of these issues for their vote choice. Empirically, studies have found evidence that government parties tend to deemphasize economic issues during times of economic crisis and spread out their attention to many different issues (Greene, 2015), especially non-economic ones such as socio-cultural issues (Pardos-Prado & Sagarzazu, 2019; De Vries & Solaz, 2019).

This line of studies argues that whereas government parties are eager to avoid becoming associated with problems, they are much more interested in

“looking to score on good news, drawing attention to itself as a winner, claiming credit and proactively defending the legitimacy of its policy responsibility” (Thesen, 2013: 368). Therefore, parties will seek to highlight those problems to which they can claim to have provided policy solutions, for instance if a problem indicator develops positively.

However, in line with another group of recent studies (Williams et al., 2016; Traber et al., 2019; Calca & Gross, 2019), the argument of this dissertation is that it is highly unlikely that government parties will want to (or be able to) sweep issues such as immigration or the economy under the rug in times of a massive number of asylum-seekers or when there is soaring unemployment. Consider a government that does not devote attention to these problems when voters are looking for the parties that will be best able to deal with them. Although it is electorally unfortunate for a government when problems deteriorate, it would immediately be accused of being incompetent, irresponsible and unable to deliver any credible policy solutions if it did not react. Therefore, it is likely that government parties will try to be highly responsive to these problems. As argued by Baumgartner et al. (2011), governments must govern. Voters expect that governing parties will deliver policy solutions to problems because they are assumed to hold responsibility, even if they have little control over them. Electoral punishment is thus likely to only be harsher for unresponsive government parties, as they have the most explaining to do in order to convince the electorate that they continue to be the best managers of government (Williams et al., 2016). Even though problem indicators often uncover undesirable topics from government parties’ point of view, ignoring problems is therefore almost impossible for government parties. By engaging with an issue when indicators highlight problems, government parties can instead appear well-informed, to be building their government agenda on evidence, and “in touch with what the public wants” (Traber et al., 2019: 4).

Moreover, even though government parties are forced to respond to problem indicators, there are still ways within that constraint in which they can attempt to avoid the electorate’s wrath. Simply ignoring an issue deprives government parties of any say over who is blamed for a problem and leaves room for opponents to define its causes, consequences and solutions. In order to sell themselves as well as possible, parties in government will instead seek to explain a problem. Studies show that voters tend to reward governments who actively defend unpopular policies whereas governments that obfuscate unpopular reforms tend to be sanctioned harshly (Elmelund-Præstekær & Emmenegger, 2013; Elmelund-Præstekær et al., 2015). Other strategies would be to change the way voters perceive the problem, for instance by drawing comparisons to countries that fare much worse, or to shift blame to other political

actors (Weaver, 1986) such as previous governments or international organizations (e.g. for a poor economy).

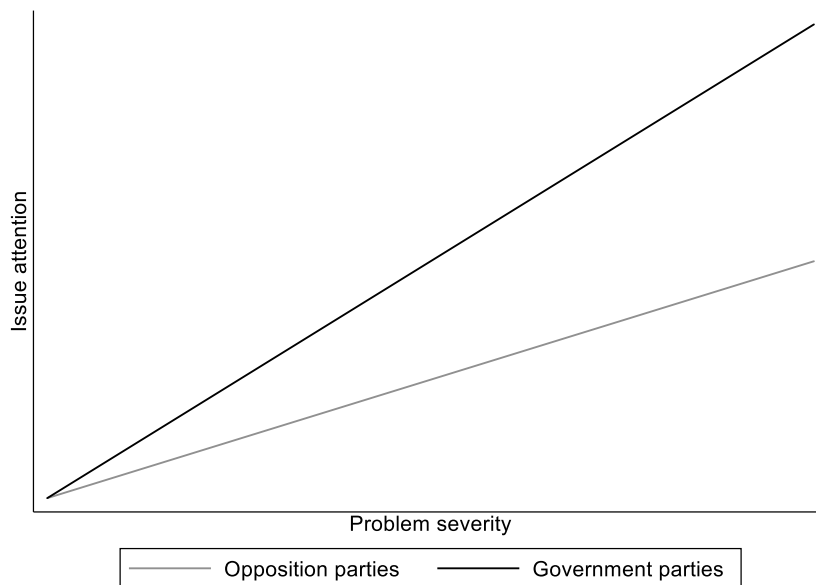
Government parties may have a strategic interest in celebrating good results and claiming credit for them (Thesen, 2013). Yet, in a context where many problems deserve the attention of political parties, a problem indicator is likely to have little leverage on the political agenda when it, for instance, develops positively. For government parties, there will always be some other problem out there that they have to attend to. Government parties will also have limited chances to get such stories out to the public via the media, because the media tends to focus on negative stories deemed more newsworthy (Soroka, 2006). Hence, government parties may try to politicize success stories, but they typically have limited chances of success. Rather than avoiding problems and only focusing on success stories, the argument here is that government parties are likely to confront problems head on by devoting attention to poor performances.

Opposition parties, on the other hand, find themselves in a completely different strategic position than government parties. Unlike government parties, they do not have a policy record that they can be held accountable for and have to defend (Green-Pedersen & Mortensen, 2010; Seeberg, 2013). Lacking influence over lawmaking thus also comes with an advantage. It sets opposition parties free to focus on the issues they want, as they do not have any obligation to govern responsibly (Greene, 2015). Given the relationship between the severity of societal conditions and the electoral misfortune of government parties, opposition parties should have a strong incentive to politicize problems (Seeberg, 2018). Mobilizing discontent against the government when voters experience a loss in welfare due to severe problems is likely to be a vote-winning strategy.

When problem are severe, i.e. when patients lie in hospital hallways due to a lack of beds or international school tests show inferior performance relative to other countries, both government and opposition parties are expected to devote more attention to those issues. This expectation is illustrated by the two upward-sloping graphs in Figure 4.3. Whereas the opposition will be trying to cast blame on the government for what is happening, government parties will want to protect their issue reputation by possibly casting blame on other actors. However, as opposed to government parties, opposition parties are less constrained in terms of having to emphasize all kinds of different issues whenever indicators bring attention to problems (Green-Pedersen & Mortensen, 2010). While government parties are expected to have an opinion on everything from soil pollution to hospital waiting lists and unemployment, opposition parties can be more selective in their choice of issues and only focus on the issues that they deem advantageous, criticizing the government for not

handling them well while ignoring those issues they are not interested in. This means that, all else equal, government parties will exhibit a stronger responsiveness to problem indicators than opposition parties. This is why the slope in Figure 4.3 is steeper for government than for opposition parties.

Figure 4.3 Illustration of the relationship between problems and political attention for opposition and government parties



4.4 Comparative variation across countries and issues

One of the important conclusions from the literature review in Chapter 3 was that few studies have explored cross-national and cross-issue variation in the influence of problem indicators on political attention. The purpose of the next two sections is to address some of this research deficit by providing a first account of how the character of problems as well as the type of political system condition the main relationship under study. The first section suggests that the presence of majority governments is a key characteristic of political systems that is likely to account for variation in the influence of problem indicators on political attention. The second section presents three characteristics of problems that are likely to condition the saliency of a problem indicator: the number of people affected, the problem's visibility and whether it is agreed upon or not.⁵ These are some of the characteristics that have often been

⁵ This section builds partly on Paper A, which exploratively investigates whether the effect of problem indicators are general across different types of problems. A portion of this summary report is also dedicated to this topic to get a little closer to this ques-

pointed at in the literature, although they have rarely been studied empirically and results have been mixed in the few studies that exist.

4.4.1 Variation across political systems

A key aspect of political systems that may explain variation in problem responsiveness both across and within countries is the extent to which parties hold control over and can be viewed as responsible for problems. Research has shown that the degree to which voters hold the government responsible for its performances varies according to the clarity of responsibility (Hobolt et al., 2013). One of the factors that is most important to the clarity of responsibility is whether or not a government possesses a majority. When the government possesses great unified control of policymaking, it is easier to evaluate who is to blame and who should be rewarded or punished and therefore also easier for opponents and voters to assign responsibility for bad policy outcomes to the government (Powell & Whitten, 1993: 398).

The presence of a majority government is, therefore, likely to affect parties' incentives to respond to problem indicators. Opposition parties, who want to take over government, will have a strong interest in drawing attention to problems and underlining the failures and lack of competence of incumbent parties. Doing so will increase their prospects of winning the next election, as research suggests that the strategy tends to be especially effective in undermining voters' evaluations of a strong government's competence (Seeberg, 2018). To avoid voters abandoning them, parties in majority governments wanting to be re-elected therefore also have a strong incentive to make sure to satisfy voter expectations by responding to problem indicators. If a government wants to accommodate the pressure to attend to problem indicators, majority governments should also have more leeway to do so. Parties in a majority government are not strongly dependent on other parties outside of government to set the political agenda and to pass legislation. Parties in majority governments thus "only" have themselves to agree with and, all else equal, they should have an easier time responding to problem indicators.

In comparison, the lines of responsibility blur when there is a minority government that is dependent on potentially a number of outside coalition partners as it becomes more difficult for voters to differentiate responsibility for current policy (Hobolt et al., 2013). If voters and opposition parties are unable to assign responsibility to the government, they are also unable to hold them accountable for problems. Government parties are therefore also likely

tion. Whereas the paper highlights six different problem characteristics, for the purposes of this report, focus is on the three that have been most influential in the agenda-setting literature to get into a little more detail with each of them.

to experience less pressure to respond to problems. The expectation therefore is that countries dominated by majority governments will exhibit a stronger responsiveness to problem indicators.

4.4.2 Variation across issues

Turning to the conditioning role of problem characteristics, the first characteristic that the dissertation explores is the *number of people* affected by a problem. Problems that affect a large number of people, such as inflation, oil prices or unemployment, may generate more political attention than those that affect few, such as crime or immigration (Rochefort & Cobb, 1994; Green-Pedersen, 2019). Everyone will, for instance, be affected by rising prices in the local supermarket or rising gas prices when they have to fill up their car. If politicians are motivated to vote maximize, it makes sense for them to focus on the problems that could potentially harm the largest voter groups. By doing so, they can hope to gain a reputation of competency among a very large portion of the electorate.

The second problem characteristic is whether politicians agree upon whether what an indicator measures is even a problem. Some problems, such as unemployment, crime and traffic accidents, are agreed upon by the vast majority of people, while others, such as inequality, poverty and immigration, tend to divide people. Issues that involve the former type of problems are popularly called *valence* issues. The expectation is that indicators of problems which are agreed upon across political differences are more likely to generate attention than divisive problems (Baumgartner & Jones, 1993; Jones & Baumgartner, 2005). Disagreed-upon problems are likely to be ignored by those who dispute them and primarily receive attention from those that recognize them.

The third problem characteristic, *obtrusiveness*, is the one that has most often been studied in the literature. It refers to the extent to which a problem is visible to people—for instance, if they have everyday experience with it (Soroka, 2002). Examples of obtrusive problems include inflation and unemployment, as people will see for themselves when prices rise or know someone who is unemployed in times of economic crisis. Immigration or crime are problems that few people have direct experience with. Whether indicators of obtrusive or unobtrusive problems generate most attention, however, is not immediately clear, either theoretically or based on the empirical findings. According to Soroka, obtrusive problems and their indicators are most likely to generate attention: “If it [the issue] is obtrusive, the possibility for public agenda-setting effects is considerably diminished – the public will simply respond to real-

world indicators” (Soroka, 2002: 19-20). At the same time, the opposite hypothesis could also be raised. For instance, it could be argued that indicators of problems that most people have personal experience with should be expected to have weak effects, as people do not need indicators to evaluate the severity of the problem on such issues. These contradictory expectations may explain why findings have also offered mixed support for the obtrusiveness hypothesis. For instance, several studies show direct agenda-setting effects of unobtrusive problems such as environmental problems (Soroka, 2002; Jenner, 2012; Delshad, 2012), crime (Farrall & Jennings, 2012) and immigration (Gava et al., 2014; Van Noije et al., 2008). Furthermore, Green-Pedersen & Wilkerson’s (2006) analysis of a prominent issue, health care, indicates that political attention towards the issue has not corresponded with developments in health care expenditures.

Chapter 5: Studying the politics of indicators in a comparative perspective

Studying the relationship between problem indicators and the attention of parties is not an easy task. This chapter describes six challenges that relate to exploring the relationship between the two and lays out how the dissertation goes about addressing each of them. It describes the main independent and dependent variables, data sources and empirical strategies of the papers as well as the additional analysis of this report. Across all empirical analyses, the dissertation relies on time-series cross-sectional data covering multiple countries, issues and years. The TSCS setup enables for better control of alternative variables and broadens the generalizability of the findings across issues, countries and time. Table 5.1 below lists the countries, issues and data sources used.

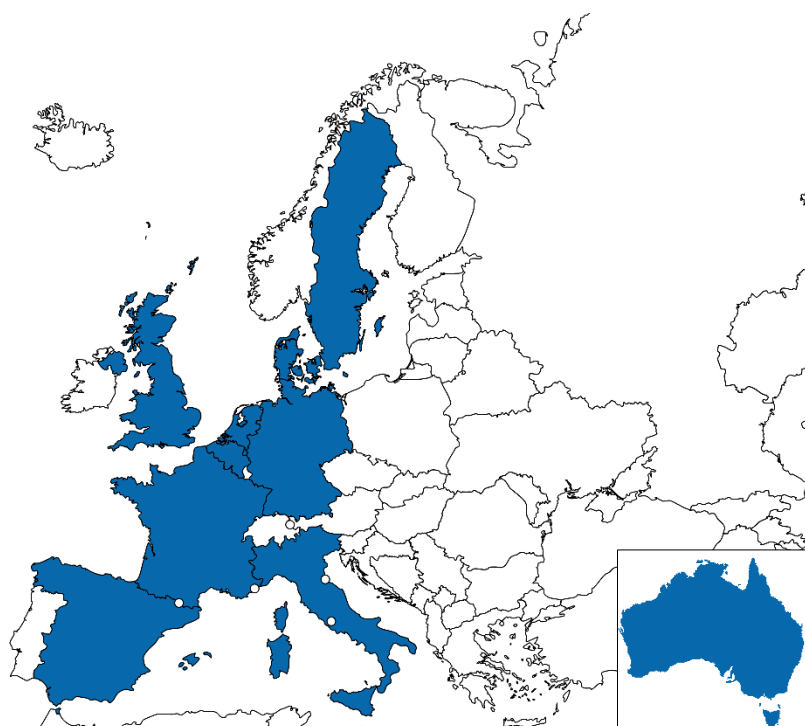
5.1 The bare necessity of space and time

The first challenge that needs to be addressed relates to the lack of studies that cover multiple countries, especially within the agenda-setting literature. Including multiple countries is obviously a prerequisite for exploring comparative variation in the influence of indicators. Yet, as already hinted, another problem with the single-country character of most previous studies is that we do not know whether the findings extend beyond the countries in which the studies were conducted. Countries have different political systems as well as historical legacies and the dynamics of agenda-setting are likely to vary across countries. Some problems are likely to be more salient in some countries than in others and this is likely to affect attention to problem indicators. For instance, immigration has been a dominant issue on the political agenda in Denmark for years, but has not received similar attention in Sweden (Green-Pedersen & Krogstrup, 2008). If the goal is to say something general about the relationship between problem indicators and political attention, studies should therefore aim to include multiple countries with varying political systems in their analysis.

To meet this requirement, all empirical analyses in the dissertation cover multiple countries. In total, ten different countries are included in the dissertation's analysis, while each paper or analysis in this report covers between four and seven countries. The countries were selected to ensure variation on factors that previous research has deemed relevant to party competition. Each

paper or chapter thus covers multi-party and two-party systems, systems dominated by majority and minority governments, as well as federal and unitary political systems. Moreover, the list of countries includes southern, central, and northern European countries, as previous studies have indicated that this geography influences party competition (Green-Pedersen, 2019). Overall, this makes it the most comprehensive study of the relationship between problem indicators and political attention to date in terms of the number of countries covered.

Figure 5.1 Countries under study in the dissertation



Second, as already argued, a study on the consequences of problem indicators for political attention should consider the fact that the problems measured by indicators are not alike by including multiple issues that vary on important problem characteristics. However, the vast majority of studies within the literature have focused on economic issues (see e.g. Greene, 2015; Williams et al., 2016; Pardos-Prado & Sagarzazu, 2019a; Traber et al., 2019; De Vries & Solaz, 2019; Calca & Gross, 2019). In fact, the section in this summary report on how government and opposition parties respond to problems is the first study on the topic that goes beyond economic indicators. The lack of attention to other issues such as crime or the environment, which take up a large share of the political agenda, is problematic if we want to say something general about the effect of problem indicators, because focusing on economic indica-

tors creates fertile conditions for any effect. Theories on economic voting suggest that economic issues have an advantage over other issues in terms of how voters weigh the importance of issues in their decision making. For instance, Singer (2011) shows that economic concerns tend to crowd out all other concerns. Furthermore, Petrocik (1996) argues that voters rely more on performance information on economic than on non-economic issues when they evaluate the competence of parties. Therefore, indicators of economic problems are especially likely to gain political attention.

To ensure generalizability (and enable testing of whether responsiveness matters according to the problem at stake), the dissertation includes issues that vary on important characteristics in terms of the problems involved. Table 5.3 presents an overview of the 19 different issues included in the dissertation as well as the indicators that are used to measure problems on those issues. Some affect a large number of people, such as inflation, while others affect few, such as immigration. Some are problems that many have everyday experience with, such as tests in schools (parents and children), and others are much more distant to most people, such as crime.

The third challenge is that the importance of problem indicators is likely to vary over time. For instance, Jones & Baumgartner (2005) show that congressional attention to crime occasionally tracks crime rates quite closely but that the two are most often completely unrelated. This example underlines the importance of studying the relationship between problem indicators and political attention over multiple years. By focusing on only a few years, one would risk concluding either the presence or absence of an effect depending on the time period in focus. To accommodate this, the dissertation covers multiple years across all analyses.

Table 5.1 Overview of data

Paper	Dependent variable	Data source	Sample	Issue(s)	Years
A.	The issue composition of the political agenda	Parliamentary questions coded by the Comparative Agendas Project (CAP)	7 countries: Australia, Denmark, Belgium, France, Germany, Italy, Spain	17 issues	1960-2015
B.	The political attention of parties	Party manifestos coded by the Comparative Agendas Project (CAP)	6 countries: Sweden, Denmark, the Netherlands, France, Germany, the UK	10 issues	1980-2015
C.	The political attention of parties	Party manifestos coded by the Comparative Agendas Project (CAP)	6 countries: Sweden, Denmark, the Netherlands, France, Germany, the UK	Primary and secondary education	2001-2015
Summary report	The political attention of government and opposition parties	Executive speeches and parliamentary questions coded by the Comparative Agendas Project (CAP)	4 countries: Denmark, Belgium, Germany, Spain	17 issues	1960-2016

5.2 Different communication channels, different issue strategies?

Parties and politicians communicate to voters in many different ways including press releases, ads, election manifestos, parliamentary questions and speeches. These communication channels vary greatly in length, frequency, saliency to the public and in the extent to which parties alone determine their content. Although parties are generally interested in staying consistent and “on message” (Norris et al., 1999: 62), they are likely to communicate differently across these various channels because of their different format and purpose (Tresch et al., 2017). Parties may be more tuned in to their owned issues in some types of communication, whereas they may be more geared towards tracking problem indicators in others. The fourth challenge is that to provide a representative view of the political agenda and the attention of parties, the dissertation should preferably include analyses of multiple data sources on political attention.

The first data source is parliamentary questioning, which Paper A relies on to measure the political agenda. As a non-legislative activity that is institutionalized in many Western democracies, parliamentary questions constitute one of the best comparable measures of the political agenda that are available across countries and time. The process of raising a question varies from country to country, but in general it is rather swift, especially compared to other parliamentary activities such as raising a bill (Baumgartner et al., 2009). Most often, questions are asked by individual politicians, who can address any issue they want, but in most countries there is strong party discipline in parliamentary questioning (Borghetto & Chaqués-Bonafont, 2019). Parliamentary questioning therefore offers parties or politicians a good arena for utilizing and showing responsiveness to short-term fluctuations in figures. In some countries, the questions are primarily a tool that opposition parties use to challenge incumbents. However, in many countries government parties also frequently ask questions. This makes them one of the best available measures of the political agenda, and they are frequently used as such within the literature (Soroka, 2002; Vliegenthart et al., 2016).

To capture government parties’ political attention, the government/opposition section in this report relies on annual executive speeches. In many countries, the head of government or head of state delivers an annual statement. Despite some cross-national variation in the timing and presentation of the speeches, the speeches perform a relatively comparable function across countries, making them well suited for comparative analysis (Jennings et al., 2011; Mortensen et al., 2011). The speeches are made on behalf of the executive and

are typically both backward-looking, providing the executive with a chance to look at their accomplishments (if they wish to), and forward-looking, providing an opportunity to lay out the government's policy priorities in the following year. They normally have great substantive importance since they are one of the main ways the government can set the political agenda for the year ahead. Overall, they thus provide a great annual snapshot of what is on the executive's agenda. To compare how government and opposition parties respond to severe problem information, the annual executive speeches are compared against parliamentary questions asked by opposition parties in a given year.

Before presenting the communication channel under study in Papers B and C, it is worth discussing that the type of communication channel that researchers focus on may be one factor which accounts for some of the seemingly contradictory findings in the literature that discusses whether government parties engage or avoid problems. Pardos-Prado and Sagarzazu (2019a, 2019b) show that Spanish government parties increasingly focused on non-economic issues in their *parliamentary questions* during the last economic crisis, but Traber et al. (2019), in a multi-country study, show that the same economic crisis generated more *government speeches* on the economy. Findings in studies focusing on *party manifestos* to measure the emphasis of parties have been mixed. Greene (2015) shows that government parties seek to divert attention from economic issues, while Williams et al. (2016) find that they are responsive to economic indicators, and more so than opposition parties.

It may thus be reasonable to expect that government parties simultaneously engage with and avoid problems, but that the choice of strategy depends on the specific communication channel. Parliamentary questions and party manifestos are important communication channels for parties, but their format makes them less likely to reflect government and opposition dynamics. Manifestos reflect a party's ideal wish list for the issues that they would like to see dominate the political agenda in the upcoming election period (Norris et al., 1999: 62) and are therefore likely to be focused on favorable issues, for instance those for which the party enjoys issue ownership. Furthermore, since they are only published once and are often written months in advance of an election as the result of a long decision process within parties, they are less suited for attacks on opponents or defensive responses to short-term developments in problem indicators (Tresch et al., 2017). Manifestos are thus not very confrontational in nature, which is an important prerequisite for government and opposition dynamics to manifest themselves.

Similarly, parliamentary questions are not ideal for exploring opposition and government battles. Parliamentary questions are used by government

parties in several countries, but they cannot be seen as a measure of the government's collective agenda. Like the manifestos, they are written or asked by individual parties or politicians and not on behalf of the government. In fact, recent research shows that often government parties and politicians act more like opposition parties when asking questions. For instance, Höhmann and Sieberer (2020) show that coalition partners in government use parliamentary questions to monitor and keep tabs on each other on issues of high salience to avoid electorally damaging ministerial drift.

Moreover, although manifestos and parliamentary questions do sometimes receive media coverage, all else equal they tend to attract less attention from the media than executive speeches, which are high-profile events. Since media attention to manifestos and questions is lower, it is probably easier for government parties to take focus away from problematic issues in those venues. Because a government reaches a much broader audience with its executive speeches, it is comparatively more likely to focus on problems in order to present itself as well informed to the broader public.

Papers B and C dive into the interactive relationship between problem indicators and issue competition. Both utilize party manifestos as their data source, because they provide fertile ground for parties to draw attention to preferred issues. A great deal of criticism has been voiced against the use of party manifestos. For instance, sometimes the lack of real manifestos means that shorter electoral campaign materials have been selected for coding (Gemenis, 2013). It has also been shown that the coded documents vary substantially in length and that there are a number of uncoded sentences in some countries with the CMP coding scheme (Hansen, 2008). At the same time, however, manifestos remain one of the most attractive and oft-used measures of parties' issue strategies, since they are one of the few comparable data sources on party attention to different issues that are available over time, enabling for time-series cross-sectional analyses. Moreover, the use of manifestos as a data source in this dissertation should be unproblematic, as long as they reflect parties' issue priorities. Furthermore, it is worth noting that Green-Pedersen and Mortensen (2009) show that the new CAP coding used in the papers results in far fewer uncoded sentences than the CMP coding scheme.

It is apparent from party manifestos, executive speeches and parliamentary questions that parties and politicians actually pay attention to problem indicators and use them to influence the political agenda. For instance, in 2015, after years of declining performance in the international student achievement test PISA, the British Conservative party wrote the following in their manifesto: "Our schools have fallen down the global league tables for maths and science... We aim to make Britain the best place in the world to

study maths, science and engineering, measured by improved performance in the PISA league tables” (Conservatives, 2015). In 2010, Danish Social Democrat MP Mette Gjørskov asked a parliamentary question to the center-right government about the increasing use of pesticides by farmers in Denmark: “Would the minister inform us whether it is good or bad for the environment in Denmark that the agricultural sector’s use of pesticides has increased by 45 percent in the period from 2002-2008, where the government has had the responsibility for Denmark’s environmental policy?” (Gjørskov, 2010; my translation). Section 6.4 provides similar examples from executive speeches. Although these are just a few examples, they are far from the only references to indicators. Statistics on issues including the numbers of unemployed, asylum seekers and crimes frequently appear throughout the analyzed documents.

5.3 Measuring issue attention

The fifth challenge is to obtain a good measurement of attention to issues. One reason why we have not seen more studies on problem indicators and political attention may be that there has not been much available data on political attention to specific problems. It can be difficult to study how political attention tracks problem indicators if one does not possess the necessary means to measure attention to problems. The Comparative Manifesto Project (CMP) (Volkens et al., 2019) is the most popular and well-known data source on parties’ issue attention, and has coded party manifestos across most Western democracies since the end of World War Two. However, the central disadvantage of the CMP coding scheme is that most of its issue categories, such as multiculturalism, are highly aggregate. Consequently, they are not good reflections of specific problems such as immigration. This means that CMP data is ill suited for analyzing the link between problem indicators and political attention.

Table 5.2 Different levels of issue aggregation

Major issues	Examples of sub-issues
The environment	Global warming Water pollution Soil pollution Protection of endangered species
Health care	Pharmaceutical expenditure Hospitals Cancer treatment
The economy	Bankruptcies Inflation Budget deficit Unemployment
Education	Primary education Secondary education Higher education

With the Comparative Agendas Project's (CAP) coding scheme, however, it is possible to get much closer to attention to actual problems. Although CAP covers fewer countries over fewer years than CMP, its more than 200 issue categories are so fine-grained that it allows for the inclusion of many different types of issues. Surprisingly, the great number of issue categories and detail that CAP data provides is rarely used by studies that rely on it. Studies that use CAP data most often study relatively general issue categories such as health care, crime or the economy. Attention to, for instance, health care is then compared against the number of health patents (Green-Pedersen & Jensen, 2019) or the number of cancer patients (Seeberg, 2017).

Table 5.3 Overview of issues and problem indicators in the dissertation

Issue	Problem indicator	Papers/chapter
Unemployment	Unemployment rate	A, B, D
GDP Growth	GDP growth	A, B, D
Inflation	Inflation rate	A, B, D
Government Deficit	Government deficit	A, B, D
Global Warming	CO2 emissions	A, B, D
Immigration	Asylum seekers	A, B, D
Crime	General crime rate	A, B, D
Poverty and Inequality	Gini coefficient	A, B, D
Bankruptcies	Number of bankruptcies	A, B, D
Pharmaceutical Expenditure	Pharmaceutical expenditure	A, D
Health Manpower	Number of doctor and nurses relative to share of population 65+	A, D
Water and Soil Quality	Pesticides use	A, D
Waste	Municipal waste collection	A, D
Oil Prices	Crude oil price	A, D
Roads and Traffic Accidents	Road accidents	A, D
Elderly	Share of elderly 65+	A, D
Foreign Trade	Import-export	A, D
Hospitals	Number of hospital beds relative to the share of elderly 65+	B
Primary and secondary education	PISA scores (OECD)	C

However, it is problematic to assume that these (or any) indicators represent the problem development of aggregate issues such as health care, the economy, or the environment, which consist of a bundle of minor issues (e.g. pharmaceutical expenditures or securing sufficient manpower) characterized by very different problems. These minor issues connect to the same overall issue, for instance improving people's health, and parties tend to prioritize and position themselves similarly on related issues,⁶ but the challenge is that it is

⁶ For instance, left-wing parties tend to prioritize environmental protection and favor public investments as a tool to secure it, whereas right-wing parties tend to prioritize crime and favor strict sentences.

difficult to have confidence in the relevance of problem indicators on aggregate issue categories, as no indicator mirrors the problem development of many aggregate issues. The number of cancer patients is, for instance, a relevant problem indicator in relation to cancer treatment, but only weakly relevant to securing sufficient medical staff. This means that if studies find a positive or no effect, it is difficult to know whether it had anything to do with the problem indicator, whether it is simply the product of a coincidence or whether it reflects a real effect.

Therefore, the dissertation takes a step down the ladder of issue abstraction and focuses on narrower issues that closely relate to specific problems such as soil and water pollution, global warming or waste disposal, where it is possible to operationalize problem indicators that can be expected to represent the problem development of the issue at hand (Green-Pedersen, 2019). Paper A provides more information on how the issues were selected and constructed using the CAP coding scheme.

5.4 Reverse causality

The sixth challenge relates to reverse causality. In general, there are great political stakes connected to what problem indicators show. Problem indicators are used to measure and compare effectiveness and to (re)allocate resources (Gil & Levy, 2013; Hirschman & Berman, 2014), and voters tend to reward and sanction parties based on performances on indicators (Kayser & Leininger, 2015; Soroka et al., 2015). Since some are helped while others are hurt by the way a specific indicator comes to be defined, whether and how to count a problem and getting others to agree with that measurement becomes a major preoccupation for parties (Kingdon, 1984). Yet if parties exert an influence over the construction of problem indicators (as also suggested by the introductory example), reverse causality becomes a concern for a dissertation that looks at the consequences of those problem indicators for political attention.

There are, however, important reasons why reverse causality should not be a particularly prominent problem for the empirical conclusions in this dissertation. First, even if indicators are often designed intentionally for a specific purpose, there is little reason to expect that politicians will be able to control the information that problem indicators contain, not least how they develop over time. What politicians hope to show with a problem indicator is one thing; what it actually shows is another. That the number may not show exactly what politicians want is neatly illustrated by the Danish Conservative party's request to count the number of women wearing a burqa in 2009. The Conservatives had a ban against burqas on their agenda, but it turned out that fewer than 200 women in Denmark were actually wearing a niqab and only a

handful a burqa. Hence, the perceived problem was much less prevalent than expected and, as a consequence, the Conservatives lost any momentum in terms of legislating against burqas. Hence, controlling the information environment by producing problem indicators is a close to impossible task for parties. Furthermore, not all indicators are endogenous to politics. More and more indicators are routinely published by national statistical agencies, think tanks, interest groups or international organizations, such as the OECD's PISA investigation or the World Bank's Ease of Doing Business Index, where parties are precluded from having much say in whether and how the indicators are calculated.

To address reverse causality when studying the relationship between problem indicators and political attention, external problem indicators can furthermore be used to investigate how exogenous information from a problem indicator affects the attention of parties. Paper C utilizes the PISA investigation to examine exactly that. In this context, it is important to emphasize that although the problem indicator itself may be out of parties' hands, whether and how they use the specific information that it produces is still very much a strategic decision that is entirely in their hands.

5.5 Modelling time-series cross-sectional data

Across all the analyses, the dissertation makes use of time-series cross-sectional data covering multiple parties, countries and issues over time. While the use of TSCS data addresses the challenges and shortcomings of previous literature outlined in this chapter, it also creates a number of statistical issues that need to be addressed. Most importantly, the cross-sectional nature of the data is likely to give rise to omitted variable bias if unobservable heterogeneity at the country and issue level is not accounted for. This is a major concern with the type of data at hand, since the different institutions and historical legacies of countries are, as already mentioned, likely to affect the saliency of a problem indicator. To solve this issue, the analyses follow the most widely used approach and include fixed effects with panels across issues in each country in all analyses. This modelling accounts for time-invariant issue and country factors that may confound the results. The only paper that does not rely on a fixed-effects estimation in the main model is Paper C, as it is interested in how cross-national variation in the PISA scores has affected party attention to education. Specifying country-fixed effects would absorb all variation in the

PISA scores across countries, which it theorizes is likely to be a major determinant of why education has received more attention in one country than another.⁷

The use of TSCS data also raises concerns of autocorrelation, meaning that the units of the observations are likely to be related to their previous observations at $t - 1$. Moreover, it may generate problems with contemporaneous correlation and panel heteroscedasticity (Beck & Katz 1995, 1996; Plümper et al. 2005). The latter refers to situations where the different units have different variances of the errors, while the former two imply that the errors are correlated across groups and time. All three problems should be addressed as they violate the standard assumptions of OLS. To uncover the presence of these problems, a series of statistical testing have been conducted for each paper, and in most of the analyses, the analyses reveal that they are present. To deal with the issues of contemporaneous correlation and panel heteroscedasticity, the analyses follow the recommendation of Beck & Katz (1995) and use panel-corrected standard errors (or cluster-robust standard errors) across all analyses. Autocorrelation is handled in two different ways depending on the data at hand. For Paper A and Chapter D, which use annual data, a lagged dependent variable is included. This is a widely used procedure to eliminate autocorrelation (Beck & Katz, 1996; Rabe-Hesketh & Skrondal, 2012). In the papers that study party manifestos (Papers B and C), the analyses rely on a Prais-Winsten regression, which is another oft-used way to correct for autocorrelation. This method has become widely used by studies on party competition, especially those that study on party manifestos (Schumacher et al., 2013; Spoon et al., 2014; Dassonneville, 2018; Kraft, 2018). An important advantage of the Prais-Winsten transformation is that it keeps the first observation of each unit, which is often beneficial when dealing with parties, where observations are few. Moreover, the Prais-Winsten approach is preferable since there is often a long time between elections. Making the model dynamic by including a lagged dependent variable would assume that the effect would decay over an unrealistically long period of time.

Adjusting for serial correlation in either way is likely to change the effect of the results. For instance, including a lagged dependent variable makes the model dynamic and changes the interpretation and most likely reduces the effect size of other covariates (Plümper et al., 2005). Across the papers, the results are therefore scrutinized by estimating more conventional models, i.e. without a lagged dependent variable or with regular OLS. Across all estimations, the main conclusions remain unchanged.

⁷ As evident from Paper C, including country-fixed effects does not alter the main results.

Chapter 6: Main findings

This chapter presents the main findings of the dissertation. The chapter is structured in the same way as the theoretical chapter, starting with the first question about the influence of information on political attention, which mostly draws on empirics in Paper A. The second part of the chapter presents the empirical analyses of how problem indicators and parties' political preferences interactively drive the attention of parties. These analyses are based on Papers B and C. The third part presents the results from the analysis of opposition and government parties' responsiveness to problem indicators, which is new to this report. Last but not least, the chapter looks into comparative variation across issues and countries.

6.1 Problem indicators and the political agenda (Paper A)

The first aim of the dissertation was to investigate whether information from problem indicators affects political attention as well as to examine which type of information matters. Some of the questions raised in the theoretical chapter were whether politicians respond to levels of as well as changes to problem indicators, and whether performance relative to other countries matters. These questions were examined in Paper A. With the use of parliamentary questions as a measure of the political agenda, it analyzes the relationship between 17 problem indicators and the issue composition on the political agenda across seven Western democracies over more than five decades.⁸

The results are shown in Table 6.1 below. Model 1 regresses current changes in and lagged levels of problem indicators on the political agenda. The results show a positive and significant effect of lagged levels of problem indicators on the political agenda. In addition, it can be observed that changes in a problem indicator have a positive and statistically significant effect. These first results provide evidence in support of the expectation that politicians use problem indicators to assess the level of and changes in problems. Results in the paper furthermore show that the effect of changes is solely driven by negative changes in problems. As expected, negative changes exert a strong influence on the political agenda, but there is no relationship between variation in improvements to conditions and political attention.

⁸ All data in Paper A is annual.

Table 6.1 The influence of problem indicators on the political agenda

	(1) Model 1	(2) Model 2	(3) Model 3
Political agenda _{t-1}	-0.579 ^{***} (0.047)	-0.579 ^{***} (0.050)	-0.581 ^{***} (0.051)
Δ Problem indicator	0.997 ^{**} (0.374)		2.172 [*] (1.034)
Problem Indicator _{t-1}	0.967 ^{***} (0.247)		0.615 [*] (0.236)
Δ Benchmark		0.370 (0.746)	-1.316 (1.352)
Benchmark _{t-1}		1.666 ^{***} (0.489)	1.162 [*] (0.559)
Δ Single-party government	-0.061 (0.251)	0.017 (0.285)	0.002 (0.281)
Single-party government _{t-1}	-0.040 (0.090)	-0.022 (0.110)	-0.019 (0.109)
Δ Election year	-0.050 (0.059)	-0.024 (0.066)	-0.025 (0.065)
Election year _{t-1}	-0.032 (0.084)	0.014 (0.095)	0.011 (0.093)
Constant	0.742 ^{***} (0.135)	1.070 ^{***} (0.093)	0.833 ^{***} (0.117)
R ²	0.111	0.117	0.118
N	3004	2590	2590

Cluster robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Estimates from Error Correction Model. Country- and issue-level fixed effects. Reprint from Paper A.

Model 2 introduces a variable that measures a country's performance relative to the other countries under study. The measure is positive if a country is out-performed by the other countries and negative if a country is doing better. As expected, problem indicators generate more attention on the political agenda if a country is doing worse relative to other countries. Model 3 shows that this

conclusion does not change when including variables for a country's own and relative performance at the same time.⁹

Paper C also provides support for several of the expectations tested in Paper A. First, comparing OECD PISA scores against party manifestos, the paper shows that the level of the PISA scores as well as changes in the scores over time affect attention to primary and secondary school. Moreover, it finds that a country's PISA ranking closely relates to the amount of attention that it generates. This finding supports the argument that much of the power of problem indicators comes from their comparative component. It suggests that the attribution of relative positions to countries and other political entities and the strong sense of competition that this creates between those being measured is an important reason why problem indicators generate political attention.

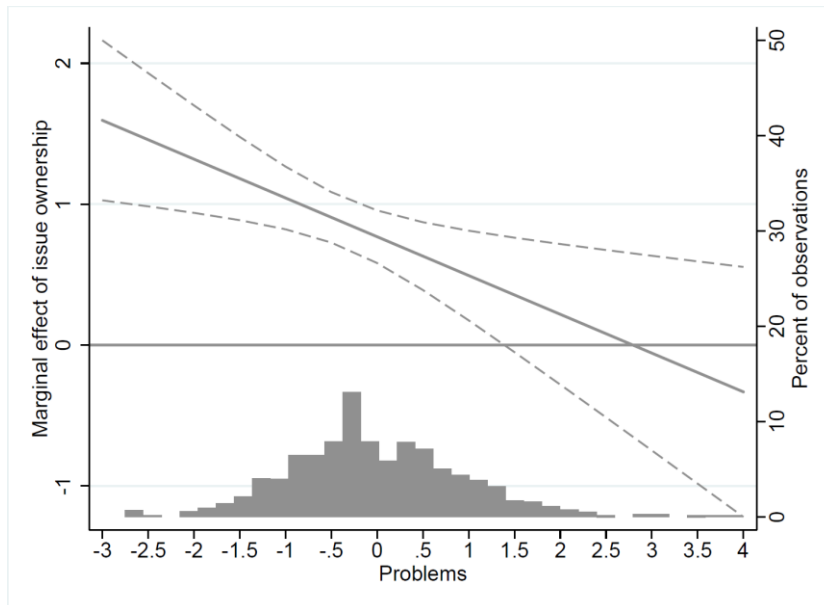
In sum, the paper shows that the content of the information that comes from problem indicators is likely to influence the political agenda. It confirms the general expectation that politicians use problem indicators as heuristic shortcuts to evaluate which problems are the most pressing and demand attention. Thereby, the paper suggests that problem indicators are important tools for politicians that make them capable of assessing and responding to quite complex information about problems.

6.2 When parties engage each other (Paper B)

The second aim of the dissertation was to bridge a gap between a widely held theoretical argument of issue avoidance and consistent yet contradictory findings of a high degree of issue overlap in the attention of parties. The results presented here test the expectation that problems can account for some of the variation in the overlap in parties' issue profiles, because the issue overlap between parties with and without issue ownership increases and decreases with problem severity. To test this expectation, Paper B compares ten different problem indicators against party manifestos across six Western European countries. Confirming the results from Papers A and C, the paper first finds a strong and statistically significant effect of the level of problem indicators on parties' attention. The findings also provide evidence in support of the classic issue ownership hypothesis as parties with issue ownership on average devote more attention to an issue than parties without issue ownership.

⁹ The findings provide evidence of partial benchmarking if Kayser and Peress' (2012) test of the benchmarking hypothesis is adopted. See Table A.1 in the appendix.

Figure 6.1 The influence of problem indicators on the differences in political attention between parties with and without issue ownership



Note: Estimated average marginal effects and 95% confidence intervals.
Reprint from Paper B.

Most importantly, Paper B shows that problem indicators, as expected, attenuate the effect of having issue ownership. To illustrate, Figure 6.1 plots the marginal effect of issue ownership at increasing levels of problem severity. Figure 6.1 shows that when problems are moderate, there is a strong and significant effect of having issue ownership. In such situations, there is little overlap in the attention of parties, and issues primarily receive attention from parties that enjoy issue ownership. However, as problems become more severe, the difference in attention to an issue between parties with and without issue ownership is reduced. At first it becomes statistically indistinguishable from zero, and when problems are most severe, it becomes zero. Paper B furthermore shows that this main finding holds across a number of party-level factors such as a party's adherence to a mainstream ideology, position in government or opposition and vote share. The empirics thus strongly support the argument that the overlap in parties' issue profiles increases the worse the problems become. This is an important and interesting finding because it illustrates how real-world problems, and more particularly their indicators, constrain party competition.

6.3 When parties do not surrender without a fight (Paper C)

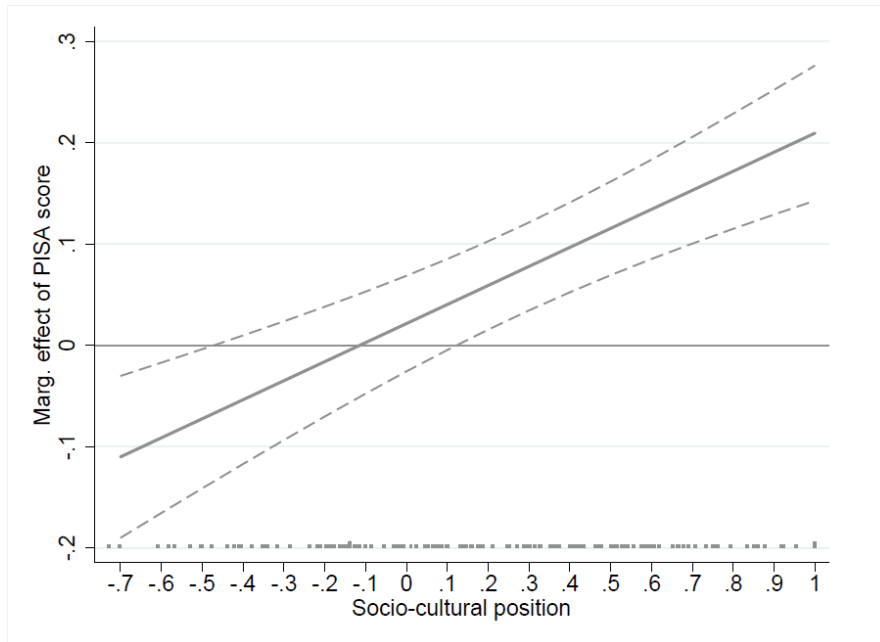
The aim of Paper C was to investigate how parties respond in terms of political attention when information from a problem indicator turns party competition upside down by challenging the views of parties with the strongest commitment to an issue and instead supporting parties who have not greatly prioritized an issue. It analyzes this question in the context of the OECD PISA tests, which pose a good case for testing the argument. The reasons are twofold. First, there are good reasons to expect that parties will want to say something about poor PISA scores. The OECD has achieved a powerful brand in terms of producing comparable and reliable indicators. Moreover, most people agree that education is a good thing and that the subjects tested in PISA (reading, math and science) cover skills that are important to learn in school. This means that the PISA scores are likely to exert a strong influence on the attention of parties. Second and most importantly, PISA's focus on education's economic returns has been strongly disfavored by socially liberal parties, who recent research suggests prioritize education policy the most (Beramendi et al. 2015, Kraft 2018). One reason that socially liberal parties tend to have strong commitments to education policy is that they appeal to voters who themselves are highly educated. Beramendi et al. (2015) argue that people with higher levels of education tend to accept a higher degree of uncertainty, which is linked to prioritizing education policy where the benefits manifest in the distant future. Furthermore, social liberals tend to prioritize education because they see it as a way to achieve self-fulfillment and autonomy as well as a way to educate children to become good citizens.

These views, however, were challenged by PISA. By providing some concrete measure of pupils' skills, PISA removed focus from non-measurable skills such as democratic participation and artistic talent that social liberals regard as important to learn in school and emphasized a more pragmatic view of education's worth to society. PISA has thus made education more tangible and reduced the high level of uncertainty of the output of education policy, which is something that is likely to appeal to social conservatives.

Turning to the empirical test of how parties have responded to PISA, Paper C, as already mentioned, first regresses the PISA scores and a party's socio-cultural position on party attention to primary and secondary education in party manifestos. To test whether socially liberal and socially conservative parties responded differently, the paper then constructs a measure of a party's position on the socio-cultural value dimension using data from the Comparative Manifestos Project. High values on the measure reflect that parties are

more socially liberal, whereas low values reflect that they are socially conservative. This variable is then interacted with the levels and changes of the scores.

Figure 6.2 Marginal effect of PISA score on attention to primary and secondary education



Note: Estimated average marginal effects and 95% confidence intervals.
Reprint from Paper C.

Figure 6.2 presents the results for levels, illustrating the marginal effect of PISA scores across the socio-cultural value dimension. The steep upward sloping line in the figure shows that socially liberal parties, as expected, are much more responsive to PISA scores.¹⁰ Examples from socially liberal parties' manifestos show that they increased their attention to education in an attempt to denounce PISA. They fiercely criticized testing in schools and adherents of it. A few quotes from the manifestos that illustrate this are already presented in Paper C, but to highlight that these quotes are not unique to a few manifestos, a few more examples from other parties in Denmark are presented here. For instance, in their 2005 manifesto, the Social Liberals (socio-cultural position: 0.48) were clearly not fond of the debate about testing in schools that PISA

¹⁰ It is worth noting that, unexpectedly, Figure 6.2 shows that there is no effect of PISA scores at all for the most socially conservative parties. This is surprising given the alignment between social conservative values and PISA. However, in connection with this unexpected finding, it should be emphasized that Paper C does find an effect of changes in PISA scores from one test round to the next for both socially conservative and socially liberal parties.

had initiated: “Education must be strengthened. *Folkeskolen* [Danish primary school] is a locally anchored school that puts weight on teaching and general education – not national standardized tests” (Social Liberals, 2005). Similarly, the Danish Red-Green Alliance (socio-cultural position: 0.86) criticized tests for creating an air of competition in schools that would prevent pupils from thriving: “We believe it is completely wrong that school is one big competition. School should be a place for everyone who wants to learn” (Red-Green Alliance, 2005). It is clear from these quotes that the socio-culturally leftist parties saw PISA and school tests as largely incompatible with the development of civic skills (general education) and student well-being. Danish social conservative parties were, in comparison, much more positive towards PISA’s approach to education. For instance, in their 2005 manifesto, the Danish People’s Party (socio-cultural position: -0.34) stressed that the purpose of school first and foremost is that pupils learn something: “Children and youth must have a proper education. They need wisdom, insight, and skills, and they must know Danish history, Christianity, and western culture” (Danish People’s Party, 2005).

In sum, the analysis confirms the expectation that parties who are deeply committed to an issue counter-attack problem indicators that challenge their views on that issue by increasing their attention to the issue. Thereby, the paper provides an illustration of how party competition can affect the reception of problem indicators. It suggests that understanding the consequences of problem indicators to political attention entails understanding how they feed into party competition and more specifically how they relate to parties’ existing commitments to issues.

6.4 Sweeping it under the rug and pulling out the rug?

The next results presented here relate to the questions about how government parties handle the burden of governing when problem indicators deteriorate and whether opposition parties use problem indicators to challenge government parties. As mentioned above, the section is a distinctive contribution of the summary report that fills out an important gap in the dissertation’s papers. The theoretical chapter argued that a model about how problem indicators influence political attention need to account for the different strategic situation that government and opposition parties find themselves in. Although a control variable for a party’s position in government or opposition is included in the dissertations papers where necessary, none of the papers however distinguishes between the response of government and opposition parties, because

they, as argued, rely on the wrong data to investigate the different incentives that problem indicators impose on opposition and government parties.

As outlined, the analysis compares executive speeches against opposition questions based on the same 17 issues as Paper A.¹¹ Since executive speeches are not available in all of the countries from Paper A, slightly fewer countries could be included (the countries are Denmark, Belgium, Germany, and Spain). However, these countries should ensure sufficient variation across different types of political systems. All government questions were removed from the parliamentary questions, and to ensure comparability among speeches and questions, both data series were standardized.¹² Moreover, only years where data on both speeches and questions have been CAP coded were included.¹³ Otherwise, the estimation approach is the same as in Paper A in which changes in attention to each of the issues is regressed on current changes and lagged levels of the corresponding problem indicators.

Turning to the results, do government parties try to sweep problems under the rug to avoid blame or do they face problems head-on to improve their reputation on the issue at hand? In the year 2009, Denmark had just been hit by the most severe economic crisis in decades, with plummeting levels of growth, rising unemployment and major bankruptcies, especially within the financial sector. When Danish prime minister Lars Løkke Rasmussen spoke to parliament at the beginning of the parliamentary year, the economy was the main topic. After his opening phrases, he immediately started to talk about the economy:

¹¹ Focusing on the ten issues from Paper B yields even stronger effects of the problem indicator variables. The finding that governments are more responsive to problem indicators than are opposition parties also replicates.

¹² Data on parties' position in opposition or government is taken from Döring and Manow (2019). Because executive speeches are not given at the party-level but on behalf of all government parties, the questions were summarized across all opposition parties in a given year, whereafter annual attention in percent to each issue was calculated.

¹³ A few more decisions about this data are worth mentioning. Moreover, in Germany, questions that are not asked by individual parties but by party groups were removed. Because Merkel, upon entering government in 2005, changed the way the state of the union speeches were delivered, making them more frequent, shorter and more focused on individual issues, the German data series was stopped in 2005 (and not in 2013 as in Paper A). In Spain, the data starts in 1983 (and not in 1978 as in Paper A), when information about the party group asking each question became available.

Right now we are in an international economic crisis. It challenges us ... The government's top priority is to bring Denmark through the crisis with as few human costs as possible. Therefore, we have undertaken active crisis policies that are among the most offensive in the world... Economists are daring to make predictions about new growth. However, this is happening after last year's big and sudden reduction, so I want to tell it like it is: we have to be prepared for unemployment to rise for some time. It is inevitable (Rasmussen, 2009; my translation).

Six years later, in 2015, Rasmussen's speech sounded completely different. The center-right had just reentered government and Denmark's economy was back on track, but the country was—similar to the rest of Europe—experiencing massive immigration, especially following the civil war in Syria. This reflected in that year's opening speech. Whereas very little attention was devoted to the economy, immigration was the top issue of the day:

Denmark and Europe are in an extraordinary situation. Our borders are under pressure: Partly from people who move because of poverty; partly from people who flee because of war and devastation... This is deeply disastrous. Denmark has an obligation to help refugees. However, we also have an obligation to keep our country intact (Rasmussen, 2015; my translation).

There is little evidence in these quotes that the Danish government attempted to avoid the most salient problems and tried to direct attention elsewhere. Instead, it confronted those uncomfortable issues head-on. To provide more systematic evidence of how government parties engage (or avoid) problems, the analysis now turns towards the results from the quantitative analysis of government speeches and opposition questions.

Table 6.2 Predicting government and opposition attention to problem indicators

	(1) Opposition parties	(2) Government parties
Attention _{t-1}	-0.731*** (0.057)	-0.803*** (0.0407)
Δ Problem indicator	0.191 (0.183)	0.411* (0.197)
Problem indicator _{t-1}	0.217* (0.108)	0.593** (0.203)
Δ Election year	0.001 (0.024)	-0.045 (0.043)
Election year _{t-1}	-0.030 (0.028)	-0.067 (0.074)
Δ Single party government	0.054 (0.052)	0.070 (0.067)
Single party government _{t-1}	0.001 (0.054)	0.088+ (0.046)
Constant	-0.056 (0.044)	-0.206* (0.0829)
R ²	0.416	0.402
N	1747	1747

Note: Cluster robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Estimates from Error Correction Model. Country- and issue-level fixed effects.

Models 1 and 2 in Table 6.2 present the results for opposition parties and government parties respectively.¹⁴ The results are in line with the theoretical expectations. Model 1 shows that there is an influence of the lagged levels of problem indicators for opposition parties, but Model 2 shows that it is much stronger for government parties. Going from the minimum to the maximum

¹⁴ For ease of interpretation, the results are presented in separate columns for opposition and government parties rather than interacting the main independent variables with a dummy variable for government parties. As a robustness check, a model was run in which the problem indicator variables were interacted with a dummy variable for government status. The results confirm that government parties are more responsive to problem indicators than are opposition parties.

on an indicator generates approximately 0.2 standard deviations more attention from opposition parties, whereas it generates 0.6 for government parties. The effect is thus almost three times as large for government parties compared to opposition parties. The findings are largely similar with respect to current changes in problem indicators, where the effect is twice as large for government parties as for opposition parties. In fact, the coefficient for current changes is only statistically significant for government parties. As a robustness check, variables for the first differenced and lagged levels of the opposing party's attention were included in the respective models. Doing so does not alter the results (See Table A.2 in the appendix). To summarize, rather than avoiding problems and claiming credit for good performances, government parties are occupied with responding to the problems of the day, which it has been argued is the burden of governing. Opposition parties also respond to problem indicators, although to a lesser extent.

Previously, it was suggested that one factor which may explain some of the contradictory findings in the literature on opposition and government parties is the type of communication channel that scholars study. To provide an idea about whether opposition parties and government parties choose different strategies in different communication channels, data from Paper A and Paper B was used to analyze whether government and opposition parties' responsiveness to problem indicators varies in parliamentary questions and party manifestos compared to in executive speeches. The different countries that are included in the papers obviously make direct comparison difficult, but the results will provide a first indication of the extent to which parties respond differently in different channels.

With respect to Paper A, which focuses on parliamentary questioning, the questions were divided into those asked by government and opposition parties.¹⁵ Opposition and government parties' percentage attention to each issue in a year was then regressed on the problem indicators following a similar estimation approach to that used above (see Table A.3 in the appendix). In general, the results confirm the positive relationship between problem indicators and both government and opposition parties' questioning. For the lagged levels of the problem indicators, government parties are slightly less responsive than opposition parties, but the difference is small and statistically insignificant. For current changes, there is only an effect for opposition parties, as gov-

¹⁵ Countries (Australia, Denmark and Germany) where government parties rarely ask questions were excluded from this analysis. The list of countries thus includes: Belgium, France, Italy and Spain. In France, questions asked by independents with no party affiliation were removed.

ernment parties do not respond at all. The difference in responsiveness to current changes between opposition and government parties in their parliamentary questioning is statistically significant at the <0.01 level. Contrary to the evidence from executive speeches, there is thus some evidence in government parties' questioning behavior that they seek to avoid problems.

With respect to the party manifestos used in Paper B (see Table A.4 in the appendix), each party was divided into parties in government or opposition prior to an election, but otherwise the variables and estimation approach were the same as in Paper B. Once again, the results show that problem indicators exert a strong influence on both government and opposition parties' attention. There is, however, little difference between government and opposition parties. Government parties respond slightly less in party manifestos than opposition parties, but this difference is small and statistically insignificant.

Although the different country setup in each analysis renders direct comparisons difficult, these results provide tentative evidence that especially government parties' strategies whenever confronted with problems vary across communication channels. Whereas government parties are highly focused on problems in high-profile speeches, there is more room to "overlook" them in the less salient parliamentary questions and manifestos. This freedom is utilized to a certain (though limited) extent by government parties to avoid problematic issues if problems are worsening.

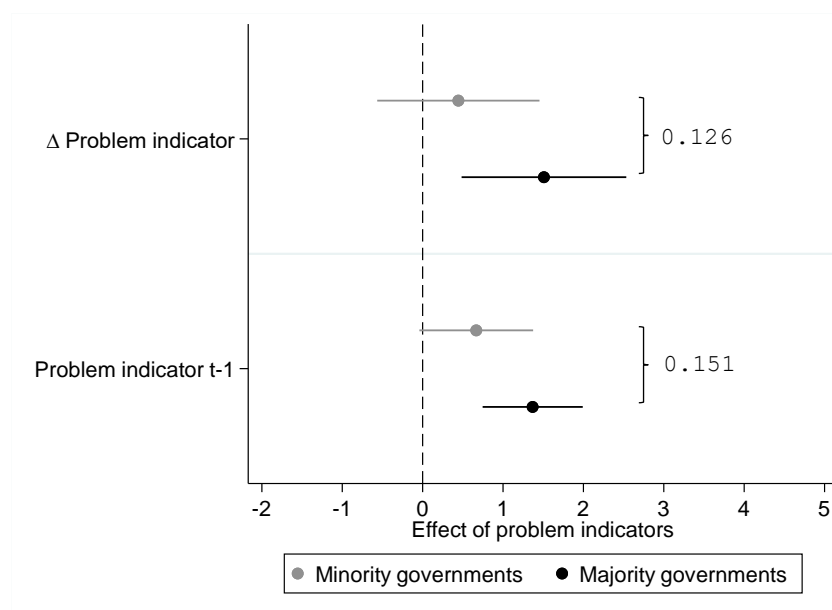
6.5 Strong and weak governments

Another question that is not covered in any of the papers concerns whether the strength of governments, given the presence of majority governments, is a factor which generates cross-national variation in the main relationship between problem indicators and political attention. To investigate this question, this section utilizes the data from Paper A to study whether countries dominated by majority governments have a higher responsiveness to problem indicators, as hypothesized earlier. It divides the countries under study in Paper A into those that typically have majority governments (Australia, Belgium, Germany, France and Italy) and those that most often have minority governments (Denmark, Spain).¹⁶ To show the results, Figure 6.3 plots the marginal effect of current changes in and lagged level of problem indicators on the political agenda for the two groups of countries. The results provide moderate support for the expectation. The coefficient estimates for both current changes

¹⁶ Although Spain also often has majority governments, they have had minority governments for most of the period under study in Paper A (24 years out of 39 in the period from 1977-2015).

and lagged levels are smaller for minority than for majority governments and are only statistically significant for the latter (although the effect of problem indicators_{t-1} for minority governments is close, with a p-value of 0.060), but the difference in the coefficient estimates is not statistically significant at conventional levels (p-value: 0.126-0.151).

Figure 6.3 The influence of problem indicators across political systems with minority and majority governments



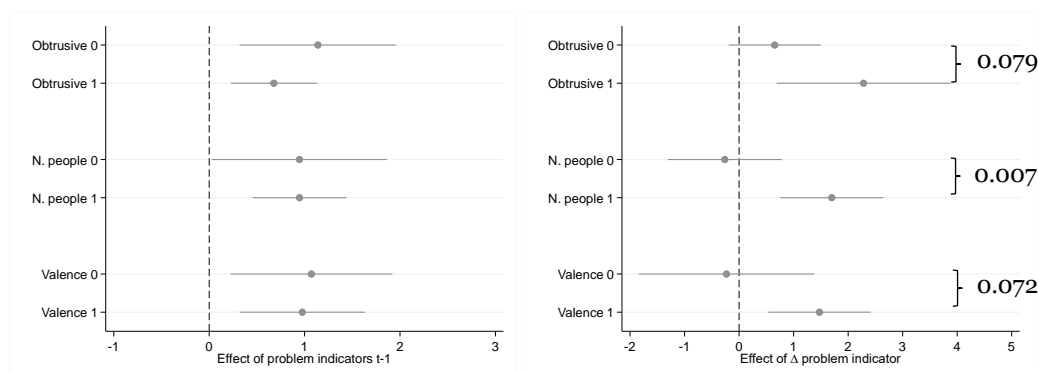
Note: The figure builds on regression results shown in Table A.5 in the appendix.

Since the presence of majority governments also sometimes varies within countries over time, analyses of the data also tested whether a country's political agenda is more responsive to problem indicators whenever it has a majority government compared to minority governments. A positive and statistical interaction term ($b = 2.048$, $p\text{-value} = 0.005$) between a variable indicating the presence of a majority government in a given year and current changes in problem indicators supports the expectation that the strength of government matters to attention to problem indicators (see Table A.6 in the appendix). In sum, these results moderately support the expectation that the presence of majority governments means that the political agenda is more responsive to problem indicators.

6.6 The character of the problem at stake (Paper A)

Paper A exploits the large number of issues it covers to explore how parties' responsiveness to problem indicators varies across different types of problems. As explained in Chapter 4, the expectation is that there is a stronger effect for indicators of problems that affect a large number of people, are highly visible and are agreed upon, because devoting attention to these types of problems appeals more to a larger group of voters than indicators of problems that affect fewer people, are invisible and are disagreed over. Paper A explores this argument by dividing all 17 problems under study into two groups for each of the three characteristics. Those that reasonably can be said to possess a characteristic were coded as 1, whereas those that do not were coded as 0. Figure 6.4 illustrates the results by plotting the marginal effects of the lagged levels of and current changes in problem indicators across the three problem characteristics.

Figure 6.4 The influence of problem indicators across different types of problems



Note: The figure builds on regression results shown in Table SI 3 in Paper A.

The right-hand side of the figure shows that across all three problem characteristics, the lagged level of problem indicators exerts an influence on the political agenda. Despite comparing problems that are very different in character, there is thus little variation in the effects and none of the coefficient estimates are statistically significantly different from each other. The pattern is different with respect to current changes, pictured in the left-hand side of the figure. It shows that the relationship between current changes in problem indicators from year to year and the political agenda vary in terms of the character of a problem. Whereas the coefficient estimates are small and statistically insignificant for problems that affect few, are invisible and are disagreed over, they are strong and statistically significant for those that are agreed-upon, have visible effects and affect a large number of people. Although the

difference between the coefficient estimates hovers around conventional levels of statistical significance (p-value: 0.079 – 0.007), this is evidence that the character of problems matters to the prominence of problem indicators. However, it is also important to emphasize that the importance of variation across problems should not be exaggerated, considering that there is an effect of the lagged levels of problem indicators across all types of problems. This is tentative evidence that, in fact, most types of problems receive at least some attention on the political agenda.

Chapter 7: Discussion and conclusion

Why do parties devote attention to certain issues while ignoring others? Seminal works within political science (Schattschneider, 1960; Bachrach & Baratz, 1962) have outlined the importance of this key question about the allocation of political attention. So far, existing research on parties has mostly focused on how parties' political preferences related to their issue ownership shape parties' political attention. This has led to a depiction of party competition as though it takes place in a vacuum in isolation from the real world and its problems, where parties are primarily seen as interested in highlighting their political preferences on the political agenda but show little interest in real-world problems and their indicators.

The arguments of this dissertation have challenged this account of party competition. The dissertation has argued that information is an intrinsic part of politics, because parties maneuver in an era of numbers where they are expected to have something to say about more and more indicators, published by public, private or international organizations that constantly provide information about policy problems. By developing and testing a theoretical argument that allows for a dynamic interplay of problem indicators and party competition, the dissertation has shown that the consequences of information from problem indicators to party competition need to be accounted for in order to understand how parties compete with each other. This conclusion was reached using novel data on political attention from many different communication channels, covering multiple countries, issues and years, thereby increasing the external validity of the conclusions. This final chapter recaps the main findings, discusses their implications and lays out avenues for future research. Furthermore, the chapter discusses two relevant factors that may condition the influence of problem indicators but which have not played a large role in the empirical or theoretical setup of the dissertation and therefore deserve mentioning: the media and public opinion.

7.1 Recap of findings

The dissertation set out to investigate how and when problem indicators affect political attention. Beginning with the *how*, the empirical findings throughout the dissertation have provided strong and consistent evidence, demonstrating an influence of problem indicators on political attention. It has thus documented that information about the size and development of problems, both

over time as well as relative to other countries, generate political attention (see Paper A but also B and C). Turning to the question of *when or under what conditions* problem indicators affect political attention, the dissertation has found that they actually do so under most conditions. As for the conditioning role of parties' political preferences, it has found evidence that parties across the board, with and without issue ownership, do respond to a problem indicator (see Paper B). In fact, results showed that problems attenuate the effect of issue ownership on parties' attention, meaning that problem indicators impede the importance of parties' political preferences. This is not to say that the dissertation suggests that the strategic agency of parties never matters. Parties have a strong incentive to care about problem indicators, but there is no direct transmission of problem indicators onto the political agenda. In fact, the dissertation has shown that there is plenty of room for party politics to unfold in response to problem indicators. When discussing the moderating role of parties' political preferences, it has shown that parties that prioritize an issue strongly fight against indicators that they dislike, if those indicators challenge their views on that issue (see Paper C). The point, however, is that it is the problem indicator that forces them to do so in the first place.

Moreover, the dissertation has provided evidence of a main effect of problem indicators across a number of other conditional variables that may promote or restrict the influence of problem indicators. Analysis in this summary report revealed that both opposition and government parties respond to problem indicators, although the effect was strongest among government parties. Furthermore, the summary report showed that although the character of problems matters, there was a base effect even for problem indicators that affect few people, are disagreed upon and are mostly invisible.

Returning to the example from the introduction about why Danish parties went to great lengths in fighting over an official poverty line, it should now be clear that they did so because of the power that comes from having such numbers work to one's (dis)advantage. Parties may disagree that a problem deserves political attention and they may not have strong commitments to the issue at hand. Yet, once indicators show that problems are severe, those numbers merit attention. At the very least, it becomes difficult for parties that want to appear responsible in the eyes of voters to completely ignore such poor numbers.

7.2 Implications

These findings have several important implications for research on parties' issue competition. First, the dissertation helps advance our understanding of the role of real-world problems to the attention stage of the policy process.

Previous work on issue competition has started from the assumption that vote-motivated parties first and foremost care about devoting attention to advantageous issues; for instance, those over which they have issue ownership. The findings of this dissertation challenge this assumption and demonstrate that it is a view that oversimplifies party competition dynamics. They show that the desire for votes also leads parties to be responsive to the most severe problems of the day, or more particularly to indicators of those problems. This demonstrates that one has to account for problem indicators and the incentives they create for parties if one wants to understand why some issues gain attention at the expense of others. Because problem indicators interact with parties' political preferences, it is not enough to include them as control variables. They have to be incorporated into the theoretical arguments in order to understand party competition dynamics.

At the same time, the interactive relationship between problem indicators and parties' political preferences also entails that incorporating parties' political preferences is crucial to understand how party competition unfolds in response to problematic information. Currently, existing literature on the influence of problem indicators on policy simply tends to compare information from those indicators against policies (Kelley & Simmons, 2015; Doshi et al., 2019), but has not opened up the mechanism of how these problem indicators translate into policy. Here, the dissertation has highlighted the strategic agency of parties as an important driver determining which problems receive political attention. The theoretical argument in this dissertation has thus put a strong emphasis on agency by insisting that parties' political preferences as well as their strategic position in government or opposition matter.

The dissertation also helps nuance our understanding of variation in party competition across issue areas. Scholars tend to assume that issue competition is characterized by the same dynamics across issue areas and, although tentative, the findings of the dissertation suggest that, to some extent, they are indeed universal. It has thus found that indicators of very different types of problems and of varying importance to people all generate political attention. At the same time, the findings of this dissertation also suggest that simply assuming universality across issue areas is problematic. Although most types of problems receive some political attention, it has found important variation in responsiveness to problem indicators depending on the character of the problems involved. This means that one has to account for the unique traits of problems if one wants to fully understand parties' incentives to engage with problem indicators.

By highlighting cross-issue as well as cross-national differences in the relationship between problem indicators and political attention, another contribution of the dissertation is to underline the importance of studying multiple

issues and countries to the external validity of the findings. The dissertation's findings thus suggest that it is difficult to say something general by studying one or two issues in one or two countries, as is mostly done by scholars studying political attention. It has addressed the lack of broad empirical studies by studying in total 19 different issues in 10 different countries.

7.3 Limitations and directions for future research

As argued above, the dissertation has made some important contributions to the literatures on issue competition and political agenda-setting. However, it of course also has its limitations. The purpose of the next two sections is to present a couple of these limitations and discuss the extent to which they are likely to be problematic for the main conclusions. In connection to these limitations, the following sections also make suggestions for the focus of future research.

7.3.1 Do voters sanction parties for poor performance?

At the most basic level, the dissertation's argument departs from the assumption that parties are motivated to respond to problem indicators because of how they affect public opinion. It is worth discussing two findings within public opinion literature which may contradict the existence of a link between performance on problem indicators and parties' electoral prospects. First, it has been shown that people are often not able to recall problem indicators correctly both in terms of their absolute levels as well the direction and size of changes (Larsen & Olsen, 2020; Esberg & Mummolo, 2018). For instance, Larsen and Olsen (2020) show that most people cannot recall the actual number of burglaries in their country or municipality when asked upfront. Scholars suggest that one of the explanations for this lack of knowledge about problem indicators is that it makes little sense for rational voters to invest a lot of resources in being well informed (Paldam & Nannestad, 2000). Second, a long line of literature has found a strong partisan bias in the interpretation of problem indicators. Partisans are found to selectively cite evidence that supports their views (Pielke, 2007; Oreskes & Conway, 2010) and to disagree over the severity of leading economic indicators (Bartels, 2002; Gaines et al., 2007). Partisans whose party is in government also tend to hold much more positive views of the economy than partisans belonging to the opposition (Jerit & Barabas, 2012). The problem for the argument of this dissertation is that if voters are not able to recall problem indicators accurately, whether out of ignorance or because their assessments are fueled by partisan-motivated reasoning, parties may also decide that it is not worth caring about problem indicators.

The argument that voters do not hold accurate views of problems clearly has merit, but based on recent work, it should be reasonable to expect that voters will have sufficient knowledge to sanction or reward parties and thus motivate them to take action in response to poor numbers. Voters need not be perfectly rational decision-makers for the argument to work, as long as they possess more or less precise ideas about the severity and development of problems. Problem indicators are constructs that help voters make relatively accurate calls about exactly that. For instance, in an experimental setting, Larsen and Olsen (2020) show that receiving a leaflet with information about the burglary rate strongly improved citizens' abilities to assess the number of burglaries several days after they received the leaflet. Moreover, studies have found that voters are actually well aware of changes in problem indicators, even though levels can be difficult for them to assess (De Vries et al., 2018; Paldam & Nannestad, 2000; Okolikj & Hooghe, 2020). The severity of the information also matters to whether voters hold non-biased perceptions of the economy. Studies have also found that when partisans face unambiguous real-world problems such as an economic crisis, their perception of the economy becomes much less partisan-motivated (Parker-Stephen, 2013; Bisgaard, 2015; De Vries et al., 2018).

Furthermore, voters' perception of problems is not exogenous to parties' behavior. Parties also play an important role in "informing" voters about problems, and voters' views of problems are likely to be affected by how parties communicate against problem indicators. One of the core arguments of the dissertation is that one reason why parties have an interest in drawing attention to problem indicators is to enhance voters' attention to a problem and thereby increase the likelihood that voters will reward or punish certain parties based on it. Because there is almost always a party that wants to capitalize on a problem indicator by politicizing it, it seems likely that voters will be presented with the information it contains.

It thus seems fair to assume that voters will be aware of important problem indicators and will hold parties accountable for them. However, it should be emphasized that it is not a necessary condition for the argument advanced in the dissertation that voters hold accurate views of problem indicators. It is sufficient that politicians believe (or fear) that they do so and that they expect to be punished if the numbers look bad. In the end, it is thus politicians' models of voter behavior that will determine their strategy against problem indicators. Many problem indicators are likely to arrive on politicians' desks long before they reach the media and the public, and the risk-averse politician may decide to pick up on them in anticipation of how voters will react. Much of what is argued above is thus likely to happen in anticipation of electoral sanctions (Arnold, 1990).

However, it will be an obvious avenue for future research to investigate the voter level. Recent years have seen an increase in the number of studies that explore the link between political attention and the problems that the public views as most important (Minozzi, 2014; Klüver & Sagarzazu, 2016; Green & Jennings, 2019), but the problem environment has not been modeled into these contributions. One reason is that data coverage on survey questions regarding “most important problems/issues” that is needed to explore the role of public opinion still remains limited in terms of the number of years, issues and countries covered. Collecting this kind of data on voters could provide interesting new avenues for future research. For instance, if problems are salient to voters, it may increase the strength of the signal coming from problem indicators. Moreover, with such data at hand, it would be possible to look into how parties’ strategic communication against problem indicators influences and manipulates voters.

7.3.2 On the role of the media

Another actor that does not figure prominently in the dissertation is the media. Agenda-setting scholars have long recognized the media as a key actor that influences the political agenda (Baumgartner & Jones, 1993; Dearing & Rodgers, 1996). There can be little doubt that it is present in the context of this dissertation, since some of the information from problem indicators is likely to reach politicians via the media (Sevenans, 2017; Van Aelst & Walgrave, 2015). The media thus plays a role in collecting, summarizing and transmitting a great deal of information to parties and politicians, making it accessible and manageable. Although data on media attention to issues is becoming more and more widespread, there is still limited data coverage in terms of the number of countries and years available. This lack of data has made an investigation of the media’s role difficult, as including media coverage in the models would leave a relatively limited empirical scope.

Despite the role of the media in bringing problem indicators to politicians, there are good reasons why it should not be problematic to not include measures of the media agenda. First, since it is highly unlikely that media coverage can affect the severity of problems, the media cannot confound the results. Even if media data had been out there, including media coverage would simply add a moderating or mediating factor to the main relationship between problem indicator and political attention. The media is able to focus attention on some problems (and has a tendency to neglect others), and it is able to influence the political identification and prioritization of problems (Baumgartner and Jones, 1993; Walgrave & Van Aelst, 2006; Van Aelst & Walgrave,

2016). Yet this does not mean that journalists necessarily initiate new problems or issues, but rather that they play a role in structuring and strengthening the signal of information available to parties.

Second, parties may also learn about how these indicators develop through channels other than the media. Parties, especially government parties, also have agencies for monitoring problem indicators at their disposal (Kingdon, 1984). These are often large, specialized information networks such as governmental agencies, which routinely monitor society for various problems. In fact, it may be the case that the media and political actors simultaneously respond to the same external information, causing media effects on the political agenda to be spurious (Van Aelst & Walgrave, 2016; Sevenans, 2017). A recent literature review by Van Aelst & Walgrave (2015) shows that most studies that investigate the relationship between the media and political attention do not control for real-world problems (e.g. Vliegenthart & Walgrave, 2011; Green-Pedersen & Stubager, 2010; Chaques-Bonafont & Baumgartner, 2013). Whereas the studies without real-world controls show the strongest media effects, studies that include problem indicators as controls tend to find a more limited explanatory power of the media (e.g. Delshad, 2013; Liu et al., 2009; although see Van Noije et al., 2008). These findings suggest that at least some of the effect of the media is spuriously caused by exogenous information about problems derived from other sources such as problem indicators. Not including problem indicators might therefore be more problematic for a study on the effect of the media than vice versa.

Collecting data on the media, however, would provide an avenue for new insights into the mediating and moderating role that the media has when it comes to problem indicators. For instance, it seems likely that a problem indicator is more likely to attract political attention if the media reports intensively on it. Doing so would enhance our understanding of the transmission of problem indicators onto the political agenda and further nuance our understanding of the conditions that moderate the main relationship.

7.4 Good or bad news for democracy?

Finally yet importantly, it is also worth highlighting that the findings of the dissertation may tell us something positive about the status of democratic accountability. Democratic accountability relies on voters being able to evaluate the performance of governments and reward them for positive outcomes at elections while sanctioning them for negative ones. This should in turn incentivize parties to offer voters the policies they want. Although there is no 1:1 relationship between problems and their indicators, indicators are crucial for voters' ability to hold parties accountable for problems as they provide some

of the best available information about problems that is accessible and understandable to most. Yet, if parties systematically distort information from problem indicators, the described accountability mechanism potentially breaks down (Benedictis-Kessner, 2020). That parties will want to communicate strategically against problem indicators to influence voters' views of problems is not an unlikely scenario. For instance, government parties may prefer to ignore problem indicators if they bring attention to poor performance and instead focus only on success stories, whereas opposition parties may wish to only draw attention to poor performances. The problem in either case is that it can be difficult for voters to evaluate parties' performances if they are not presented with a realistic picture of what problems really look like.

In terms of this prerequisite for democratic accountability, the dissertation mostly brings good news. It has found no evidence that parties hide away problem indicators that disfavor them, for instance those that their opponents are viewed as most competent at handling (i.e. if their opponent has issue ownership) or if their position in government makes blame for problems likely. To the contrary, the findings of this dissertation suggest that parties confront problems head on. Moreover, the fact that parties are not afraid to engage with each other's issues when problems are severe suggests that voters are actually presented with different solutions to the same problems, which is a necessary condition for voters' ability to compare and choose the party with their preferred solution. This is so far all good news.

The findings may also have encouraging implications in terms of democratic representation. Scholars have recently argued that attending to problems is an important condition for democratic representation (Loftis et al., 2020; Hansen, 2020). The standard view of democratic representation is that parties offer different platforms that voters can choose from at elections, whereafter parties fulfill their election pledges once they enter government. This classic "mandate" view of democratic representation closely relates to Scharf's (2003) ideas about input legitimacy. According to Scharf, input legitimacy depends on the presence of mechanisms, such as elections and party competition, that translate the "will of the people" into political decisions (i.e. "government by the people").

Yet elections are likely not the only way that voters may want parties to represent them. According to Scharf, effectively performing governments are also a prerequisite for legitimate governance. Scharf calls this *output legitimacy* (i.e. "government for the people"). It presupposes that policies are adopted that represent effective solutions to common problems among the governed. It is thus important to the welfare of citizens that parties attend to problems in between elections even though they were not on anyone's to-do

list in the first place (Manin et al., 1999). If a major economic crisis or an environmental disaster hits, the pledges that parties made at the time of the election are likely to be outdated and out of sync with the real world. Problems can thus make the world look completely different from the time of the election. Had they known at the time of the election, most voters would probably prefer that parties first do something about plummeting levels of growth or unemployment rather than simply following through on their pledges. To the extent that indicators highlight problems that threaten the welfare of citizens, information from problem indicators is important to ensure such problem-based representation (Loftis et al., 2020). They show which problems parties should attend to in order to satisfy voters. If problem indicators enable politicians do so, this may be one of the positive implications of the increased production of and responsiveness to problem indicators in modern democracies that this dissertation has found (Hansen, 2020).

Obviously, one thing is what parties say in the agenda-setting stage of the policy process—another is what they actually do in terms of policy. Whereas this dissertation has focused on the former (what parties state they will do), it has not focused much on the relationship between problem indicators and policies. Although previous studies have shown that there is a link between the issues that receive attention on the political agenda and governments' policy output, saying something about a problem is likely to have less tangible consequences than adopting a new regulation or channeling money to an issue, which can have far-reaching consequences (Van Aelst & Walgrave, 2015). Therefore, policy output is likely to be more fixed than political attention (Walgrave & Van Aelst, 2006). However, whether this affects policy responsiveness to problem indicators remains an avenue for future research.

At the same time, the good news should perhaps not be exaggerated. Although all of the dissertation's analyses find a positive and statistically significant relationship between problem indicators and political attention, most of the effects are moderate. This is maybe unsurprising as several of the issues under study are of relatively low salience (e.g. pharmaceutical expenditure, water and soil quality, roads and traffic accidents). Still, it suggests that the correspondence between the issues that are salient e.g. on the political agenda and information about problems may not always be 1:1. One reason for this may relate to attention scarcity. Because attention is limited, brief and cascading, attention tends to be focused on only a few issues at a time (Baumgartner & Jones, 1993; Jones & Baumgartner, 2005), and those few issues take up major parts of parties' attention and the political agenda. This means that there is only a limited number of problem indicators that can receive attention at a time and that, all else equal, the effect of problem indicators is most likely to be moderate.

Moreover, it should also be emphasized that if the strength of indicators is that they reduce the complexity of information, this reductionism also comes at a price. It means that only certain measurable information is incorporated. OECD's PISA Investigation neatly illustrates that problem indicators inevitably and often deliberately eliminate or discredit a considerable amount of policy-relevant information. Baumgartner & Jones (2015) argue that if problem indicators eliminate important information, this may be one of the negative side effects of their increased use as part of the wave of evidence-based policy, which may at the very least not have straightforwardly positive implications for good governance.

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Appendix

1. Benchmark analysis using Kayser and Peress' model

Table A.1 The influence of problem indicators on the parliamentary questioning using Kayser and Peress modelling

	(1) Model 1
Political agenda _{t-1}	-0.581*** (0.051)
Δ Local Problem indicator (difference group - national)	2.164* (1.031)
Local Problem indicator (difference group - national) _{t-1}	0.618* (0.236)
Δ Group mean problem indicator	0.542 (0.638)
Group mean problem indicator _{t-1}	1.689*** (0.495)
Δ Election year	-0.025 (0.065)
Election year _{t-1}	0.011 (0.093)
Δ Single party government	0.002 (0.281)
Single party government _{t-1}	-0.019 (0.109)
Constant	0.830*** (0.117)
R ²	0.118
N	2590

Note: Cluster robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Estimates from Error Correction Model. Country and issue level fixed effects.

Interpretation of the coefficients in Table A.1 follows the reasoning in Kayser and Peress (2012): If politicians engage in full benchmarking on the problem indicators, the coefficients on the local problem indicators (the difference between the national and the group mean) should be negative whereas the coefficient on the group mean should be zero. In this case, politicians would be responding to the extent to which domestic performance is better or worse

relative to the group. If politicians partially benchmark, the coefficients for national problem indicators should be larger than the coefficient for the group. Finally, if problem indicator do not matter, the coefficients on both national and the group should be zero. Table A.1 find evidence for partial benchmarking: if the national performance is better than in the other countries, politicians talk more extensively about issue at hand. A Wald test for the joint hypothesis that the coefficients on local problem indicator_{t-1} and global problem indicator_{t-1} are equal. The Wald test rejects the null hypothesis (p-value: 0.069) that the coefficient estimates for local problem indicators_{t-1} and global problem indicator_{t-1} are equal. There is however no evidence that politicians benchmark relative changes. Changes in the group mean on a problem indicator, however, appear to have an independent effect on politicians attention to an issue. A Wald test on the local and group component of the changes in problem indicators show that they are statistically indistinguishable from each other (p-value: 0.283).

2. Additional evidence of how opposition and government parties respond to problem indicators

Table A.2 Predicting government and opposition attention to problem indicators while controlling for opposition/government emphasis

	(1) Opposition parties	(2) Government parties
Δ Opposition attention		-0.013 (0.050)
Opposition attention _{t-1}	-0.731*** (0.057)	0.078 (0.065)
Δ Government attention	-0.005 (0.020)	
Government attention _{t-1}	0.030 (0.024)	-0.804*** (0.039)
Δ Problem indicator	0.205 (0.181)	0.414* (0.198)
Problem indicator _{t-1}	0.201+ (0.111)	0.573** (0.200)
Δ Election year	-0.001 (0.024)	-0.048 (0.043)
Election year _{t-1}	-0.032 (0.028)	-0.074 (0.074)
Δ Single party government	0.053 (0.051)	0.066 (0.076)
Single party government _{t-1}	-0.0023 (0.054)	0.084+ (0.045)
Constant	-0.049 (0.045)	-0.199* (0.082)
R ²	0.417	0.404
N	1747	1747

Note: Cluster robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Estimates from Error Correction Model. Country and issue level fixed effects.

Table A.3 Predicting government and opposition attention to problem indicators in parliamentary questioning

	(1) Opposition parties	(2) Government parties
Attention _{t-1}	-0.652 ^{***} (0.054)	-0.857 ^{***} (0.053)
Δ Problem indicator	1.792 [*] (0.693)	-0.426 (0.812)
Problem indicator _{t-1}	1.168 ^{**} (0.439)	1.053 [*] (0.501)
Δ Election year	0.010 (0.078)	0.100 (0.102)
Election year _{t-1}	-0.018 (0.099)	0.129 (0.158)
Δ Single party government	0.324 [*] (0.127)	-0.032 (0.297)
Single party government _{t-1}	-0.163 (0.143)	-0.023 (0.134)
Constant	0.754 ^{***} (0.216)	1.045 ^{***} (0.200)
R ²	0.329	0.438
N	1315	1315

Note: Cluster robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Based on data from paper A. Estimates from Error Correction Model. Country and issue level fixed effects. The included countries are: Spain, Italy, France and Belgium. The included issues are: Unemployment, GDP Growth, Inflation, Government Deficit, Global Warming Immigration, Crime, Poverty and Inequality, Bankruptcies, Pharmaceutical Expenditure, Health Manpower, Water and Soil Quality, Waste, Oil Price, Roads and Traffic Accidents, Elderly, Foreign Trade.

Table A.4 Predicting government and opposition attention to problem indicators in party manifestos

	(1) Opposition parties	(2) Government parties
Problem indicator	0.593 ^{***} (0.115)	0.438 ^{**} (0.138)
Issue ownership	0.854 ^{***} (0.141)	0.393 (0.245)
Percent votes _{t-1}	0.029 ^{***} (0.006)	0.025 ^{**} (0.008)
Niche party	0.157 (0.135)	0.548 (0.335)
Constant	2.613 ^{***} (0.539)	1.848 ^{***} (0.403)
R ²	0.313	0.236
N	2105	932

Note: Panel-corrected standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Estimates from Prais-Winsten regression. Based on data from paper B. Country and issue level fixed effects added but not included for ease of interpretation. The included countries are: Sweden, Denmark, The Netherlands, France, Germany, The UK. The included issues are: Unemployment, GDP Growth, Inflation, Government Deficit, Global Warming, Immigration, Crime, Poverty and Inequality, Bankruptcies, Hospitals.

3. Evidence of how the political agenda in majority and minority party systems responds to problem indicators

Table A.5 Variation in the influence of problem indicator on the political agenda across minority and majority systems

	(1) Model 1
Political agenda _{t-1}	-0.580*** (0.047)
Δ Problem indicator	0.443 (0.483)
Δ Problem indicator X Majority government system	1.080 (0.702)
Problem indicator _{t-1}	0.661+ (0.347)
Problem indicator _{t-1} X Majority government system	0.704 (0.488)
Election year	-0.056 (0.058)
Constant	0.700*** (0.130)
R ²	0.110
N	3004

Cluster robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Country and issue level fixed effects. Based on data from paper A.

Table A.6 Variation in the influence of problem indicator on the political agenda across years with minority and majority governments

	(1) Model 1
Political agenda _{t-1}	-0.580*** (0.0470)
Δ Problem indicator	-0.162 (0.441)
Majority government	-0.277 (0.208)
Δ Problem indicator X Majority government	2.048** (0.715)
Problem indicator _{t-1}	0.867* (0.429)
Problem indicator _{t-1} X Majority government	0.164 (0.570)
Election year	-0.045 (0.057)
Constant	0.916*** (0.200)
R ²	0.113
N	3004

Cluster robust standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Country and issue level fixed effects. Based on data from paper A.

English summary

Why do parties devote attention to unemployment at one point in time, while at other moments in time issues such as immigration or crime are more salient to them? This question about the saliency of issues is one of the most important in politics. Salient issues tend to weigh more in voters' decision-making, and the issue composition of the political agenda can therefore have strong electoral consequences for parties. Dominating the political agenda is thus key for parties with office aspirations. If we look at the reasons why parties' attention becomes focused on some issues rather than others, one of the most influential explanations has come from the literature on parties' issue competition. According to this literature, parties try to increase the saliency of the issues for which they enjoy issue ownership, i.e. those which voters view them as most competent in handling, whereas they ignore issues owned by their opponents.

This dissertation challenges this view of party competition, which it argues oversimplifies how parties compete in reality. The main problem, it argues, is that issue competition studies tend to assume that parties compete in isolation from the surrounding environment and its incoming information, which has led to the depiction of party competition as though it is mostly characterized by stability once firm issue reputations are established. Whereas issue ownership theory explains why parties devote more attention to some issues over others, it largely fails to account for why parties' attention to issues varies over time. The dissertation provides one answer to this question: because of how constantly changing information about real-world problems such as unemployment, crime or immigration constrain parties' engagement and avoidance of issues. When unemployment rates skyrocket or when crime rates are on the rise, these problem indicators make the issues unavoidable to parties that want to appear responsible in the eyes of voters. These problems disrupt and interact with well-established patterns of party competition, but make it much more dynamic than depicted by many issue competition scholars.

Relying on data that cover 10 countries, 19 issues and multiple data sources on parties' attention over several decades, the dissertation demonstrates a relationship between information from problem indicators and the issues that receive political attention. It also finds that parties' responsiveness to problem indicators in terms of political attention is shaped by how the problem indicators feed into existing party competition, such as government and opposition battles and fights between parties with strong and weak issue reputations. Yet, across all the types of problems, parties and communication

channels under study, it documents a positive and statistically significant relationship between information from problem indicators and political attention. These findings suggest that although political logics pervade how parties respond to problem indicators, indicators of most types of problems do, in fact, receive attention from most parties.

Dansk resumé

Hvorfor giver partier arbejdsløshed opmærksomhed på ét tidspunkt, hvorimod de på et andet fokuserer mere på emner som immigration og kriminalitet? Spørgsmålet om, hvilke politiske emner får mest politisk opmærksomhed, er et af de mest afgørende i politik. Saliente emner påvirker vælgerne stemmeadfærd, og emnesammensætningen på den politiske dagsorden kan derfor have altafgørende vælgermæssige konsekvenser for partier. Dermed er det altafgørende for partier, som ønsker at opnå valg, at de dominerer den politiske dagsorden. Hvis vi kigger på årsagerne til, at partier i højere grad fokuserer på nogle emner end andre, så er den mest indflydelsesrige forklaring kommet fra litteraturen om partiernes emnekonkurrence. Ifølge denne litteratur forsøger partierne at øge den politiske opmærksomhed på emner, de har emneejerskab over, dvs. emner, hvor vælgerne vurderer, at de er mest kompetente til at håndtere problemer. Derimod foretrækker de at ignorere emner, som er ejet af deres modstandere.

Afhandlingen udfordrer denne gængse påstand om partikonkurrence og konkluderer, at den oversimplificerer, hvordan partier konkurrerer i virkelighedens verden. Den argumenterer for, at hovedproblemet er, at flertallet af emnekonkurrencestudier har en tendens til at antage, at partier konkurrerer i et isoleret system, der er lukket for det omkringliggende samfund og dets indkommende information. Dette har ført til en afbildning af, at partikonkurrence for det meste er karakteriseret ved stabilitet, når først partierne har etableret emneejerskab. Hvor emneejerskabsteori derfor er velegnet til at forklare, hvorfor partier giver nogle emner mere opmærksomhed end andre, så er teorien kun i begrænset omfang i stand til at forklare, hvorfor partieres opmærksomhed varierer over tid. Afhandlingens svar på dette spørgsmål er: Fordi konstant fluktuerende problemer som arbejdsløshed, kriminalitet og immigration begrænser partiernes muligheder for at fokusere på eller undgå emner. Når arbejdsløshedsraten eksploderer, eller når kriminalitetsstatistikkerne stiger, bliver disse emner uundgåelige for partier, som ønsker at fremstå som ansvarlige overfor vælgerne. Disse problemer og deres indikatorer forandrer og interagerer med den veletablerede partikonkurrence og gør den meget mere dynamisk, end emnekonkurrence studier har antaget.

Ved hjælp af data fra 10 lande, 19 emner, flere årtier og forskellige datakilder til at måle partiernes opmærksomhed, viser afhandlingen en sammenhæng mellem information fra problemindikatorer og de emner, som får politisk opmærksomhed. Afhandlingen finder også, at partiernes respons er formet af, hvordan problemindikatorer spiller sammen med eksisterende partikonkurrence såsom kampe mellem regerings- og oppositionspartier såvel som

partier med og uden emneejerskab. Samtidig viser afhandlingen dog, at der er en positiv og statistisk signifikant sammenhæng mellem information fra problemindikatorer og politisk opmærksomhed på tværs af alle de forskellige typer af problemer, partier og kommunikationskanaler, som den undersøger. På trods af at politiske logikker påvirker, hvordan partier reagerer på problemindikatorer, indikerer resultaterne, at de fleste typer af problemer får opmærksomhed fra de fleste partier.