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EXPLORING BIAS IN THE CREATION AND USE OF EVIDENCE IN THE POLICY-MAKING PROCESS OF THE LOAN SYSTEM IN THE NETHERLANDS

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Abstract

The current Dutch government has announced its intention to abolish the student loan system. Remarkably, policies introduced recently and that have been the subject of so much research are already being abolished. This research tries to find an explanation for this non-optimal policy outcome in the light of evidence-based policy. In doing so, this research draws on the two forms of bias in evidence-based policy-making described by Parkhurst in his book "The Politics of Evidence" (2017). The following research question will be answered: *Did the emergence of bias in the policy-making process contribute to the non-optimal policy outcome of the social loan system in the Netherlands*. Based on the theory, it was expected that technical and issue bias in the creation and use of evidence would occur in the policy-making process. Different political and scientific sources were analyzed using qualitative content analysis. This study concludes that issue bias in both the creation and use of evidence contributed to the non-optimal policy outcome of the loan system. This research enables policy-makers to enhance policy-making by identifying flaws and offering potential solutions.

Introduction

In 2015, the Netherlands introduced the loan system for higher education students. With the introduction of this loan system, the basic grant expired, and students were instead offered the possibility of borrowing money at a relatively low-interest rate to finance their studies. Political advocates of the loan system argued that the budget not spent on the grants would be used for greater investment in education to increase the quality, which has declined since the number of students has increased dramatically in recent years. They also said that the loan system provided a fairer distribution between the collective costs and private education revenues. The political opponents did not so much invalidate these two main reasons as they were weighted differently. The opponents said that with an increase in private costs, students would abandon studying and consequently, the accessibility of education will decrease. Finally, after a previously rejected bill in 2013, many protracted debates, and lingering antagonism, the Study Advance Act, better termed as the loan system for higher education students, was introduced in September 2015.

Now, eight years later, in the academic year 2023/2024, the loan system will already be abolished. In the years following the introduction of this new policy measure, the loan system came under increasing pressure. From various sides, experts and organized bodies began to stress the system's financial and mental consequences for (ex-)students that the system entails. First, a study by RIVM (2021), the Netherlands Institute of Public Health, indicates that borrowing money and having debts negatively affect students' mental well-being and academic performance. Even if the risk of financial problems is theoretically limited, the fear of accumulating debt can (negatively) affect the mental well-being and development of the student. Second, student organizations claim that the social loan system negatively affects young people's life courses (NIBUD, 2021). The high debt students sometimes have from their loans causes uncertainty among young people, from finding affordable housing to getting a permanent contract. This obstruction in the housing market is mainly due to the inequality between generations that did incur debt through the loan system and the generation that used the basic grant. Finally, there are still concerns about the accessibility of education under the loan system. For example, students with secondary vocational education are less likely to go on to higher education, and bachelor students are less likely to start a master's degree (Inspectie van het Onderwijs, 2021). Although it is still too early after the introduction of the loan system to examine the actual effects on study participation, these figures indicate declining support for the policy to such an extent that the current government declared to abolish the loan system in its coalition agreement.

It is striking that policies are now being abolished that were on the political agenda for years before their introduction and that have been the subject of so many scientific studies and were introduced so recently. Even more striking, these policies have been the subject of many scientific studies that politicians in the policy-making process frequently cited. Therefore, these forms of evidence played an important role in the introduction of the policy. The evidence that occurred in most

plenary sessions and debates among politicians also often argued in favor of the introduction of the loan system. For example, introducing a loan system would free up more money for investment in the quality of education (Commissie Veerman, 2010). Second, the old system would not be able to sustain the desired growth in the number of students (Commissie Veerman, 2010). Finally, rising costs would have only a limited impact on the accessibility of education (CHEPS, 2013). The predominantly positive attitude that politicians had toward the loan system at the time of the policy's introduction has completely reversed to the negative attitude of virtually all politicians now during the policy's repeal. This turnaround is a major conundrum for Dutch policy-makers and public administration experts.

How is it possible that despite all the evidence that was considered during the policy-making process, this policy is already being discarded as a failure? Or was it, perhaps, because of the consultation of evidence that was skewed in the direction of the policy's positive outcome? It is important to know how political policy-making can be improved in the future. After all, policies that do not work or are unwanted by the population are not good for society. Because evidence and socio-economic indicators had a crucial role in the policy-making process, this study will explore how this evidence was generated and how different types of evidence were used in the policy-making process.

This case study analyzes the use of evidence in the policy-making process surrounding the introduction of the loan system to identify possible causes of non-optimal policy outcomes and prevent them in the future. In doing so, it draws on the theoretical framework outlined by Parkhurst in his book, *The Politics of Evidence-Based Policy Making* (2017). In his book, Parkhurst explores the potential consequences that can occur when evidence is not used appropriately in the policy-making process. In doing so, the author distinguishes between two forms of the misuse of evidence. First is the issue of using evidence that violates the principles of scientific best practices, also known as technical bias. This form of bias is mainly a concern of evidence advocates that political interests drive the misuse or manipulation of evidence. Second, issue bias refers to shifting the political debate by marginalizing policy-relevant social concerns. This form of bias is mainly at the concern of critical policy scholars that explain how "evidence-based policy" can depoliticize political debates. This research puts Parkhurst's theoretical framework of bias in evidence-based policy-making into practice by applying it to the policy-making process in the case of the loan system. In doing so, the main research question of this thesis is:

Did the emergence of bias in the policy-making process contribute to the non-optimal policy outcome of the social loan system in the Netherlands?

Therefore, the main goal of this research is to improve the policy-making process in Dutch politics, particularly the policy-making process. The process can be improved by identifying possible weaknesses in the use of evidence in these processes. Indeed, in his book, Parkhurst presents his framework for "the good governance of evidence". This framework corrects or prevents the

occurrence of various forms of bias in the different phases of the policy-making process. For example, in his book, Parkhurst describes per stage in the policy-making process where evidence is applied (in creation, selection, and use), the performance of bias (technical and issue), and what solutions can be offered. Because of Parkhurst's systematic approach, targeted solutions can be offered to Dutch policy-makers later in the research, should forms of bias indeed occur in the policy-making process.

Moreover, the research is also scientifically relevant. Much of the EBP research tests reality and analyzes how evidence has been applied. Parkhurst builds on this by arguing that there is a strong need for scientific research to examine how evidence can be applied more efficiently and effectively in the policy-making process. Parkhurst does this in his book by establishing the "good governance of evidence" framework, which can provide solutions to the forms of bias that can come into play in policy-making. This study adds on that, since little research has been undertaken on how the establishment of bias in actual policy-making has resulted in unexpected consequences. This research tests Parkhurst's framework in practice and will contribute to possible further use of the framework to define non-optimal policy outcomes and provide solutions for policy-makers.

The rest of this study is structured as follows. First, the theory will be presented. In doing so, the different forms of bias are further elaborated and broken down into the stages of the policy-making process in which they may occur. This will also include the presentation of four hypotheses that relate to the different forms of bias. These hypotheses will be tested in the analysis section to answer the research question later. Next, the methodology will be explained, and the data analysis will follow. It is a qualitative study in which used evidence, policy papers and documentation surrounding the policy-making process will be analyzed. It will also elaborate on how this qualitative data were selected and analyzed. After the data analysis, an answer can be given to the research question. This is done in the conclusion. Subsequently, in the discussion, the results will be summarized and interpreted to provide a more accurate answer to the research question, which will also include limitations of the study and recommendations for further research and policymakers. Finally, the conclusion will again summarize the study and provide a final answer to the research question.

Theory

This theory section introduces the two forms of bias that can occur in evidence-based policy-making. Parkhurst presents these two forms of bias in his book, *The Politics of Evidence-Based Policy Making* (2017). In his book, Parkhurst first describes the two forms of bias that can occur in the creation, selection, or interpretation of evidence. He then identifies and describes the political origins of these forms of bias. In it, he distinguishes between the conscious choices of policy-makers, called the overt politics of evidence, and between the subconscious processes underlying the forms of bias, the subtle politics of evidence. In the book's final section, Parkhurst arrives at his idea of "the good governance of evidence." In this section, he discusses how the various forms of bias can potentially be averted.

The concept of good governance of evidence is broken down into two phases of evidence in policy making; (1) what evidence is appropriate for policy-making and (2) how this evidence should be used in the policy-making process.

In order to tie the two separate forms of bias to the practice of implementing the loan system, the stages of the forms of bias and the good governance of evidence will be merged. This theoretical section will draw a difference between the generation of valid evidence for policy-making and its right application in policy-making. The theory will elaborate on the two forms of bias and the causes and mechanisms that lead to them. Then the hypotheses will be presented regarding the form of bias in that particular stage of the policy-making process. After the hypothesis, the possible solutions offered by Parkhurst through his "good governance of evidence" framework will be briefly discussed to provide possible recommendations at the end of the study to improve the policy-making process and avoid nonoptimal policy outcomes.

According to the book, *The Politics of Evidence-Based Policy Making* (2017), two forms of bias underlie nonoptimal policy outcomes in policy making where evidence is underpinning. The first bias relates to how evidence can be unscientifically misused for political objectives. This technical bias is also referred to as the politicization of science and covers the problematic utilization of evidence from the perspective of scientific best practice. The second form of bias in evidence-based policy is issue bias. Issue bias is primarily concerned with whether clinical evidence should be the sole criterion for providing it. Issue bias reflects how the choice in what evidence is created and what evidence is used affects policy-making in politics. It can be described as shifting the political debate by marginalizing policy-relevant social concerns. Issue bias can be problematic because it obscures or undermines the different values important to the public, leading to unintended policy outcomes. Therefore, issue bias can be seen as the depoliticization of politics. Both forms of bias occur in the creation of the evidence and in the use of the evidence in policy making. The following sections will examine how bias can occur in the different phases of policy making. We will also briefly discuss what possible solutions Parkhurst offers when these forms of bias occur.

When one of these forms of bias occurs in the creation of the evidence or the use of the evidence, it can ultimately lead to nonoptimal policy outcomes. Because the loan system policy can be seen as a nonoptimal policy outcome, this study expects that some form of bias occurred in the creation of the policy. Therefore, this theory also establishes four different hypotheses that expect the bias to have occurred in the policy-making process leading up to the introduction of the loan system in the Netherlands. These hypotheses will be tested in the analysis of this study.

Technical bias in the creation of evidence

Technical bias occurs in the creation of evidence when policy-relevant research is undertaken in ways that are strategically manipulated to produce desired outputs. It may be that the way research was conducted does not meet the scientific standards for good research. So when technical bias occurs in the creation of evidence, scientific best practice is hampering the research because of political influences. Flawed research includes adjusting the research design after experiencing negative outcomes, cherry-picking certain findings or manipulating initial data (Parkhurst, 2017). An example of manipulating data is selection bias, described by Collier & Mahoney (1996). In the case of selection bias, researchers deliberately select extreme cases in order to achieve the desired result. However, these results should not be generalized to the larger population, as they are biased and not representative of the larger population (Collier & Mahoney, 1996). Two other mechanisms of technical bias in the creation of evidence are given by Strassheim & Kettunen (2014). They describe the misuse of evidence or the use of false evidence as policy-based evidence: "the failure to include relevant knowledge, the claim of distorted evidence when it is not, the interference with research and its opportunistic use, the fabrication, suppression, falsification and instrumentalization of facts for political purposes" (Strassheim & Kettunen, 2014). It thereby considers that empirical research depends on both the methodological and interpretive clarity of the sender and the political will and rationality of the recipient. The authors describe the causes underlying policy-based evidence. In doing so, they create a typology, grouped by the dominant form of selectivity and the type of power asymmetries that occurs, that distinguishes four different mechanisms for the emergence of policy-based evidence. Two of these mechanisms occur in the creation of evidence and lead to technical bias. First, using too complex statistical models and simulations, called black-boxing, can lead to epistemic opacity and a trend of self-confirmation. Second, over-simplification can lead to limited use of essential knowledge in terms of local or practical forms of knowledge. Often large-scale planning schemes or management techniques are causes of the minimal use of these local forms of knowledge (Strassheim & Kettunen, 2014).

Uncertainty in the policy issue or contestation may be the root cause for technical bias in the creation of evidence. For example, policy uncertainty can create heuristics that lead to the overuse of established preferences or past experiences that may not accurately address the current issue (Parkhurst, 2017). In addition, contestation and the importance of the policy problem to interest groups will enlarge the incentives for manipulating evidence to achieve desired outcomes. When many stakeholders are present, each with solid interests and differing opinions, the potential for biased research is more prevalent. (Parkhurst, 2017). Due to the nonoptimal policy outcome of the loan system, this research expects to see technical bias in the creation of evidence and formulates the first hypothesis:

H1: Technical bias occurred in the creation of the evidence that served as the basis for the introduction of the loan system in the Netherlands.

Should the study show that there was technical bias in the creation of the evidence, this will need to be avoided in the future. The solution, according to Parkhurst, is universal standards for quality evidence for policy making. Several authors have already developed such a framework. For example, the TAPUPAS framework of Pawson et al (2005), which is an acronym for the seven criteria that good evidence must meet. The acronym stands for transparency, accuracy, purposivity, utility, propriety, accessibility and specificity, what should all be present when the evidence is used in policy-making (Long, 2005). In addition, the GRADE framework provides a systematic and transparent assessment for clarifying questions, determining the outcomes of interest, summarizing the evidence that answers the question, and moving from evidence to a recommendation or decision (Guyatt et al. 2008). Both TAPUPAS and GRADE are examples of frameworks against which the quality of evidence can be tested. According to Parkhurst, there will need to be an independent but representative organization that creates such a framework and also applies and monitors evidence used in policy making. This is a possible solution should technical bias occur in the creation of evidence.

Technical bias in the use of evidence

There are two possible options how technical bias occurs in the way it is used in evidence-based policies. First, evidence can be 'cherry-picked' in a way that only highlights the pieces of the evidence that supports the desired outcome. Sources of evidence often contain various findings, so looking at the totality of the evidence is necessary for the scientific best practice. The selective use of pieces of evidence can contribute to different facts in line with personal political needs and goals. Second, the interpretation of evidence can be wrong, which will lead to invalid conclusions.

A typical example is a correlation seen as causation (Parkhurst, 2017). However, misinterpretation is an example in which much can be manipulated. For example, there are several studies where absolute risk cases are presented, but the relative risk is omitted (Aubrey, 2015; Roberts, 2015). This mainly creates misinterpretations among lay people and can significantly impact public opinion and political debate. This may be with the intent to manipulate evidence, but it may also be done unconsciously. One cause may be that people do not understand the statistics or methods well enough to draw the correct conclusions from their research results. Another cause may also lie in the complexity of the policy problem. A complicated case with many elements can increase reliance on intuitive 'fast' thinking and heuristic-driven processes for shortcuts. These can result in biases such as inaccurate judgements of probability or illusory correlations (Parkhurst, 2017). Finally, the same motives of contestation will also underlie technical bias in the selection and interpretation of evidence. Polarization in the political debate also has a large part to play here. For example, a political environment with two groups directly opposed to each other is more likely to ensure that only the

desired outcomes of policies are shown due to more stringent motivations for identity-protective cognition (Parkhurst, 2017). Due to the nonoptimal policy outcome of the loan system, this research expects to see technical bias in the use of evidence and formulates the second hypothesis:

H2: Technical bias occurred in the use of evidence that served as the basis for the introduction of the loan system in the Netherlands.

Should technical bias occur in the use of evidence in policy-making, then transparency, deliberation, and systematic reviews can ensure that it disappears from the process. Transparency through mechanisms such as freedom of information or regulations of public disclosures will lead to the publicness of information. In this way, the use of evidence is more contestable, and policy-makers must justify the manner they used evidence (Parkhurst, 2017). Second, deliberative spaces, such as roundtables, stakeholder conferences and increased public participation, will lead to a less polarized debate and reduce the incentives for technical bias (Parkhurst, 2017). Finally, it is good to offer alternative analysis techniques when using evidence in policy-making. For example, systematic reviews can prevent evidence from being created or misinterpreted (Parkhurst, 2017).

Issue bias in the creation of evidence

In creating evidence, issue bias occurs when the wrong factors and consequences have been considered in the research. So it may be that the research was constructed and executed rigorously and validly, but not on the right topic or phenomena. For example, researchers may have made wrong choices in what they studied or what questions they asked to research the topic (Parkhurst, 2017). Of course, these wrong choices need not have been made by the researchers themselves. This is also where the force field between science and politics needs to be well balanced. The "technocratic" view holds that expanding the role of the expert community in policy-making will indeed lead to better policy outcomes. Experts with scientific knowledge know what works and what does not. Nevertheless, something that might work might not equate to what is desired by the public. The "democratic" critique of the previous kind of science policy is that policies based on sciences alone fail to incorporate a full enough range of values. Indeed, when science begins to take precedence over politics, the likelihood of issue bias increases (Parkhurst, 2017). Representatives of this democratic critique argue that accountable public representatives must first identify what public values are at stake and use these to determine the goals to be achieved by policy. Then these goals can be examined by scholars and evidence produced. When these values and goals are not first identified, there is a high possibility of one-sided evidence or obfuscation of political values. Due to the nonoptimal policy outcome of the loan system, this research expects to see issue bias in the creation of evidence and formulates the second hypothesis:

H3: Issue bias occurred in the creation of evidence that served as the basis for the introduction of the loan system in the Netherlands.

Should issue bias occur in the creation of evidence, Parkhurst suggests the appropriateness framework, which includes three core conditions for good evidence. First, the evidence must be relevant to the goals/purposes of the policy. For this purpose, there is, in the first place, a need for goal clarification. This means that prior to the research producing evidence, it must be clear which values are essential for policy making and therefore need to be investigated. Once these values are clear, they should be studied and not just a selection that is strategically good to research (Parkhurst, 2017). Second, appropriate evidence is constructed in a way that it can measure the values and concepts at stake. Various studies can be constructed in a good way, but the conceptualization of specific values or concepts is different (Parkhurst, 2017). Lastly, the evidence that is used should apply to the local context, which considers that what counts as evidence in one context does not directly count as evidence in another context. Process analysis or meta-analysis enables researchers to assure that the evidence is generalizable and thus applicable in that particular policy context. When all the three previously mentioned conditions are met, it is suitable for the corresponding policy concern and prevents issue bias in the creation of evidence (Parkhurst, 2017).

Issue bias in the use of evidence

Issue bias also occurs when using evidence in policy-making. A first possibility is that from a wide variety of available sources of evidence, only the evidence that matches personal interests is shown. It thereby resembles the "cherry-picking" that also occurs with technical bias in using evidence (Parkhurst, 2017). However, there is a clear difference between the two. For example, cherry-picking in technical bias involves singling out specific findings from one scientific source. In contrast, cherry-picking in the case of issue bias is the selective presentation of evidence that addresses only a few prejudiced political values rather than all relevant policy concerns. In this way, a political debate may produce two policy outcomes that are both evidence-based but with different perspectives. Second, erroneous interpretations of findings can prioritize a particular social outcome to the exclusions of others (Parkhurst, 2017). For example, research can evaluate multiple social concerns but was incorrectly interpreted as only speaking to some of those outcomes. Referring back to the concept of policy-based evidence of Strassheim and Kettunen (2014), two mechanisms can also be identified that result in issue bias in the use of evidence in policy-making. First, knowledge monopolization is the mechanism that, from different scientific sources, an asymmetric selection is made in choosing which to use, with the plicate tendency to protect the cognitive core of organizations or networks at the interface of science and policy from conflicting evidence. The second source of policy-based evidence is the tendency to blame-avoidance or risk-aversion by spin, presentation or evidence-selection

strategies to shift responsibilities to other actors (Strassheim & Kettunen, 2014). Due to the nonoptimal policy outcome of the loan system, this research expects to find one or both of these mechanisms in the policy-making process and poses the fourth hypothesis:

H4: Issue bias occurred in the use of evidence that served as the basis for the introduction of the loan system in the Netherlands.

When issue bias in the use of evidence occurs, the construction of Evidence advisory systems (EAS) is a solution. Evidence advisory systems are institutions that ensure the rigorous and systematic use of valid pieces of evidence within the policy-making process through systematic reviews of evidence and procedures to identify appropriate evidence and to create deliberative spaces (Parkhurst, 2017). These institutions also remain representative of and accountable to local populations. Because the EAS is put together by the public to whom they are ultimately accountable, they will also have to represent their interests. This will allow the EAS to properly oversee the use of evidence relevant to the population to whom they are accountable.

Method

Now that the hypotheses have been set in response to the theory, this section will elaborate on the research design, coding scheme, and data used.

Research design

This qualitative research examines what evidence underlies the introduction of the loan system in the Netherlands and how policy-makers have used this evidence. The analysis of the evidence and how it was applied in the policy-making process will be able to reveal how bias may have been able to occur and also in what part of the process. The qualitative data used consists of two types of documents. On the one hand, scientific and expert sources will be analyzed based on their content and methodology. Thus, possible forms of bias in creating evidence can be discovered. On the other hand, political data such as memoranda of understanding, plenary reports and other policy documents are analyzed to see how evidence has been handled. The various documents will be analyzed through coding. The codes used are operationalizations of the concepts covered in the theory section. The next section will elaborate on the coding scheme used for the analysis.

The codes used to identify bias in the creation of evidence are mostly be used in the analysis of the expert documents. In contrast, the codes used to identify bias in evidence are mostly used in the political documents. After coding the data, this study looks at which codes were common and which were less common for each hypothesis. In this way possible patterns will emerge which identify technical or issue bias. Once all the hypotheses have been run through and a judgment made as to

whether they have been accepted or rejected, what this means for the main research question will be considered.

Coding scheme

This section details how signs of the four hypotheses can be identified in the diagnostic evidence. In order to accomplish this, the study used coding, which may be thought of as a link between raw qualitative data and their interpretation (Charmaz, 2001). A researcher uses codes, also defined as "a researcher-generated construct that symbolizes or 'translates' data to identify patterns." These patterns occur when data recurs multiple times in the qualitative documents being studied. When patterns are recognized, this can reveal something about the hypotheses set forth and, in this way, answer the researcher's research question(s) (Saldana, 2016).

This study focuses on two forms of bias that could account for the non-optimal policy outcome of the loan system in the Netherlands. These two forms of bias can occur in two phases of the policy-making process; during the creation of the evidence or the use of the evidence in the process. This way, four different types of bias can occur in policy-making. The four different types of bias led to the four hypotheses proposed in the theory sections. In addition, the four biases have different ways in which they can show up in the policy-making process. These processes and mechanisms have also been addressed in the theory section. Table 1 again shows the four different forms of bias and possible ways they occur in the policy-making process.

	Technical bias	Issue bias
Creation of evidence	• Strategic/adjustment of the research design • Manipulating data • Black-boxing • Oversimplification	• One-sided-evidence • Obfuscation of values within the selection of evaluation criteria
Use of evidence	• Cherry-picking (highlighting pieces of evidence) • Misinterpretation of results	• Cherry-picking / Monopolization of evidence

Table 1

In the documents that will be analyzed, this research attempts to identify the different mechanisms that lead to the four different forms of bias. Table 2 briefly describes what the different mechanisms entail and the codes used for the analysis. Only the mechanisms of one-sided-evidence and cherry-picking do not involve a description but different codes. These codes can be given to the different types of evidence used in the process. When one code does not appear or barely appears in the evidence but has led to the abolition of the policy, this may say something about issue bias occurring in the creation of evidence. The codes presented in the table are used in a way that Grbich describes as *codifying*: a process that permits data to be divided, grouped, reorganized and linked to consolidate meaning and

develop explanation (Grbich, 2013). Thus, the codes will not be extracted one-to-one from the text but are intended to recognize patterns of mechanisms. When codes from one particular form of bias occur frequently, there is a pattern that says something about the likelihood of this bias.

Bias	Mechanism/code	Description
H1: Technical bias in the creation of evidence	Strategic/adjustment of research design	Any indication of flawed research designs
	Manipulating data	Any indication of selection bias
	Black-boxing	Any indication of too complex statistical models or simulations
	Oversimplification	any indication of: – inadequacy of evidence on practical grounds – denial of causal factors
H2: Technical bias in the use of evidence	Cherry-picking (highlighting pieces of evidence)	Any indication of only highlighting pieces of evidence documents: – quality of education – financial feasibility – students welfare – accessible education – students' financial situation – study choice – practical feasibility – study dropout – future prospects of students
	Misinterpretation of results	Correlation as causality; excessive use of absolute statistics;
H3: Issue bias in the creation of evidence	One-sided-evidence	The creation of evidence that addresses only a few, prejudiced political values rather than all relevant policy concerns: – quality of education – financial feasibility – students welfare – accessible education – students' financial situation – study choice – practical feasibility – study dropout – future prospects of students
	Obfuscation of values within the selection of evaluation criteria	Equality; proportionality; liberal-values; participation; hierarchy;
H4: Issue bias in the	Cherry-picking (outsourcing of evidence)	Any indication of selection and presenting evidence that addresses only a few, biased political values rather than all relevant policy concerns:

use of evidence	/ monopolization of evidence	– quality of education – financial feasibility – students welfare – accessible education – students' financial situation – study choice – practical feasibility – study dropout – future prospects of students

Table 2

Data

All data used is qualitative and collected through document analysis and literature research. In line with the distinction between the construction and the use of evidence, two different types of textual data were used to test the hypotheses and answer the research question. First, political sources like the reports of the plenary meetings, explanatory memoranda, and the reports of the legislative proposals are analyzed and coded. These reports offer insights into the use of evidence by policy-makers and politicians and their behaviour, motivations and attitudes towards the evidence. A total of six documents that cover the political policy-making process were analyzed. Starting with the explanatory memorandum of the policy measure as it stood in 2013, then known as the Social Loan System Master Phase Act. Ultimately, this policy measure did not pass, and a new debate on the introduction of the loan system followed. In it, a majority of the chamber indicated that they would support such a loan system, resulting in a new policy measure on the table, the Higher Education Advance Funding Act. Four more documents were analyzed as a result of this policy measure; the explanatory memorandum, the treatment of the policy measure in the Second Chamber, the continuation of the treatment in the Second Chamber and then the treatment in the First Chamber.

Second, the scientific sources are analyzed based on the claims that policy-makers make about the evidence and on the document's quality and appropriateness. After analyzing all political sources, the resulting scientific and expert documents were analyzed. In total, there were ten different documents. The most frequently used sources of evidence are the studies of the CPB, a Dutch institute for economic forecasting and analysis, the SCP, for social scientific research, and the CBS, the central bureau of statistics. Nevertheless, other independent institutes such as the CHEPS, the Center for Higher Education Policy Studies, ABF Research, ResearchNed and Science Guide also provided sources of evidence at the request of the bill proposer. Finally, reference was also made to independent studies by the Higher Education Council, the Council of State and the Veerman Committee. After analyzing the sources referenced in the policy-making process, a literature review of available other sources on the political interests and elements surrounding the policy measure was conducted. This was done to get a good idea of what sources the policy-makers had at their disposal and what research, if any, could have been done in the Dutch context.

Analysis

This section presents the findings that result from the qualitative content analysis to confirm or reject the hypotheses and answer the main research question. The chapter consists of four parts, each relating to one of the hypotheses. The parts will be structured as follows; first, another brief discussion will be given of the codes used and the method of analysis. Then the results of this analysis will be presented in greater detail. Finally, a conclusion will be drawn as to whether the available data sufficiently support the hypothesis.

Hypotheses 1: Technical bias in the creation of evidence

Table 3 presents the codes that guided the first hypotheses' data analysis. Policy documents and plenary reports were first analyzed to identify the mechanisms leading to technical bias in the creation of evidence. This was done first to discover policymakers' attitude towards the evidence, and this attitude could already expose specific mechanisms to technical bias. Afterwards, the actual sources of evidence were analyzed and it was checked whether the attitude of policymakers indeed corresponds to a possible bias in the creation of evidence. This was done by focusing on the underlying methodology that was used in the creation of evidence.

H1: Technical bias in the creation of evidence	Strategic/adjustment of research design	Any indication of flawed research designs
	Manipulating data	Any indication of selection bias
	Black-boxing	Any indication of too complex statistical models or simulations
	Oversimplification	any indication of: – inadequacy of evidence on practical grounds – denial of causal factors

Table 3

In analyzing the documents in search of technical bias in the creation of evidence, two evidence documents used, caught attention. First the document of the Central Planning Bureau (2013) that examines the participation effects when the social loan system is introduced. Politicians often refer to this document to justify the accessibility of education. Opponents of the loan system point out that 2,700 students a year would drop out of school if the personal contribution was increased by 1,000 euros. This is based on a 0.6% drop in enrollment for every 1,000 euro increase in the personal contribution. (*Plenaire vergadering: Wet studievoorschot Hoger onderwijs* (34035) (Eerste Termijn Kamer), 2014). However, the content analysis shows that the CPB has based its calculations on an American model. More precisely, on the model presented in the study by Dynarski (2003). This study by Dynarski is based on the American context of the 1990s. To relate the results of this study to the Dutch context 25 years later may entail shortcomings. For example, various context-related variables,

such as the presence of flanking measures or interest rates, may not have been weighed. This form of oversimplification may occur when using this evidence. In addition, CPB notes that the U.S. estimates do not consider the possibility of borrowing the additional funds needed, possibly under favourable conditions (Centraal Planbureau, 2010).

Second, the policy-making process refers here and there to the ABF Research report (Kences & ABF Research, 2014). This study examines the behavioural effects of students in response to any policy change. Opponents of the policy measure refer to this study because it shows that 10% of the students would abandon their studies if the loan system were introduced. Even 40% of *HBO* students would abandon attaining a master's degree (Debat over de invoering van het leenstelsel voor studenten, 2014). However, the data is selectively chosen, something the proposer of the bill, the minister of education, also points out; “The statement that 40% of college students would not pursue a master's degree comes from a study by Kences (ABF Research) […] It did not ask whether these *HBO* graduates would consider a master's programme at this moment. This question is relevant because only one in ten *HBO* graduates is currently doing a master's programme.” (*Debat over de invoering van het leenstelsel voor studenten*, 2014). Aside from the fact that the data used affected the study's findings, the questioning used was also not very reality-based. Indeed, the study's intent is not to discover behavioural changes in the area of study but rather those in the area of housing. The study's design was a survey circulated without further explanation about the new loan system. Flanking measures such as low-interest rates, long repayment terms and other mitigating measures may have been unknown to respondents (Kences & ABF Research, 2014). This is probably why the percentage of students who will not study in this survey is much higher than in other surveys. Overall, it can be concluded that the research design of this study was strategically convenient for the opposition.

Apart from these two studies, which tested educational accessibility, there is no indication of technical bias in the creation of the evidence among the remaining evidence materials. Forms of black boxing such as complicated computational methods or vague conceptualizations did not emerge in this analysis. In addition, for the two studies that have slight indications of flawed research, alternative studies emerge that also find roughly the same findings. Examples of such studies are the SCP study "*De Studie waard*" (2013) and the CHEPS study (2013). Both studies show no oversimplification, data manipulation or strategic research design. In its completeness, it cannot be said from the analysis that there is systematic technical bias in the creation of evidence. With that, we reject the first hypothesis: *Technical bias occurred in the creation of the evidence that served as the basis for introducing the loan system in the Netherlands.*

Hypotheses 2: Technical bias in the use of evidence

Table 4 presents the codes guiding the second hypotheses' data analysis. Policy documents and plenary reports were analyzed based on the results presented by the evidence. After identification, these results

were reviewed for accuracy and completeness to recognize possible forms of cherry-picking or misinterpretation.

H2: Technical bias in the use of evidence	Cherry-picking (highlighting pieces of evidence)	Any indication of only highlighting pieces of evidence documents: – quality of education – financial feasibility – students welfare – accessible education – students' financial situation – study choice – practical feasibility – study dropout – future prospects of students
	Misinterpretation of results	Correlation as causality; excessive use of absolute statistics;

Table 4

In analyzing the plenary reports, it was noticeable that several politicians accused each other of "selective shopping" in the available evidence (*Debat over de invoering van het leenstelsel voor studenten*, 2014; *Plenaire vergadering: Wet studievoorschot hoger onderwijs* (34035) *(Voortzetting)*, 2014). This selective shopping occurred both in the choice of which evidence was explained (issue bias) and in which findings from these documents were highlighted (technical bias). To answer the second hypothesis, we focus for now on the latter form of bias. Within several cited reports that have tested students' behavioural responses to the introduction of the loan system, politicians accuse each other of cherry-picking specific findings. A first example comes from the SCP report "De Studie waard" (The Study Worth It) (2013). Opponents of the proposal claim that 10% of students will refrain from their studies if a loan system is introduced. Among MBO students, even 20% will not follow a subsequent study because of the rising costs (*Debat over de invoering van het leenstelsel Voor studenten*, 2014). This assertion is based on the ABF research study cited by the SCP in its report. In the chapter on earlier research, it is mentioned in one paragraph that the research of ABF shows that among MBO students, 20% would not study if there were a loan system (Kences & ABF Research, 2014). However, the purport of the rest of the report is very different. Other studies are convinced that an increase in the private contribution will only have a minimal impact on the accessibility of education (CHEPS, 2013; Centraal Planbureau, 2013a; Centraal Planbureau, 2013b). In addition, the same report states that this group considers the OV-card (a card that allows students to ride public transportation free of charge) an essential instrument for accessibility in education (Kences & ABF Research, 2014). In the ABF study, it was assumed that the financing of this OV-card would also be placed in the hands of the student, while in the final bill, the OV-card will simply be reimbursed by the government. This means that in citing this report, both deliberate pieces of evidence have been put forward that do not articulate the result of the study, and the results of the evidence cited have been

misinterpreted. On top of that, the SCP clearly states that their research is not quantifiable and can only be used to determine students' motivations. For example, the report states, "This qualitative research cannot answer the question of how many young people will choose a particular; nor does it allow for firm statements about the consequences of the introduction of the social loan system." (Sociaal en Cultureel Planbureau, 2013).

The second example of cherry-picking is when opponents of the policy measure cite the CHEPS study. They point to the fact that in the UK, students graduate with an average debt of £44,000 (*Debat over de invoering van het leenstelsel voor studenten*, 2014). Therefore, this high debt is not repaid by all students, which will lead to an additional debt of £10 billion (CHEPS, 2013). It is indeed true that in the U.K., students graduate with much higher debt, the minister also acknowledges. However, she points out that the situation in the Netherlands is different from that in the United Kingdom: "In England, they have quadrupled the tuition fees. I think it is now £9,000 there. So that is a different amount than what we are asking for here. They also have a loan system that requires even more private contributions from students. In that sense, the English system is not comparable to the proposal before us." (*Debat over de invoering van het leenstelsel voor studenten*, 2014). In addition, the result of the study in the U.K. gives only a limited picture of the findings CHEPS makes. For example, the researchers conclude that financial incentives typically have only limited and temporary effects on study choice behaviour. A participation effect only occurs when there are substantial changes in the net cost to students. In cases of substantial changes, supplemental grants will ensure that loan aversion and its psychological effects among students, especially those from low-income groups, is limited. Thus, accessibility problems will be avoided, CHEPS concludes (CHEPS, 2013).

These are two examples of how there is a selective choice in the evidence presented. It is also more prevalent in the policy-making process. However, policymakers correctly point this out to each other, and it is not systematically tracked. All scientific evidence, as such, has been exchanged and studied by the policy makers before deliberation. As a result, untruths in the evidence presented will not occur and, therefore will have had little impact on the implementation of the policy. However, we do see another more worrisome occurrence for the use of the evidence in this policy-making process. Many pieces of evidence that have been cited to test student behavioural changes or educational accessibility are not based on the policies that were ultimately implemented. This puts the proper interpretation of these pieces of evidence in question. Indeed, the fact is that the study is based on a set of policies that do not include all of the flanking measures that provide cost containment conditions for students. These flanking measures are an extension of the repayment term from 15 to 35 years, the increase of the supplementary grant for the lowest incomes, a surrogacy arrangement that is scaled up to 100% and, probably the most critical measure, the reimbursement of the OV-card (*Memorie van toelichting Wet studievoorschot Hoger onderwijs* (34035–3), 2014). These mitigating measures have not been included in important studies on the effects of policy. These include the much-cited studies

by the CPB (2013), SCP (2013), CBS (2013) and ABF Research (2014). These missing elements mean the evidence is not so wrongly constructed as it can be misinterpreted.

This form of misinterpretation of evidence, along with some forms of cherry-picking, nevertheless creates a subtle form of technical bias in the use of evidence. Hence, we affirm the second hypothesis: *Technical bias occurred in the use of evidence that served as the basis for the introduction of the loan system in the Netherlands*. The extent to which technical bias led to the non-optimal outcome is debatable, and this will be addressed further in the discussion section.

Hypotheses 3: Issue bias in the creation of evidence

Table 5 presents the codes which guided the data analysis for the third hypothesis. To identify this bias, we looked at the evidence available for the policy-making process. This was accomplished by examining which evidence sources were cited throughout this policy-making process. Thus, to this extent, the quantity of references has not yet been considered, but only the availability. In addition, a literature search for potentially relevant scientific or expert papers was also done. This was done to get a full picture of the available evidence that policymakers had at hand. Finally, all available pieces of evidence were coded according to the political value they presented.

H3: Issue bias in the creation of evidence	One-sided-evidence	The creation of evidence that addresses only a few, prejudiced political values rather than all relevant policy concerns: – quality of education – financial feasibility – students welfare – accessible education – students' financial situation – study choice – practical feasibility – study dropout – future prospects of students
	Obfuscation of values within the selection of evaluation criteria	Equality; proportionality; liberal-values; participation; hierarchy;

Table 5

During the analysis of the available expert and scientific documents, the first thing that stands out is that these documents can be divided into two groups. One group was created and produced at the request of the bill proposer, the minister. This group of documents are mostly produced by interdepartmental scientific institutions that operate and are funded by the state. Think of institutes such as the CPB, the SCP and the CBS. The other documents are primarily scientific articles produced by independent scientists or scientific institutions. If we make this distinction in our analysis, it is noticeable that some issue bias can be found among the first group of papers. In the debates and

explanatory memorandum that have been analyzed, nine different political values or interests can be found that speak for or against this policy change: accessible education, student finances, future prospective students, financial feasibility, practical feasibility, educational quality, conscious study choice, student welfare and study failure. Indeed, it is striking that within all the political values and interests that play a role within these legislative amendments, a disproportionate amount of attention has been given to one value or interest in particular: the accessibility of education.

Seven expert documents were produced at the request of the bill proposer, the government or the minister. When we look at what political values or interests are examined in these documents, the topic of the accessibility of education stands out. The vast majority of these papers produced at the bill proposer's request focus on students' behavioural responses in response to the policy change. For example, the central research question of the CPB's most cited study is "What are the participation effects of the introduction of the social loan system in the bachelor's and master's phases" (Centraal Planbureau, 2013). The SCP also poses the same type of question, however, they extend it: "What behavioural responses to the introduction of the social loan system and the austerity of the travel provision can be expected in the area of study choice, study behaviour, living and commuting behaviour and financial behaviour, and what considerations play a role in this?" (Sociaal en Cultureel Planbureau, 2013). Student behavioural responses are also central to the studies conducted by CHEPS, CBS, and ABF research (CBS, 2013; CHEPS, 2013; Kences & ABF Research, 2014)

Within the aforementioned research, besides the question of accessibility, other political values are also addressed, such as the financial situation for students (CBS, 2013), quality of education (CHEPS, 2013), study choice (Sociaal en Cultureel Planbureau, 2013) and financial feasibility (CHEPS, 2013). However, in most cases only limited attention is paid to these points. The only two studies that do not focus on the accessibility question are the study by the CPB from June 2013 and ResearchNed's policy monitor. In the CPB study, the researchers focus on the financial viability and future prospects of students. They focus very specifically on the question of how this will ultimately affect the government’s budget, only in a paragraph of 6 lines they focus on how the measures will affect the labor market and income effects (Centraal Planbureau, 2013c). ResearchNed discusses a large part of the political interests at stake, think of study choice, study dropout and the financial situation of students but again also accessible education is a large part of the research (ResearchNed, 2013).

When we look at the other group of documents, the scientific studies made by independent researchers, we see a wide range of studies in the field of student finance. Many studies are again focused on the accessibility of education (Johnstone, 2003; Canton & Blom, 2004; Johnstone, 2005; Vossensteyn, 2009). However, we also see plenty of sources highlighting the other political values and interests surrounding this policy measure. For example, researchers from the University of Amsterdam, albeit on behalf of the CPB, have researched the economic effects of student loan repayment. Think of the effect of student debt on the income position, employment and wage

formation of former students (Jacobs, B., & Canton, E., 2003). Another study, conducted by researchers at the University of Glasgow, examined the well-being of working students and students with debt. This study found that both having debt, and the pressure of a (side) job, have physical and mental effects on these students. For example, the number of hours worked would negatively affect a student's academic performance (Carney et al., 2005). This may have been alarming for the introduction of the loan system, as many students have indicated that they would like to work to cover the costs (Sociaal en Cultureel Planbureau, 2013). Second, another study examines how students with debt act in the housing market relative to students without debt. Bleemer et al. (2014) conclude that students with (higher) debt experience more difficulty integrating into the housing market. This makes the future outlook for students with (higher) debt less optimistic.

In addition to these three examples, numerous studies examine political values and interests other than just student behavioural changes in response to the introduction of a loan system, such as communication strategies, labour market implications, and physical health. (Cho et al., 2015; Andrew, 2010; Walsemann et al., 2015; Booij et al., 2012; Baum & Schwartz, 2006; Elliot & Nam, 2013; Shen & Ziderman, 2008). From this, we can conclude that there is plenty of scientific evidence for policymakers to draw upon in higher education funding, student finance, student debt, and other elements involved in this proposed policy measure. However, the kinds of evidence policymakers drew upon came from Dutch policy-oriented institutions that did single out one particular issue instead of the full range of issues. With this fact in mind, we nevertheless conclude that there was issue bias in the creation of evidence at the request of the government and the bill proposer. Hence, the third hypothesis "*Issue bias occurred in the creation of evidence that served as the basis for the introduction of the loan system in the Netherlands"* is true. Because evidence on various elements of this policy measure was available to policymakers, it is not guaranteed that issue bias in the use of evidence took place. This is something that is explored in more detail in the next section.

Hypotheses 4: Issue bias in the use of evidence

Table 6 presents the codes which guided the data analysis for the fourth hypothesis. Only policy documents and plenary reports were analyzed for this type of bias. It was determined through a scan of these documents which kind of evidence is most frequently cited by policymakers. Each reference to evidence was coded according to the political value they measure and present. When the ratio of different political values is uneven, this may indicate issue bias in the creation of evidence.

H4: Issue bias in the use of evidence	Cherry-picking (outsourcing of evidence) / monopolization of evidence	Any indication of selection and presenting evidence that addresses only a few, biased political values rather than all relevant policy concerns: – quality of education – financial feasibility – students welfare – accessible education – students' financial situation – study choice – practical feasibility – study dropout – future prospects of students

Table 6

Something stands out when analyzing the plenary reports and reactions of people's representatives/political parties to this policy measure. Especially in the report in which the political parties respond to the policy measure, it is noticeable that opponents of the bill all point to one political interest in which they believe this policy measure falls short: the accessibility of education (Tweede Kamer, 2014). For example, the Christian Democrats respond. "The party members have noted the disapproval of the bill that abolishes the basic grant and introduces a loan system through which students start their adult life with hefty student debt. According to the members, the abolition of the basic grant will irrevocably lead to a less accessible higher education system which will result in ten to twenty thousand fewer students enrolling." (Tweede Kamer, 2014, p.3) Another opponent of the policy measure, the Socialist Party, gives a similar reason: "The members of the party have taken note of the bill with disappointment. Studying should be encouraged rather than hindered. [...] Instead of increasing accessibility, government policy is making it worse." (Tweede Kamer, 2014, p.3). The remaining parties, the Populist Party, the Christian Union and the Reformed Party, also point to potentially declining access to education (Tweede Kamer, 2014, p.3).

This initial response from the political parties participating in the policy-making process sets the tone for the rest of the debates and plenary reports. Opponents continue to question the bill proposer and proponents about how they will continue to ensure the accessibility of education (*Plenaire vergadering: Wet studievoorschot Hoger onderwijs* (34035) (*Voortzetting*), 2014). In doing so, they point to reports commissioned by the bill proposer. The analysis shows that scientific or expert documents were referenced nearly 60 times in the plenary reports. Of these 60 times, almost 50% were about the accessibility of education. The other half of the time, only the other eight political values or interests under consideration were referenced. However, it is not the case that only opponents point to the evidence that tests educational accessibility. Proponents also point to the same pieces to show that education will remain accessible even with the change of policy (*Plenaire vergadering: Wet studievoorschot Hoger onderwijs* (34035) (*Voortzetting*), 2014). This issue of

technical bias in the use of evidence has been described before but is good to revisit here. Indeed, it demonstrates that the accessibility of education, among both supporters and opponents, plays a vital role in the possible implementation of the policy change. So it is not so much that there are conflicting interests, but rather a political conflict about how the quality of education should be maintained and at what cost.

It is not that other topics have not been covered at all in the debates and plenary reports. Proponents point to the quality impulse that is necessary to bring education up to international standards, to the fact that a larger private contribution will lead to a more conscious choice of studies and therefore to a lower dropout rate, but also to the fact that the proposed legislation represents a fairer distribution of the private yield that education students receive and the collective burden that it imposes on the population (*Verslag EK 2014/2015*, nr. 17, item 8, 2015). Opponents, on the other hand, question if this measure will raise the quality of education and if this policy measure will not cost the government a lot more money in the future because some students cannot pay back their loans. However, these points are not the main objection of opponents to the policy measure. (*Verslag EK 2014/2015*, nr. 17, item 3, 2015). Besides the accessibility of education, which opponents mostly insist on, the debts students will be saddled with are also a significant objection. Parts of the debate include how much debt the system entails for students or whether the government should saddle students with debt (because of the lessons of the credit crisis). However, of course, the essence of the debate is about the problems that these debts create and what is striking about the policy-making process is that it only looks at what the behavioral responses of students are, in response to these potential debts. Little attention is given to the consequences for (former) students that the debts bring. The analysis shows that students with high(er) debts are more likely to suffer from stress, depression, and, as a result, lower school results (Carney et al., 2005; Walsemann et al., 2015). But also a study debt causes a worse position on the housing market (Bleemer et al., 2014). On top of that, there has been little research into any other consequences of having student debt. Consider the effects relative to wage formation, labour force participation, and the income position of former students. That so little attention was paid to these interests, combined with the fact that much of the evidence cited in the debate was about educational accessibility, allows us to conclude from this analysis that there was indeed issue bias in the use of evidence. This allows us to conclude that the last hypothesis: "*Issue bias occurred in the use of evidence that served as the basis for the introduction of the loan system in the Netherlands*" can also be confirmed.

Discussion and conclusion

The main research question can be considered now that the analysis is finished and the hypotheses have been tested. In the discussion section, we will again summarize and interpret the study's main findings. This will be followed by a discussion of what this means for the main research question.

Then some limitations within this research will be discussed, and recommendations will be presented both for policy-makers and for further research. Finally, the conclusion will summarize the research and provide a final answer to the main research question.

Discussion

This study found that certain forms of bias occurred in the creation of the loan system in the Netherlands. First, the qualitative content analysis of the study indicates that technical bias occurred in the use of evidence in the policy-making process. Although selective shopping in the evidence was limited, reports widely cited in the policy-making process were incomplete or did not align with the policy measure change at stake. This caused evidence to be misinterpreted by policy-makers. In addition, issue bias appeared to occur in both the creation of evidence and the use of evidence. The evidence created in the lead-up to the policy measure, at the request of the bill proposer, the minister, appeared to be overloaded with research on student behavioural responses. Primarily, the question of whether education would remain accessible was mostly examined. Other political values and interests, such as students' future prospects and well-being, consequences for ex-students, and how best to boost education, were not much explored, if at all. Only independent researchers from abroad investigated these interests. Therefore, for policy-makers, information and evidence about all the interests at stake were available. However, the policy-makers also appeared to be primarily concerned with the behavioural response of students to rising debt. Research into interests such as study failure, student interests or consequences for ex-students were underexposed subjects.

So the question of whether bias occurred in the introduction of the loan system is easily answered with a yes. However, the presence of bias does not always imply that this has to lead to non-optimal policy outcomes. The fact that flanking measures were not tested will not have led to the policy's unforeseen negative consequences and the policy-makers turn. Indeed, the flanking measures would provide more accessible education. The financial situation for students became more favourable compared to the proposal that was tested. The negative consequences following the policy change would have been even worse with the proposal that was tested. On top of that, the opponents' selective shopping within the available evidence has not led to the policy's abolition. Altogether, the technical bias did not lead to the non-optimal policy outcome.

In terms of issue bias, this is different. To go back and look at the reasons why the social loan system is now being abolished, something stands out. In his letter to the First Chamber, the current Minister of Education argues the reasons for abolishing the loan system. First, borrowing money and having debts has a negative impact on student welfare. In addition, inequality between generations who did or did not receive a basic grant makes it more difficult for today's students to enter the housing and labour markets. Finally, the flow from secondary vocational education to higher professional education appears to stagnate. In response to these negative consequences of the loan system, the current minister expressed his opinion on the amendment of the policy measure in

retrospect: "The arguments [that led to the introduction of the loan system] are now weighed differently, partly in the light of aspects and developments that were underexposed or unforeseen seven years ago." (Eerste Kamer der Staten-Generaal, 2022). This statement of the minister is exceptionally fitting. Underexposed issues such as student welfare and consequences for former students are why the social loan system is now being abolished.

Our analysis showed sound scientific evidence regarding student welfare (Carney et al., 2005; Baum & Schwartz, 2006; Elliot & Nam, 2013; Walsemann et al., 2015) and consequences for former students (Shen & Ziderman, 2008; Andrew, 2010). Not so much in the Dutch context, but certainly in the context of introducing a social loan system. In addition, no evidence was created in this area at the minister's request or other independent research institutions. However, opponents of the policy measure also did not insist on examining these potential negative consequences. These elements have been underemphasized throughout the policy-making process, ultimately leading to negative consequences for the population. Both during the creation of evidence, after all, no evidence was created that investigated these possible consequences of the loan system. But also during the use of the evidence, because there are indeed foreign scientific studies on these elements, which the policy-makers could cite. Therefore, this research shows that issue bias in the creation and use of evidence in policy-making processes did contribute to the non-optimal policy outcome of the loan system.

That bias in the evidence contributed to the non-optimal policy outcome does not mean that bias was the sole cause of the non-optimal outcome. Thus, other causes may have played a (larger) role. It is possible that factors that could not have been foreseen when the policy was introduced played a more significant role. In addition, it may be that in the period between the introduction and the implementation of the loan system, other political values and interests have become more important to the population so that the motivations for the introduction of the policy are now weighed differently. Other possible causes were not considered in this study, and future research will have to show whether there may be other causes than the presence of bias in the policy-making process that led to the non-optimal policy outcome.

This research aims to advance the policy-making process. In this, it has already partially succeeded by exposing weaknesses in the policy-making process. However, it has not yet answered how these weaknesses can be prevented and remedied. It is good to return to Parkhurst's (2017) theory to answer this. In his book, Parkhurst establishes a framework for "the good governance of evidence." This framework remedies or prevents the occurrence of various forms of bias in the policy-making process. This has already been briefly discussed in the theory section, but good to return to now that the forms of bias that led to the non-optimal policy outcome have been identified. In the theory section, these specific solutions of Parkhurst's framework were linked to the different forms of bias and at what stage of the policy-making process they occurred. For issue bias, as we have identified in this study, Parkhurst recommends using Evidence Advisory Systems (EAS). These institutions ensure the

rigorous and systematic use of valid pieces of evidence within the policy-making process through systematic reviews of evidence, procedures to identify appropriate evidence and creating deliberative spaces. The EAS should be possessed by scientists and experts from different fields accountable to the people. However, how do these institutions prevent the occurrence of issue bias in the policy-making process?

EAS should ensure in the first instance only the creation of appropriate evidence. Appropriate evidence is relevant to the policy at hand, created in a way that is also relatable to the policy and relevant to the specific social and local context. EAS will therefore need to ensure that the policy is relevant, created, and related to the specific policy context. Creating and relating evidence to the policy context will ensure that mistakes currently made in misinterpreting evidence can be avoided. But perhaps more importantly, the relevance of the evidence to the policy will ensure that current contingencies at the time of policy creation are indeed revealed. This must be done through precise goal clarification: identifying all the interests and elements at stake around the specific bill or policy change. For the sake of correctly identifying all relevant elements and interests, Parkhurst advocates that there be democratic representation in the EAS system (Parkhurst, 2017). This means that there should be formal structures, established rules and norms of practice that ensure that the EAS is operating on behalf of the public. Parkhurst explains that this is achieved via two crucial features: stewardship and authority by the public. Stewardship signifies that structures of the EAS are developed by a stewardship body with a popular mandate to establish the institutional form of the EAS. The authority of the public indicates that the final policy-making authority lies with democratically representative bodies (Parkhurst, 2017). These two features will ensure that the population's vital interests are included in the policy-making process. Using this approach, EAS can ensure that issue bias does not occur in the policy-making process and that non-optimal policy outcome, such as with the loan system, is avoided. It is therefore recommended that the Dutch policy-making system commission a test that monitors the creation of an EAS. Research should show how this EAS can best be shaped and how it operates in advising and using evidence in policy-making and policy making.

Conclusion

This study attempted to explain the non-optimal policy outcome of the Dutch loan system from Parkhurst's bias theory. Therefore, the following research question was central:

Did the emergence of bias in the policy-making process contribute to the non-optimal policy outcome of the social loan system in the Netherlands?

The bias theory from Parkhurst's (2017) book "The politics of evidence" was used as a starting point. This theory describes how forms of bias in the creation and use of evidence can lead to the violation of

principles of scientific best practice or shift the political debate by marginalizing policy-relevant social concerns. Parkhurst classifies this bias as technical bias, referring to the violation of principles of scientific best practice and issue bias, referring to the shift of the political debate by marginalizing policy-relevant social concerns. From this theory, four hypotheses were developed and tested to answer the research question ultimately. These four hypotheses each refer to the two forms of bias, technical bias or issue bias, and specify in which part of the policy-making process occurs, in the creation of evidence or the use of evidence. These four hypotheses were tested using qualitative content analysis. Several political documents, such as plenary reports, policy documents and explanatory memoranda were selected and analyzed through coding. From this analysis, various expert and scientific sources emerged that were used in the policy-making process as evidence in favour of or against the policy measure.

The analysis found that several forms of bias occurred in using evidence in the policy-making process. First, technical bias in the use of evidence appeared to occur because many sources of evidence did not match the measures on the table. Secondly, all interests and elements concerning the policy measure had not been examined proportionally. At the request of the bill proposer, it appeared that research was conducted almost exclusively on the behavioural responses of prospective students, where other interests were not considered. The same occurred in the use of evidence in the policy-making process. Foreign academic studies appeared to provide sufficient evidence that potential debt negatively affected student well-being and would hinder future students in the housing and job market. Despite these findings, little to no attention was paid to these elements by policy-makers in the debate. Because of this fact, it can also be determined that issue bias was present in the use of evidence. This research also shows that the presence of bias led to the non-optimal policy outcome of the loan system. Indeed, the reason for abolishing the system was found to be due to underexposed and unforeseen aspects and developments, according to the Minister of Education. Studies prior to the legislative changes already showed that there was a possibility of these negative aspects or developments. The fact that insufficient attention was paid to these aspects at the time, combined with the low creation of evidence on these aspects, makes issue bias contributed to the non-optimal policy outcome of the loan system. Thus, this research argues that the emergence of bias in the policy-making process indeed led to the non-optimal policy outcome of the social loan system in the Netherlands. To avoid this in the future, the study advocates the creation of Evidence Advisory Systems. These institutions will have to ensure the rigorous and systematic use of valid pieces of evidence within the policy-making process through systematic reviews of evidence, procedures to identify appropriate evidence and creating deliberative spaces and thereby preventing forms of issue bias.

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