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RESEARCH ARTICLE

Stakeholder framing, communicative interaction, and policy legitimacy: anti-smoking policy in South Korea

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Abstract
Since the emergence of the argumentative turn in critical policy studies, increasing attention has been paid to the crucial role played by language, context, and communicative practices in the policy process. This study aims to investigate communicative interaction between state elites and societal stakeholders in South Korea with a focus on the anti-smoking policies of two different administrations: the Roh administration (2003–2008) and the Park administration (2013–2017). As a theoretical base, this paper proposes a stakeholder-oriented approach to legitimacy, which incorporates a policy frame analysis with the concept of a three-tier policy structure (i.e., policy goals, policy tools, and tool settings). In assessing policy legitimacy, the stakeholder-oriented approach examines whether there is congruence between the three-tier policy structure and the corresponding stakeholder framing. In the Roh administration, the policy frames among the three tiers of policy structure were centered on public health promotion, whereas in the Park administration, they expanded to the domain of tax policy. The empirical findings underscore the importance of two-way communication between the government and societal stakeholders, which can be evidenced using policy frame analysis. Ultimately, the results show that policy legitimacy is more likely to be guaranteed if there is no hidden or predetermined policy intention that can be detected by stakeholder framing analysis.

Keywords Policy frame analysis · Policy legitimacy · Communicative interaction · Anti-smoking policy · South Korea

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Introduction

Post-positivist perspectives, long kept at the margins of policy studies by mainstream positivist theories, are now considered to represent a powerful alternative approach. The complex and uncertain realities of modern issues mean that attention must be paid to the argumentative (or discursive, linguistic, communicative, or post-positivist) turn in the so-called critical policy studies movement (e.g., Dryzek 2006; Fischer and Forester 1993; Fischer and Gottweis 2012; Fischer et al. 2015; Ingram and Schneider 1993; Schön and Rein 1994; Schneider and Ingram 2005; Stone 2002; Yanow 2015). The critical policy studies movement and post-positivist policy literature both view the policy process as one involving ongoing discursive struggles and communicative practices that are in favor of interpretive research methodology and its critique of a positivist epistemological position.

The argumentative turn in critical policy studies takes a special interest in advancing democratic governance and the democratization of policy inquiry. In a democratic polity, political elites, such as elected politicians and unelected bureaucrats at the central government level, do not always act in the public's interest. Confronted with complex and uncertain situations that constrain the government, political elites are prone to propose or even predetermine a policy agenda that is aligned with powerful vested interests rather than the collective good (Dryzek 1983; Lejano 2013; Nutbeam and Boxall 2008; Wolman 1992). As Habermas (1973) succinctly argues, policy contents and the public understanding of them can be biased due to the unilateral exertion of the government or political elites in communication processes. In such cases, political elites do not want to reveal their true intentions behind any proposed actions, which is an issue because policy legitimacy tends to be evaluated and understood in accordance with the policy goals openly stated by political elites.

However, policy legitimacy should also be assessed in terms of the ideas, needs, and interests of a diverse range of policy stakeholders, such as pressure groups, target groups, and informal policy actors (Park et al. 2015; Wallner 2008). The existing literature on policy legitimacy emphasizes not so much the role and interpretation of societal stakeholders—e.g., civic associations, policy experts, pressure and target groups, and ordinary citizens—but those of political elites and central decision-makers. As Hanberger (2003) states, legitimacy is "the product of satisfying felt needs and solving perceived problems" (p. 258). Therefore, satisfying the needs of diverse societal stakeholders is necessary to achieve policy legitimacy.

How can we detect whether a policy agenda proposed by political elites faithfully reflects the public's demands or includes hidden intentions? To answer this question, this paper applies what we term a "stakeholder-oriented" approach to the study of policy legitimacy, with a focus on the policy frames shaped by societal stakeholders. This stakeholder-oriented approach sheds new light on policy frame analysis in an attempt to elucidate policy legitimacy by understanding the ways in which different stakeholders communicate. If the policy frames of relevant stakeholders do not match the original policy agenda, possibly due to insufficient communicative interaction in the public sphere, that agenda could be considered less legitimate.

Policy discourse, interpretation, and communication constitute a primary focus in policy frame analysis as well as critical policy studies. Societal stakeholders interpret the policy agenda and construct their own policy frames by sharing policy-relevant information obtained from various sources, such as documents and data released by the government, newspapers, internet media, and academic journals. Therefore, policy frames are not

simply a reflection of a government's policy proposal, but a result of comprehensive learning and collective knowledge sharing. The notion of frames or framing is also central to interpretive policy analysis, building on the work of Schön and Rein (1994). As Yanow (2015) mentions, the analytical focus of interpretative policy analysis has shifted to meaning-making and communication as an alternative to instrumental rationality in explaining human action.

However, both argumentative turn literature and policy frame analysis pay relatively little attention to democratic governance outside of advanced industrial democracies. The policy process in South Korea (hereafter Korea) prior to the democratization of 1987 was mainly dominated by political elites, with societal stakeholders playing a much less crucial role. Democratization changed the political landscape from one of the elite dominations to one involving competition between state elites and societal stakeholders. Although societal stakeholders' influence has increased with the process of democratization, political elites can still control more institutional resources because of the historical legacies of top-down governance (e.g., Lee and Kim 2019; Park et al. 2015; Ringen et al. 2011). The new relationship between the state and civil society in this more democratic context has thus been the key determinant in Korea's policy process.

This study aims to examine communicative interaction between state elites and societal stakeholders in Korea with the aid of policy frame analysis while focusing on anti-smoking policies in the Roh and Park administrations. The policy frame analysis in this study is based on text analysis that uses network analysis (i.e., network text analysis[1]) to extract meaningful policy frames from unstructured texts from a variety of stakeholders (i.e., columns and editorials in newspapers) (Shim et al. 2015; Park et al. 2019). It should also be noted that anti-smoking policy is used to analyze broader policy framing in these two administrations.

Public health policy, including tobacco policy, is a policy arena involving interactions among a variety of stakeholders. In other words, it is necessary to explore the ways in which different stakeholders construct policy problems and their respective solutions since public health policy "evokes particular value systems, courting public debate" (Koon et al. 2016, 2).[2] Tobacco research in Korea is also limited in that it has thus far focused exclusively on the effects of tobacco control policies (Lee et al. 2014). Therefore, we selected anti-smoking policy in Korea as an empirical case through which to elucidate the relationship between stakeholder framing and policy legitimacy. This study can be regarded as a comparative research design because the two selected cases deal with the same policy (i.e., anti-smoking policy as a social intervention) under different conditions (i.e., two different political regimes) (Yin 2003). Comparing these two cases allows for a consolidation of the theoretical framework, which this study will propose in the next section. Altogether, our interpretive case study investigates anti-smoking policy in Korea by using the

[1] Researchers have used various names for text analytics that applies social network analysis, including "semantic network analysis" (Monge and Contractor 2003; Shim et al. 2015), "word network analysis" (Danowski 1993), "text network analysis" (Paranyushkin 2011) and "network text analysis" (Carley 1997; Popping 2003). This study uses the term "network text analysis" suggested by Carley (1997).

[2] The existing public health research suggests that raising cigarette prices as a policy tool is effective among different anti-smoking policies—see Goodchild and Zheng (2019) for China; Jackson et al. (2018) for the UK; Ross et al. (2011) for the USA and Canada; Tabuchi et al. (2017) for Japan—although health concerns are the most common reason for smokers to become motivated to quit (Kasza et al. 2017). However, as Koon et al. (2016) assert, "little is known about the ways frames influence the health policy process" (p. 1).

stakeholder-oriented approach as a theoretical basis and policy frame analysis as a methodological basis to evaluate policy legitimacy.

Theoretical framework

Argumentative turn literature, which received an initial impetus from Habermas's critical theory, provides an alternative approach for democratizing policy inquiry.[3] Critical policy studies highlight the general importance of contextual understanding, ordinary knowledge, narrative storytelling, and communicative practices (Fischer et al. 2015, 6). From the beginning, the argumentative approach has linked post-positivist epistemology with social theory and the search for a relevant methodology.

Critical policy studies and communicative interaction in the public sphere

In a rejection of the prevailing positivist–instrumentalist perspective, critical policy studies and the argumentative turn have gained increasing prominence in the field of policy analysis. Related research has expanded to include work on discourse analysis, deliberative democracy, governance, participatory inquiry, collaborative planning, the uses and role of media, frame analysis, interpretive methods, and others (see Fischer and Forester 1993; Fischer and Gottweis 2012).[4] However, this should not necessarily lead to a bifurcated dichotomy between positivism and post-positivism, as "it would seem foolish to set the two concepts at odds, in a zero-sum game, as opposed to use them to inform and support one another" (de Leon 1998, 157). Rather, the argumentative turn in critical policy studies has made a significant and meaningful contribution "toward bringing back the critical role of discursive reflection and argumentation to both the practices of policy analysis and an understanding of the dynamics of policy making today" (Fischer and Gottweis 2012, 6).

Drawing on the argumentative turn in critical policy studies, we suggest in Fig. 1 that public policy comprises communicative interaction between the state and society or between the public and the private, which can be either one-way or two-way.[5] In other words, the policy process is mediated through ongoing discursive struggles and communicative practices (Dryzek 2006; Fischer and Gottweis 2012; Stone 2002). Whereas one-way communication is the unidirectional flow or transfer of information in a preassigned direction from a sender (i.e., the administrator) to a receiver (i.e., citizens), two-way communication is the bidirectional flow or transfer of information wherein participants act as both senders and receivers (Nabatchi 2012).

[3] Habermas's critical theory is grounded in a normative standard that is inherent in the structure of social action and language. His early criticisms of positivist analysis and his theory of communicative action have been a crucial stepping stone to bridging the gap between language philosophy and public policy analysis.

[4] Although these approaches' foci are hardly synonymous, they share a common commitment to "communication and argumentation, in particular the processes of utilizing, mobilizing, and assessing communicative practices in the interpretation and praxis of policy making and analysis" (Fischer and Gottweis 2012, 2).

[5] There are different approaches that use a two-part classification (the state and civil society) or a three-part classification (the state, market, and civil society). The current study adopts the dualistic model of state–civil society or the public–private sector, although it is more widely accepted that civil society—which is often interchangeably referred to as the third sector, non-governmental organizations (NGOs) or non-profit organizations (NPOs)—is located between the state and market.

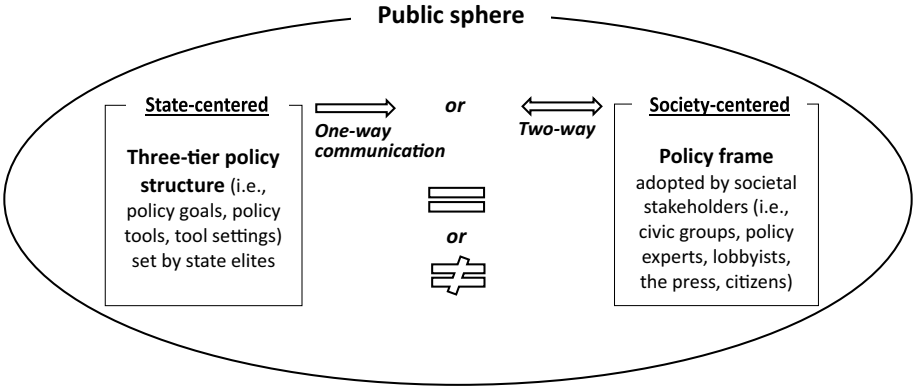

Fig. 1 Analytical framework

The communicative interaction between the state and society is situated in a bigger circle representing the public sphere. Habermas provides an insightful theoretical framework, as well as a linguistic turn, for understanding the public sphere, which is defined as a "society engaged in critical public debate" (Habermas 1989, 52) or "the public of *private* individuals who join in debate of issues bearing on state authority" (Calhoun 1992, 7; italics in original). Habermas's critical theory highlights the role of civic engagement in communicative processes involving public opinion and the vitalization of a democratic public sphere. The public sphere is also a sine qua non for securing public values within the context of a democracy. As Bozeman and Johnson (2015, 62) succinctly indicate, the public sphere is any place "functioning as a setting for expansive communication among citizens about the meaning, development, conservation, or revision of public values." To this end, this study views the public sphere as the interface between the state and society as well as the locus of public value formation. Within the public sphere, there is ongoing deliberation, dialogue, and negotiation involving competing perspectives from both state elites and societal stakeholders.

Furthermore, both the communicative interaction and the public sphere are embedded in an institutional and political context representing democratic practices (not only representative but also deliberative and participative democracy). The policy-making process of authoritarian regimes typically involves one-way communication, though a few may use two-way communication. This is facilitated by the fact that an authoritarian regime can seize control of any means of communication and prevent open public debates. In contrast, policy processes within advanced democracies are more likely to employ two-way communication, though some may still involve one-way communication. A deliberative democracy aims to include diverse societal stakeholders into the policy process, thereby allowing these stakeholders to engage in free and open communication related to public values. In this way, communicative interaction between state elites and societal stakeholders does not exist in isolation from a historically specific set of political and institutional dimensions.

In this paper, societal stakeholders are considered "those actors and organizations viewed as having a vested interest in the decision output" (Crow et al. 2019, 2). They can be categorized into four types according to their levels of knowledge and involvement in the issue (Hallahan 2000, 504–505). First, stakeholders with great knowledge and involvement in the policy process are defined as "active stakeholders." These stakeholders not

only know much about policy, but also are affected by policy, such as civic groups and lobbyists. Second, "aware stakeholders" are knowledgeable about but not directly affected by policy. Since aware stakeholders do not have a personal stake in policies, they typically show little involvement in the policy process. Examples of aware stakeholders include policy experts and opinion leaders. Third, "aroused stakeholders" share relatively low levels of knowledge regarding policy, but have a stake in it. Media groups are typically aroused stakeholders; once a social issue emerges as part of the public agenda, media groups like newspapers become immediately involved with it. Fourth, "inactive stakeholders" are characterized by having little knowledge and lacking involvement. They are usually not concerned with policy and its consequences because they do not directly affect them. Ordinary citizens as a whole are an example of this type of stakeholder.

Three-tier policy structure and stakeholder framing

As shown in Fig. 1, communicative interaction among political actors operates in a multilayered policy landscape. Public policy can be seen as a complex and multilayered course of action (or inaction) concerning the selection of goals and the means of achieving them. Policy goals "consist of a range of ideas from general philosophical and ethical principles to specific causal logics and sociological constructs," while policy means or tools "embody some knowledge of past practices and concepts of successful and unsuccessful policy implementation, but also extend beyond this to ideological and other ideational structures informing 'practical' choices for goal attainment" (Howlett 2014, 196). To date, the literature has defined policy structure and measured the degree of policy change in a number of ways. The best-known example is Hall's (1993) three orders of change, namely change of instrument settings or levels ("first-order"), change of instruments themselves ("second-order"), and paradigm change in the hierarchy of goals behind policy ("third-order"); we accordingly adopt a three-tier policy structure consisting of overarching policy goals, policy tools, and tool settings. An optimal condition for securing policy legitimacy and public values would ideally be based on the policy loopback process at all three levels of policy structure.

This idea of a three-layered policy structure is incorporated into the stakeholder-oriented approach to legitimacy by means of policy frame analysis. The existing literature on policy legitimacy tends to provide the two-way classification models of either input versus output legitimacy or procedural versus substantive legitimacy (e.g., George 1980; Scharpf 1999; Rothstein 2008; Montpetit 2008; Wallner 2008).[6] The most well-known model is Scharpf's typology, which provides the input and output dimensions of legitimacy. Input-oriented legitimacy presupposes that the powers of government must be exercised in response to the preferences of the people, whereas output-oriented legitimacy is derived from the effectiveness of government actions in advancing the common good (Scharpf 1999). According to Montpetit (2008), input-oriented

[6] Drawing critically on the twofold classification of policy legitimacy, Park et al. (2015) propose three main dimensions of legitimacy: (a) substantive legitimacy, (b) procedural legitimacy, and (c) feasibility-centered legitimacy. Substantive versus procedural legitimacy or input versus output legitimacy is often deemed dual imperatives for successful policy outcomes. However, the two dimensions are a necessary but not sufficient condition for policy success, because a policy could secure them in earlier stages of the policy process, but still lead to a negative outcome. Therefore, feasibility-centered legitimacy in later stages needs to be established as another necessary condition for a positive policy outcome (see Park et al. 2015).

(or citizen-centered) processes have greater potential to reduce legitimacy deficits than output-oriented (or expertise-based) processes. However, input-oriented legitimacy takes longer, particularly when it involves large numbers of stakeholders. By contrast, Rothstein (2008) claims that legitimacy is more dependent on the output dimension of the political system (i.e., the "quality of government") than the input dimension.

The stakeholder-oriented approach is a newly coined term to encompass literature on input-oriented legitimacy, which is also closely linked to a new mode of governance (i.e., network governance and joined-up governance) and deliberative democracy. Here, we conceive of the stakeholder-oriented approach not as a competing theoretical framework, but as one that is complementary to the existing literature on policy legitimacy. The stakeholder-oriented approach neither undermines the usefulness of input-oriented legitimacy nor suggests that output-oriented legitimacy is of secondary importance. Instead, it aims to extend the purview of the two-way typologies of policy legitimacy by considering a new way to measure the policy frame of societal stakeholders. Furthermore, legitimization also takes place after the passage of a law or the adoption of a policy. Our focus is on the last possible stage of the policy process, wherein societal stakeholders interpret and understand central policy-makers' intent. Therefore, any analysis of input-oriented legitimacy in the policy-making process needs to be followed by a detailed investigation of stakeholder framing after enactment, which has thus far been relatively overlooked in studies on policy legitimacy.

Viewed from the angle of the stakeholder-oriented approach, stakeholder framing is a useful criterion with which to examine and assess policy legitimacy. Here, framing is a way of interpreting and making sense of a complex reality. In other words, policy frames are not simple "descriptions of reality, but specific constructions that give meaning to reality, and shape the understanding of reality" (Verloo 2005, 20). They are revealed through the narrative or political language that participants use to discuss policy situations and debates. To investigate stakeholder framing, we employ network text analysis, which is a method of extracting underlying meanings and frames from the structures of networks consisting of texts (e.g., Diesner and Carley 2005; Paranyushkin 2012; Park et al. 2019; Shim et al. 2015; van Atteveldt 2008). Frame analysis is also a key tool for those seeking to "understand issues in the mismatch between administrators' implementation of legislated policies and policy intent" (van Hulst and Yanow 2016, 92). As shown in Fig. 1, it is necessary to elucidate whether there is congruence between the three dimensions of policy structure (i.e., policy goals, policy tools, and tool settings) set by state elites and the corresponding frames adopted by the relevant societal stakeholders.

Moreover, frame analysis is part of an intellectual movement that set out in the early 1990s to challenge the positivist, technocratic, and empiricist mainstream viewpoints in policy studies (Fischer and Forester 1993; Schön and Rein 1994). The dominant positivist and empiricist approach ignores some of the most essential dimensions of politics and policy-making, such as language, values, ideas, and normative judgments. As an alternative, frame analysis "may open up a space for exposing relations of inequality, exclusion, domination and power, to reconstruct social movements' struggle for social justice and democratic participation and thereby contribute to critical policy analysis in this sense" (Braun 2015, 441). In this regard, policy frame analysis can coexist and interact with the argumentative turn in critical policy studies and the stakeholder-oriented approach to policy legitimacy.

Case description

Our goal in this study is to explore how communication between the government and societal stakeholders affects policy legitimacy by comparing the three-tier policy structure and stakeholder framing. As a case for empirical analysis, we examine Korean anti-smoking policies in two different administrations: the Roh Moo-hyun administration (2003–2008) and the Park Geun-hye administration (2013–2017).

Differences in the public sphere between the Roh and Park administrations

The characteristics of the communicative interaction and the public sphere differed substantially between the two administrations. The Roh government occupied a center-left position in the Korean political spectrum, and President Roh, who had been a political opponent of military authoritarianism, was more committed to a progressive agenda and participatory democracy than were his predecessors. He dubbed his administration the "Participatory Government," which favored inclusive and democratic policy-making (Hahm and Lee 2008; Kim 2012).

By contrast, the Park government, while democratically elected, was rooted in the previous authoritarian regime, because President Park was a leader of the long-entrenched, conservative party as well as the daughter of former authoritarian President Park Chung-hee (1963–1979). President Park and her administration were unresponsive to the public during various national crises (e.g., the Middle East respiratory syndrome epidemic and the Sewol Ferry Disaster). In 2016, there was a massive corruption scandal involving political and business elites, which generated many public protests (i.e., the "Candlelight Revolution") and eventually led to the impeachment of President Park (Kim 2017; BBC News 2018). The corruption scandal was centered on Park's uncommunicative disposition and relationship with her confidante, Choi Soon-sil, who held no official position, but heavily influenced state affairs without legitimacy. The communication breakdown between the Park administration and citizens played a crucial role in Park's impeachment in 2017 (Doucette 2017; Moon 2016; Insight 2016).

Given the strong presidential system of Korea, the president has always played a crucial role in the policy-making process (Ringen et al. 2011; Lee and Kim 2019). The administration of President Roh fostered democratic political processes such as citizen involvement and recruited more civil society activists and experts than previous administrations (e.g., Kim 2012; Lee and Yun 2011). By contrast, the Park administration mostly relied on an elitist approach to policy-making and adhered to conservative mainstream values (e.g., Moon 2016). Her administration was committed to a unilateral style of communication with societal actors, whereas the Roh administration was a much stronger proponent of two-way communication in the public sphere.

Anti-smoking policy and three-tier policy structure

Smoking in Korea was popular with male adults until the mid-1990s, with smoking rates among male adults of 79.3% in 1980 and 73% in 1994 (Lee 2007). However, at the turn of the new millennium, smoking scenes started to be forbidden in TV programs. At that time, the Korean government accepted the World Health Organization's Framework Convention on Tobacco Control, which encouraged the introduction of a variety of anti-smoking programs such as non-smoking education programs, programs to help people quit, and bans on

Table 1 Comparisons of anti-smoking policies using the three-tier policy structure

	Roh administration	Park administration
Three-tier policy structure		
Policy goal	The promotion of public health	
Policy tool	Increase in cigarette price	
Tool setting	500-won increase	2000-won increase
Main issue regarding increased tax item	Health promotion charge for cigarette consumption increased from 150 won to 354 won	Introduction of special consumption tax (594 won)

smoking in public spaces (Ministry of Health and Welfare [MHW], 2002). Following these measures, the government's public health promotion efforts enacted through anti-smoking policy came to be generally accepted by academics starting in the mid-2000s (Jung 2004; Lee and Lee 2010). Accordingly, the public began to agree on the perceived necessity of implementing anti-smoking policy to promote public health (Lee 2007); however, there were differing opinions concerning the policy tools (i.e., non-price vs. price tools) and the tool settings (i.e., how much prices should increase).

As shown in Table 1, the stated policy goals and tools of both the Roh and Park administrations were the same. Specifically, the two administrations shared the same policy goal—the promotion of public health—and both administrations regarded the price increase policy as an effective means through which to achieve this goal. However, they differed on the three-tier policy structure's tool settings.

In the Roh administration, it took almost one year for diverse stakeholders to agree on the policy tool and price tool settings. The initial proposal from the MHW was a 3000-won (approximately 2.7 USD) increase, from 2000 won (1.8 USD) to 5000 won (4.5 USD) per pack of cigarettes on May 24, 2003. Other branches of government, such as the Ministry of Finance and Economy (hereafter MFE), the Ministry of Government Administration and Home Affairs, the Ministry of Planning and Budget, and the Commission on Youth Protection, immediately disagreed with this price proposal because they considered the 3000-won increase to be so steep that it could cause unintended side effects and become an obstacle to achieving the policy goal. Subsequently, relevant public bodies met to resolve this conflict, which resulted in consensus for a 1000-won (0.90 USD) increase on July 22, 2003. However, the MFE was opposed to the policy tool, arguing that the price increase itself would bring about inflation and decreases in local taxation. Due to this opposition, the MHW and MFE met again and agreed to use price increase as a policy tool on August 12, 2003. At this moment, non-governmental stakeholders such as tobacco leaf farmers, cigarette retailers, and smokers were still against the revised policy proposal, so they formed the Korean Tabaco Consumer's Right Protection Association to represent their voices. The MHW then made efforts to persuade and negotiate with them, which ultimately led to a 500-won increase on May 10, 2004.

Conversely, it only took about two months for the Park administration to make a decision regarding the price increase because the price had already been set internally by the government before making a formal policy announcement. On September 11, 2014, the MHW reported the initial proposal of a 2000-won price increase to the Supreme Council of the ruling conservative party. The predetermined amount was supported by government-sponsored think tanks, such as the Korean Institute of Public Finance (Choi 2014) and the National Assembly Budget Office (Shin and Seo 2013). After running simulations

with varying price levels (from 3000 won to 8300 won), they asserted that an increase of 2000 won would maximize tax revenues. Finally, the chairman of the Supreme Council announced the price increase of 2000 won as a new policy in November 2014, which took effect on January 1, 2015. While there were many dissenting opinions about the specific amount of the price increase, the government, together with the ruling party, refused to engage with them.[7] The following sections will compare the anti-smoking policies established by these two administrations in terms of the stakeholder-oriented approach to policy legitimacy, based on a frame analysis methodology.

Research design

To examine the legitimacy of each anti-smoking policy using stakeholders' interpretation of the policy, this study applies network text analysis to detect the policy frames of the stakeholders. Network text analysis, as a text analytical applying social network analysis, is not only valuable for exploring the meaning of texts, but also helps analysts understand and compare the intentions or views of the authors who contributed to texts regarding a specific social issue (see Carley 1997; Diesner and Carley 2005).

Data collection

This study collected columns and/or opinion sections written by six different categories of societal stakeholders represented in newspapers during the respective periods. The columns and opinion sections of newspapers include not only facts about policy, but also interpretations of and arguments for or against policies. Furthermore, they function as a public sphere for societal stakeholders to communicate their arguments and are therefore relevant texts for analyzing stakeholder framing.[8]

On this basis, this study collected data from 10 nationwide newspapers by searching the Korean news search engine, NAVER, for the keyword "nonsmoking policy." These 10 nationwide newspapers were selected due to their coverage and influence in Korea's media landscape; as of 2018, their combined circulation was 61.8% of the total paid circulation of all newspapers in Korea (Korea Audit Bureau of Certification 2018). The initial search resulted in 157 total matches (47 from the 2003–2005 period under the Roh administration and 110 from the 2013–2015 period under the Park administration). Of these, 69 columns/opinions were excluded for the following reasons: (1) content was unrelated to non-smoking policy; (2) articles included only facts; (3) articles focused on international cases; (4) articles had been deleted; and (5) articles were written by people not corresponding to the six types of stakeholders. After this process, 88 articles (33 from 2003–2005 to 55 from 2013–2015) were ultimately selected for network text analysis (see Table 2).

[7] Even a conservative newspaper that supported the Park administration criticized this decision; see the newspaper editorial Joong-Ang Ilbo (2014).

[8] Newspapers, as one of the most influential forms of mass media that shape public opinion, act as a communication channel that promotes behavioral change, especially regarding public health (Abroms and Maibach 2008). Societal stakeholders can use newspapers for public relations activities, which involve two-way communication between contributors (i.e., stakeholders) and readers (i.e., the public) (Cutlip et al. 2006).

Table 2 Data collection (Number of column/opinion sections)

	Total		Policy expert[a]		Civic group		Lobbyist		Conservative press[b]		Progressive press[c]		Ordinary citizen	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Roh administration	33	100	9	27	4	12	2	6	2	6	9	27	7	21
Park administration	55	100	18	33	2	4	4	7	15	27	11	20	5	9
Total	88	100	27	31	6	7	6	7	17	19	20	23	12	14

[a]Policy experts (professors and researchers) in public health

[b]Conservative press: columns from Chosun Ilbo, Dong-A Ilbo, Joong-Ang Ilbo

[c]Progressive press: columns from Hankyere Shinmun, Kyung-hyang Shinmun, Hankook Ilbo

Network text analysis

Text consists of words, which make up the basic elements in the text network. To conduct network analysis, the words in the text must be coded in a way that is suitable for analysis. This is done through two processes: selecting/arranging words and identifying ties between the words (e.g., selecting the range of co-occurrence). The selection/arrangement of words initially proceeds in three steps (Paranyushkin 2012, 7): (1) removing stop words (such as "this," "that," "will," "and," "but," "how," and "or"); (2) changing the remaining words to morphemes (i.e., "plural is converted to singular form," "past tense is converted to present tense," etc.); and (3) removing numbers, punctuation, and special characters such as * and %.[9] (see also "Appendix 1" for data cleaning).

Next, ties between words are usually coded by co-occurrence within the same text, but the range of co-occurrence is selected based on a rule of thumb (Paranyushkin 2012). In extreme cases, all the words in a text can be connected, which results in a complete network. For establishing ties, the literature has suggested two to five windows (Paranyushkin 2012; Shim et al. 2015). This study applied a connection with a window of two within a sentence.[10]

Network text analysis focuses on the text as a network composed of words as a node and their links. Shim et al. (2015, 58) define network text analysis as "network analysis using

[9] Additional procedures beyond these steps were necessary due to how much the Korean language's structure differs from that of English (Park and Lee 2017). First, word spacing in Korean is complex and often ambiguous. For example, although the two words, "health" and "promotion," are independent words with their own meanings, many texts collected in this study used both "health promotion" (건강 증진: *geongang jeungjin*) and "healthpromotion" (건강증진: *geongangjeungjin*). This study applied an exploratory approach to select the vocabulary (Carley and Palmquist 1992) that involved comparing both cases in terms of how many times each type was used, then selecting the case more frequently used in the whole text. The latter (without a space) appeared 180 times, while the former (with a space) appeared 58 times. Therefore, we considered "health promotion" and "healthpromotion" to be the same word with a single meaning. Secondly, there are many homonyms in Korean. To distinguish these homonyms, we used Chinese characters. For instance, the Korean word 사기 (*sagi*) has two independent meanings: "fraud" and "spirit." The former is coded as 詐欺 and the latter as 士氣.

[10] This means that two consecutive words within a sentence were considered to be connected. For example, the sentence "two consecutive words within a sentence are connected" is first modified to "consecutive, word, text, connect," and then, the following three ties between words are constructed: "consecutive–word," "word–text," and "text–connect."

written texts to identify salient words and concepts in order to extract underlying meanings and frames from the structure of concept networks." It highlights the meaning structure by breaking down the text into nodes and their connections. To capture the meaning structure, this study highlights the text network's centrality and subgroups.

First, the centrality measure—betweenness centrality—was applied to explore meaning-circulating words in the text network (Paranyushkin 2011; Shim et al. 2015). Words with high betweenness centrality not only convey central concepts in the text but also act as a pathway connecting other words and word clusters (i.e., subgroups or modules). This structural feature enables words with high betweenness centrality to function as junctions for meaning circulation in the text network (Paranyushkin 2011). We regarded words with the highest level of betweenness centrality (i.e., the top three in this study) as circulating meanings in the whole network.

Second, subgroups of the text network imply policy frames and/or arguments as independent meaning structures (Shim et al. 2015). For subgroup analysis, this study applied modularity analysis (Newman 2010), which detects subgroups "within which connections are dense, but between which connections are sparser" (Newman 2004, 321). For the network analysis, we used Gephi software (https://gephi.org/).

Frame analysis results

Frame analysis by means of network text analysis is a mixed methodology approach that combines quantitative and qualitative methods (Shim et al. 2015). Accordingly, it consists of two processes that are, respectively, based on formal and interpretative investigations. The first process is data collection and network text analysis, which are mostly conducted using computer software (i.e., Excel, Gephi, and UCINET). Next, the second process is an interpretative phase that reconstructs and interprets policy arguments from modularity analysis. In this study, for the reconstruction of policy arguments, two researchers separately reassembled the sentences and then compared them to check the validity of interpretation and reconstruction (see "Appendix 2").

Meaning-circulating words and frame configuration in network text analysis

Table 3 presents a summary of meaning-circulating words in the text network. Across various types of societal stakeholders in the Roh and Park administrations, the word that was most frequently and consistently used was "tobacco," which played the most dominant role in circulating meaning. At the time, it was natural for stakeholders to use "tobacco" as a central concept to create overall meanings by connecting other words to it. Aside from "tobacco," the meaning-circulating concepts between the two administrations differed substantially.

To understand the differences in meaning-circulating words between the two administrations, this study applied the notion of a three-tier policy structure. Among others, the four words, "smoking," "anti-smoking," "smoker," and "youth" can be considered to be related to policy goals. Similarly, "cigarette price" is a concept directly indicating policy tools, and "increase" is directly related to tool settings. Table 4 shows the meaning-circulating words rearranged according to the three-tier policy structure.

Whereas societal stakeholders in the Roh administration used concepts relating to all three tiers as their meaning-circulating words, stakeholders in the Park administration

Table 3 Meaning circulation words: top three betweenness centrality concepts

Rank	Policy expert				Lobbyist			
	Roh administration		Park administration		Roh administration		Park administration	
	Words	Score	Words	Score	Words	Score	Words	Score
1	Tobacco	8006.7	Tobacco	102,760.2	Cigarette_price	21,238.6	Tobacco	77,786.6
2	Cigarette_price[a]	4051.8	Smoking	78,345.0	Increase	14,924.2	Smoker	46,054.8
3	Environment	2892.1	Smoker	70,090.7	Tobacco	11,291.6	Cigarette_price	40,987.2
Rank	Conservative press				Progressive press			
	Roh administration		Park administration		Roh administration		Park administration	
	Words	Score	Words	Score	Words	Score	Words	Score
1	Increase	3405.4	Cigarette_price	106,717.3	Tobacco	195,610.8	Government	96,083.0
2	Minister	2999.7	Increase	80,574.7	Smoking	71,093.5	Tobacco	84,225.9
3	Smoking	2000.3	Anti-smoking	74,758.5	Youth	34,923.6	Anti-smoking	83,071.2
Rank	Civic group				Ordinary citizen			
	Roh administration		Park administration		Roh administration		Park administration	
	Words	Score	Words	Score	Words	Score	Words	Score
1	Tobacco	24,191.3	Tobacco	16,437.8	Tobacco	68,781.2	Tobacco	129,811.5
2	Cigarette_price	19,735.7	Smoker	12,109.3	Cigarette_price	32,885.2	Smoking	77,620.6
3	Anti-smoking	17,127.5	Anti-smoking	9659.2	Smoking	28,440.8	Anti-smoking	56,990.3

[a]In many cases, spacing is different between Korean and English. For example, "cigarette price" is two words in English, but the same meaning is translated into one word in Korean (담 뱃 값). In this case, we used the underscore symbol between two words when translated into English (i.e., "cigarette_price")

Table 4 Meaning-circulating concepts according to the three-tier policy structure

Three-tier policy structure	Meaning-circulating words	Roh administration	Park administration
Policy goal	"Smoking"	3 (27.3%)	2 (16.7%)
	"Anti-smoking"	1 (9.1%)	4 (33.3%)
	"Youth"	1 (9.1%)	0 (0.0%)
	"Smoker"	0 (0.0%)	3 (25.0%)
	Subtotal	5 (45.5%)	9 (75%.0)
Policy tool	"Cigarette price"	4 (36.4%)	2 (16.7%)
Tool setting	"Increase"	2 (18.2%)	1 (8.3%)
Total		11 (100.0%)	12 (100.0%)

Table 5 Comparisons of frame configurations by policy hierarchy

Three-tier policy structure	Roh administration		Park administration	
	No. of frames	%	No. of frames	%
Policy goal	17	29.8	20	27.4
Policy tool	34	59.7	47	64.4
Tool setting	6	10.5	1	1.4
Policy process	0	0.00	5	6.8
Total	57	100.00	73	100.00

focused more on the level of policy goals than that of policy tools or tool settings when constructing their policy frames. Specifically, out of the six types of stakeholders, five types used concepts at the level of policy tools and tool settings to circulate meaning during the Roh administration, but only two types (i.e., the conservative press and lobbyists) applied these to circulate meaning during the Park administration. This indicates that stakeholders in the Park administration were more concerned with the policy goal itself than with the other two tiers of policy structure. By contrast, in the Roh administration, the stakeholders' focuses were relatively diversified among the three tiers of policy structure.

For the subgroup examination, modularity analysis provided 163 frames (71 frames in the Roh administration and 92 frames in the Park administration). However, Table 5 only includes 130 frames (57 in the Roh administration and 73 in the Park administration) because we excluded marginal or irrelevant frames, such as "objection against the suspicion of tobacco company collusion" (from a lobbyist during the Park administration), "opposition to the abolition of military tobacco tax exemption" (from an ordinary citizen during the Roh administration), and "criticizing the tax policy of the previous administration" (from the progressive press during the Park administration).

Interpreting policy frames between the two administrations

Table 6 presents the number of frames according to the three-tier policy structure plus policy processes. First, the number of policy frames stating policy goals is similar between the two administrations (29.8% in the Roh administration and 27.4% in the Park

administration). This suggests that societal stakeholders significantly debated and/or shared policy goals during the policy process. Second, frames about policy tools are most frequently observed in both administrations (59.7% in the Roh administration and 64.4% in the Park administration). This means that societal stakeholders' focus regarding anti-smoking policy was on policy tools more than on the other elements. Third, while there were a considerable number of tool setting frames in the Roh administration, tool setting frames were not a key issue in the Park administration (10.5% vs. 1.4%, respectively). On the other hand, societal stakeholders' frames were concerned with policy processes in the Park administration, which was not the case in the Roh administration.

As discussed earlier, the biggest differences between the two administrations are found in frames about tool settings and policy processes. However, analyzing in detail yields other differences in policy frames. First, policy frames at the policy goal level are divided into "public health promotion" and "tax increases" frames. Whereas the "public health promotion" frame was dominant as a policy goal in the Roh administration (15 vs. two instances), the "tax increases" frame was more important in the Park administration (13 vs. seven instances). In the Roh administration, all societal stakeholders other than lobbyists viewed the anti-smoking policy's goal to be the promotion of public health.[11] However, the societal stakeholders' opinions were bifurcated into two frames during the Park administration.

Second, the policy tool frames are divided into two types: non-price and price policy tools, as shown in Table 6. Of these two types, the price policy tool was one-third of the total frames in both administrations—32.8% (17 frames) for the Roh administration and 32.9% (22 frames) for the Park administration. Both types of policy tool frames include positive and negative arguments. Societal stakeholders, excluding lobbyists, shared a positive perspective on the non-price tool in both administrations. It could therefore be seen as legitimate for the government to select the non-price tool. However, the situation involving the price tool is different. Regarding positive arguments ("A price increase is necessary to achieve the policy goal"), four stakeholders during the Roh administration (i.e., policy experts, conservative press, progressive press, and ordinary citizens) shared this frame, but only two (i.e., policy experts and civic groups) shared it during the Park administration.

Negative frames for the price policy tool include three specific arguments (see Table 6). In terms of the policy being a social equity issue, only two stakeholders (i.e., lobbyists and civic groups) objected to the price increase tool during the Roh administration, but four stakeholders shared the same opinion during the Park administration (i.e., policy experts, civic groups, progressive press, and ordinary citizens). The differences between the two periods became sharper when examining two other arguments. Negative frames during the Roh administration centered on where to spend the excess revenue obtained from the tobacco price increase. This frame criticized the government by claiming that it would try to use the revenue to compensate for more spending on public health insurance. At that time, the government legitimized the tobacco price increase by arguing that high rates of smoking would increase the prevalence of certain diseases in the general public. Societal stakeholders counter-argued that the excess revenue from a tobacco tax should be spent to benefit the smokers who paid that tax when buying cigarettes, such as by subsidizing

[11] In the Roh administration, only lobbyists interpreted anti-smoking policy as a tax policy (two frames). As spokespersons for cigarette companies, they tended to equate a cigarette price hike with a tax increase to block the price hike. Furthermore, they tried to hide the pros of the anti-smoking policy while highlighting its cons.

Table 6 Comparisons of anti-smoking policy frames[c]

Societal stakeholders' policy frames in three-tier policy structure				Policy expert		Lobby-ist		Civic group		Con-servative press		Progres-sive press		Ordinary citizen		Total	
Three tiers	Frame		Arguments[b]	R	P	R	P	R	P	R	P	R	P	R	P	R[a]	P[a]
Policy goal	Public health frame		Anti-smoking policy is a must for public health promotion	7	4			3			1	4	1	1	1	15	7
	Tax policy frame		Hidden goal of current anti-smoking policy is tax increase, not promoting public health			2	3		2		3		5			2	13
Policy tool	Non-price	Positive frame	Non-price policy tools (warning messages/ graphics, anti-smoking campaign/education, prohibition of cigarette ads) are necessary	3	5	1		3	1		3	2	4	1	1	10	14
			Regulation on smoking in public places is necessary	3	3	1						1		2	5	7	8
		Negative frame	Cigarette warning graphics are disgusting				2									0	2
			Smoking ban in public areas is irrelevant considering Korean smoking culture				1									0	1
	Price increase	Positive frame	Price increase is necessary to achieve policy goal	2	3				1	2		1		1		6	4
		Negative frame	Price increase is against social equity (low-income group)		1	2		1	2				1		1	3	5

Table 6 (continued)

Societal stakeholders' policy frames in three-tier policy structure			Policy expert	Lobbyist	Civic group	Conservative press	Progressive press	Ordinary citizen	Total	
		Increased revenue from price increase should not be used to compensate for public health insurance losses	2	2	3			1	8	0
		Tobacco price increase is designed not to reduce smoking rates, but to maximize tax revenues		1		3	5	4	0	13
Tool setting	Increase adjustment criteria	For appropriate increase amount, Korean context should be the first criteria for adjustment, not tobacco prices in developed countries			1			1	2	0
	Increase adjustment mechanism	Intergovernmental negotiations needed to determine price increase				2	1		3	0
	Inflation	The high rate of increase in tobacco price will lead to inflation		1		1			1	1

Table 6 (continued)

Societal stakeholders' policy frames in three-tier policy structure		Policy expert		Lobbyist		Civic group		Conservative press		Progressive press		Ordinary citizen		Total	
Policy process frame	Lack of stakeholder participation in the policy process		1		1				1					0	3
	Criticism of government political attitudes: fixing price in collusion		1								1			0	2
Total		17	20	8	7	11	9	5	13	9	16	7	8	57	73

[a]R: Roh administration period (2003–2005); P: Park administration period (2013–2015)

[b]Policy arguments presented were constructed in two steps. First, after modularity analysis, words within a module were reorganized into a sentence representing specific stakeholder understanding and/or interpretations (i.e., policy argument). For example, one civic group module comprised 54 words. Of those 54 words, the most significant concepts (i.e., high ranking in degree and betweenness centrality) were selected (e.g., "tobacco, increase, national health insurance, deficit, and suspect") to reconstruct a meaningful sentence, which resulted in "It is suspicious that tobacco price increase is due to the national health insurance deficit." Then, each policy argument was derived from similar arguments specifically asserted by the individual stakeholders, e.g., a negative frame for the price increase is "Increased revenue from price increase should not be used to compensate for public health insurance losses." This frame is derived from eight arguments made by four stakeholders during R

[c]Number in Table 6 indicates number of policy arguments suggested by respective stakeholders: e.g., civic groups presented three (R) and zero (P) policy arguments in the public health promotion frame, and there were in total 11 policy arguments in the R and nine in the P. See "Appendix 2" for more details

patient health costs from smoking-related diseases, creating non-smoking campaigns, and developing better programs to help smokers quit. In contrast, negative frames during the Park administration were concerned not with health policy, but with tax policy. ("Tobacco price increase is designed not to reduce smoking rates, but to maximize tax revenues."). Societal stakeholders strongly suspected that the government was attempting to deceive the public with a hidden intention of raising taxes that was unrelated to the policy goal of public health promotion.

Third, the most noticeable distinctions between the two periods are identified in the tool setting and policy process frames. The tool setting frame, which was prominent during the Roh administration, focused on how much the price should be increased. As presented in Table 6, there were three specific arguments for tool setting. The Roh government initially argued that a 2000-won increase was appropriate because Korea's cigarette price was too low compared to those of other developed countries. Although civic groups and citizens implicitly agreed with the necessity of the price increase, they maintained that the cigarette price hike should instead be determined based on specific Korean contexts (People's Health Institute 2011; MBN 2014).[12] Another tool setting frame focused on stakeholders' demand that ministries within the central government should settle their disputes over the price increase. As explained in the case description section, central-level bureaucrats were conflicted on the tool settings. As a result, both the conservative and the progressive press requested price-setting negotiations between state bureaucrats to break the bottleneck in the Roh administration. However, societal stakeholders under the Park administration did not provide such tool setting frames, despite the larger increase in cigarette price.

Instead, during the Park administration, four types of societal stakeholders (i.e., policy experts, lobbyists, conservative press, and progressive press) presented frames criticizing policy processes, including "lack of stakeholder participation in the policy process" and "criticism of government political attitudes." These were not present in the Roh administration, which favored more inclusive and democratic policy-making. These policy frames reflected the complaints of societal stakeholders who were not allowed to participate in the policy processes under the conservative administration.

Discussion and conclusion

It is important that the new policy sciences focus on the myriad of choices that are made by many types of actors involved in the policy process, not just those of policy-makers, since the boundaries between policy-makers and the "targets" of policy-making have blurred over time (Cairney and Weible 2017; van Hulst and Yanow 2016). Using three layers of policy structure, policy frame analysis accomplishes this by evaluating policy frames from different societal stakeholders to secure policy legitimacy. As noted in the theoretical section, we have termed this the stakeholder-oriented approach to legitimacy through policy frame analysis. Specifically, this study investigated whether there is congruence between the three-tier policy structure and the corresponding stakeholder framing along with the consistency of stakeholder framing across the three layers of policy structure.

[12] For example, a civic group, People's Health Institute (2011) strongly supported the price increase, and a survey on anti-smoking policy reported that about two-thirds of ordinary citizens agreed on the tobacco price increases (MBN 2014).

Table 7 Policy frame analysis and stakeholder-oriented approach to policy legitimacy

	Roh administration	Park administration
Congruency between the three-tier policy structure and stakeholder framing	High	Low
Consistency across the three-tier policy structure	High	Low
Frames regarding the policy process	Not visible	Visible
Stakeholder-oriented approach to policy legitimacy	Guaranteed	Not guaranteed

As summarized in Table 7, stakeholder framing showed substantially different patterns between the two administrations. In the Roh government, the policy frames in the three-layered policy structure centered on the domain of public health policy. In other words, the focus of stakeholder framing (except from lobbyists) at the policy goal level was on public health promotion, and the policy frames about a price policy tool corresponded to tobacco control policy in the domain of public health. Conversely, anti-smoking policy under the Park administration was understood to be tax policy rather than as public health policy. Stakeholder framing at the policy goal and tool levels expanded to the domain of tax policy, which became dominant policy frames.[13] There was also no policy frame about tool settings, because societal stakeholders were indifferent to the lower tier of policy structure; they had already noticed the hidden policy goal behind the Park government's anti-smoking policy. When there is no hidden or predetermined policy intention that can be detected by the stakeholder framing approach, policy legitimacy is more likely to be secured.

The perceived hidden intention of the anti-smoking policy in the Park administration is not based only on the policy frames espoused by societal stakeholders, but is also supported by other pieces of evidence, including one that comes from the Park administration itself. First, a newspaper interview with Park's confidantes from the ruling party at the time was a rare piece of evidence confirming the government's true intentions with the policy. According to one of her cronies who was deeply involved in the presidential transition committee, "President-elect Park seemed to have decided to raise the price of cigarettes for the purpose of collecting more taxes since the transition committee process" (Ilyo Shinmun 2018). Another key figure within the pro-Park faction of her conservative party said:

> When it comes to relationships, it is right to look at taxes first and then smoking rates. Rather than raising prices to lower smoking rates, the Park administration decided to raise taxes to secure tax revenues. The correlation between smoking rate and price was discussed later… However, since tax increases are politically burdensome, the cause of promoting public health was put forward. If the administration really thought about people's health, it would have been much larger than 2000 won (Ilyo Shinmun 2018).

In other words, as noted previously, a 2000-won price hike was the optimal option for raising maximum tax revenue according to reports issued by government-sponsored institutes (Choi 2014: Shin and Seo 2013; see also SBS News 2014). If the government raised the

[13] The policy goal frame of "Hidden goal of current anti-smoking policy is tax increase, not promoting public health" constitutes 65% of all policy goal frames, and the policy tool frame of "Tobacco price increase is designed not to reduce smoking rates, but to maximize tax revenues" constitutes 59% of all price increase policy frames.

price by more than 2000 won, it could attain the policy goal of curbing the smoking rate, but with less additional revenue. Furthermore, a special consumption tax was applied to cigarettes as part of the new policy on tobacco. As the special consumption tax is typically only levied on luxury goods, citizens became more suspicious of the anti-smoking policy's hidden goal. The special consumption tax was introduced in 1976 to complement the regressiveness of the value-added tax (VAT), ultimately functioning as a kind of luxury good tax. Most additional tax revenues from tobacco price hikes were designed to be part of the special consumption tax, allowing them to be used at the government's discretion instead of being designated for the health promotion fund (Kim 2014). Finally, attention should also be paid to the self-contradictory policy of Park's conservative party. After becoming an opposition party in 2017, the conservative party, which had once raised the price of cigarettes, paradoxically insisted on lowering the price of cigarettes. It can thus be argued that the Park government's true goal with the cigarette tax was to earn more revenue for the government rather than to promote health.

The three-layered policy structure and stakeholder framing are located within wider communicative interaction between the state and society, which can be characterized, among other things, in terms of the inclusiveness and openness of policy processes.[14] If the policy process is not regarded as fair, open, inclusive, or otherwise legitimate, it is unlikely to be accepted by stakeholders (Innes and Booher 1999; Newig et al. 2018). Korea, as a recently democratized country, lacks an inclusive policy-making tradition, mainly due to the historical legacies of the previous authoritarian regime. Since the 1987 democratization, Korean governments have been left with two choices: a conventional, elite-centered strategy that does not include consultations with diverse societal stakeholders, or an inclusive reform process that involves more negotiation through social consensus and consultation.

When the Roh government, which supported an inclusive policy process and two-way communication, came to power, it established regular institutional channels to societal stakeholders. However, when the conservative Park government gained power, various access points to the policy process were weakened. If societal stakeholders have a restricted role in the policy process, it may be difficult to ensure policy legitimacy—in particular, input-oriented legitimacy (Scharpf 1999; Montpetit 2008; Park et al. 2015). It might be erroneous to solely attribute any success or limitation of policy outcomes to the stakeholder-oriented approach to policy legitimacy, as well as input-oriented legitimacy. Nonetheless, a legitimate government must respond to the needs and problems recognized by societal stakeholders. The inclusiveness and openness of the policy process thus lead to a greater potential for legitimacy deficit reduction.

Societal stakeholders have more opportunities to make their voices heard at the tool setting stage of the three-tier policy structure, which, in reality, is more visible and tangible to them. Whether societal stakeholders were allowed to participate in the tool setting stage directly affected the way they constructed their policy frames. In the Roh administration, societal stakeholders did not express complaints because the government made efforts to

[14] According to an Organisation for Economic Co-operation and Development (OECD 2009) report, open and inclusive policy-making is "transparent, accessible and responsive to as wide a range of citizens as possible. Openness means providing citizens with information and making the policy process accessible and responsive. Inclusion means including as wide a variety of citizens' voices in the policy making process as possible. To be successful, these elements must be applied at all stages of the design and delivery of public policies and services" (13).

Table 8 Outcomes of anti-smoking policy in the two administrations. *Source*: Choi (2014), Jo-Se Ilbo (2017) and Statistics Korea

	Years	Total sales (millions of packs)	Increase rate	Tax revenue (trillion won)	Increase rate	Smoking rate[a]
Roh administration	2004	5269	–	8.009	–	30.2% (2001)[b]
	2005	3902	−25.9%	6.107	−31.2%	28.8%
	2006	3906	0.1%	6.113	0.1%	25.3% (2007)[b]
Park administration	2014	4360	–	6.991	–	24.2%
	2015	3330	−23.6%	10.518	33.5%	22.6%
	2016	3660	9.9%	12.376	15.0%	23.9%

[a]Cigarette smokers who have smoked at least five packs (100 cigarettes) from the age of 19 or older and are still smokers

[b]Since annual statistics on the smoking rate have been carried out since 2007, statistics in 2004 and 2006 do not exist

communicate with them (see also People's Health Institute 2011; Lee and Yun 2011; Kim 2012). By contrast, there were quite significant frames criticizing the lack of stakeholder participation in the policy process under the Park administration.

Illegitimate policy is prone to fail to achieve the original policy goal. This is confirmed by policy outcomes, as shown in Table 8. During both periods, the intended effect of the price increase was to reduce tobacco consumption. However, the consequences one year after the policy took effect were different in the two administrations: Tobacco consumption grew during the Park administration, whereas it had not increased substantially during the Roh administration. The smoking rate also rebounded from 22.6% in 2015 to 23.9% in 2016. The major effect of the anti-smoking policy during the Park administration was eventually found to be a tax revenue increase in 2016 (Yonhap News 2017). Table 8 reveals that the total tobacco tax revenue in 2005 declined and remained almost unchanged in 2006, but that tax revenues increased significantly during the Park administration. To this end, the anti-smoking policy of the Roh administration more effectively satisfied both input-oriented and output-oriented legitimacy than did that of the Park administration.

The stakeholder-oriented approach to legitimacy can intersect with the growing literature on the role of social constructions in policy studies (Schneider and Ingram 2005; Schneider and Sidney 2009; Pierce et al. 2014) in the sense that policy may be built upon or legitimized by the social construction of diverse stakeholders, including target populations. Both approaches also draw upon post-positivist and intersubjectivist perspectives. Specifically, the social construction of target populations is now a well-established theory that can be divided into two main concerns: first, the influence of social constructions on public policy and second, the way that public policy shapes social constructions. The intended benefits and burdens of policy not only result from the political resources of various groups in society, but are also a response to the social constructions of the groups themselves.

The notions of one-way and two-way communication in the public sphere can also be related to policy transfer literature, particularly to the policy translation and policy mobility approaches. Within the field of public policy, the dominant theoretical frameworks used to analyze the movement of policies are policy transfer and diffusion (e.g., Dolowitz and Marsh 1996, 2000). However, these frameworks have been criticized in recent years, and the policy translation and policy mobility approaches, which are rooted in

multidisciplinary policy studies, have targeted what they perceive to be an overemphasis on rational models and the technical aspects of transfer (e.g., Freeman 2009; Johnson and Hagström 2005; Lendvai and Stubbs 2007; Park et al. 2014; Peck 2011). Policy translation and mobility stress the importance of adaptation to context, communication, and the continuous transformation of policies in motion. Briefly, two-way communication provides the public with more balanced information for the identification of the preferred solution along with more opportunities for feedback and negotiation in the deliberative process of public problem-solving.

The stakeholder-oriented approach to policy legitimacy builds an analytical bridge between policy frame analysis and the argumentative turn in critical policy studies. Policy frame analysis is an effective device for illuminating any possible gap between stated and implemented policy, as well as the critical role of discursive reflection and argumentation in complex policy processes. From the methodological perspective, frame analysis by means of network text analysis might serve as a middle ground between quantitative and qualitative research. While the data coding processes and analysis techniques (e.g., centrality analysis and modularity analysis) are quantitative and formalized methods, the interpretation of the analysis results, such as reassembling salient words analyzed from modularity analysis, is dependent upon researchers. Despite its methodological advancements, this study lacks any ethnographic interpretation of the text data, and further research is required to confirm the analysis results through follow-up interviews with key informants or the juxtaposition of results from other network text analyses—i.e., an ethnographic assessment of network text analysis (van Holt et al. 2013)—with our findings.

Since the policy frames perceived by societal stakeholders are the object of analysis, the stakeholder-oriented approach in this study does not explicitly and comprehensively deal with the policy positions of diverse state actors. However, this does not mean that the government can be considered a monolithic whole; as discussed previously, the various ministries differed in their judgments about the price hike for smoking under the Roh administration. Therefore, it would be worthwhile to explore the degree to which internal consistency within the government is another consideration in the dynamics of stakeholder framing and policy legitimacy. Further, since this research is only centered on one country, its conclusions may have certain limitations. Nevertheless, they can provide a point of comparison for future research on the stakeholder-oriented approach to policy legitimacy. This study also provides a foundation upon which research on stakeholder framing and communicative interaction in recently democratized countries sharing the experience of the interventionist role of the state (e.g., East Asian countries) can be based.

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Appendix 1: Three data cleaning procedures

Data cleaning was conducted through the following procedures. First, the text was coded according to Paranyushkin's three steps: removing stop words; changing the remaining words to morphemes; and removing numbers, punctuation, and special characters. In doing so, a coder can build a thesaurus while considering two issues, as described in footnote 9. Second, the thesaurus was given to an expert to review its appropriateness. For any differences that were found, the coder and the expert resolved them by means of discussion.

Third, the newly built thesaurus was applied to the whole text. The following table presents the text coding results, namely the numbers of words cleaned through the three procedures.

Societal stakeholder	Policy expert		Civic group		Lobbyist		Conservative press		Progressive press		Ordinary citizen	
Year	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015	2005	2015
Node (words)	345	824	331	244	270	518	110	773	658	800	441	588
Tie	2429	6436	1924	1472	1676	3464	490	5516	4724	5670	2878	3456

Appendix 2: How to reconstruct policy arguments from network analysis

Societal stakeholder	Year	Network analysis process			1st round (separate interpretation)			2nd round		
		Total number of modules	Modules with fewer than five words	Modules for argument reconstruction	Similar interpretation	Discrepancy	Agreement ratio	Argument used	Irrelevant argument	Number of frames identified
Civic group	2005	12	0	12	8	4	66.7%	10	2	11
	2015	11	0	11	8	3	72.7%	9	2	9
Lobbyist	2005	9	0	9	7	2	77.8%	8	1	8
	2015	13	1	12	9	3	75.0%	6	6	7
Conservative press	2005	11	4	7	6	1	85.7%	5	2	5
	2015	14	1	13	10	3	76.9%	12	1	13
Progressive press	2005	12	1	11	8	3	72.7%	9	2	9
	2015	23	6	17	11	6	64.7%	14	3	16
Ordinary citizen	2005	14	1	13	9	4	69.2%	7	6	7
	2015	17	4	13	9	4	69.2%	8	5	8
Policy expert	2005	22	4	18	14	4	77.8%	17	1	17
	2015	29	5	24	17	7	70.8%	20	4	20
Roh period	2005	80	10	70	52	18	74.3%	56	14	57
Park period	2015	107	17	90	64	26	71.1%	69	21	73
Total		187	27	160	116	44	72.5%	125	35	130

This table demonstrates the process of categorizing policy frames and arguments, referenced in Table 6. The following is an explanation of how we reconstructed policy arguments from modules, using "Lobbyist 2015" as an example. First, 13 modules in "Lobbyist 2015" were identified from network analysis (i.e., modularity analysis).

Second, among the 13 modules, one module consisted of only three words. Since it was difficult to reconstruct a complete sentence using only three words, this module was excluded from further analysis.

Third, two independent researchers individually reconstructed 12 sentences (with 12 modules). Here, the policy arguments were reconstructed in the following way: Out of all words within a subgroup (i.e., a module), highly centralized words (i.e., words with a high degree of centrality and betweenness centrality) were selected and then reassembled (and combined with other words, if necessary) to form a complete sentence. A meaning circulation role of high betweenness centrality and a local hub role of a high degree of centrality played pivotal roles by uniting other words in the subgroup, thus leading to a specific meaning (i.e., policy arguments) (see Park et al. 2019; Shim et al. 2015).

Fourth, the respective results from the two researchers were compared to check the validity of the reconstruction. In this case, between the two sets of 12 reconstructions, the contents of nine of the sentences were similar to each other, while the remaining three in each reconstruction were different. For each of the three differing interpretations, the two researchers reached a consensus through discussion.

Fifth, the researchers classified arguments into appropriate and inappropriate ones, and the latter were excluded from further analysis. For "Lobbyist 2015," six arguments were excluded because they were irrelevant to stakeholder framing in terms of the three-tier policy structure and the policy process. For example, arguments such as "It is an exaggerated claim to say that a price increase was caused by collusion between cigarette companies" were not relevant to this study.

Sixth, the remaining six arguments were allocated according to the three-tier policy structure and the policy process frame. For "Lobbyist 2015," the following three arguments concerned a policy tool, specifically negative claims for non-price policy tools:

1. Large and accusatory cigarette pack warning pictures cause panic, which infringes on smokers' rights;
2. The horrific pictures used in anti-smoking advertisements are made to justify government regulation for the purpose of promoting national health, but the effects are minimal;
3. Considering Korea's smoking culture, smoking in restaurants and on street corners, which serves to help people relieve everyday stress, should be tolerated.

The other three arguments were similar in that they stated that the aim of the price increase was to secure more tax revenue:

1. While the Ministry of Health and Welfare asserts that legislation to increase cigarette prices arose because current cigarette prices are cheap compared to inflation, the original purpose is to secure tax sources;
2. Taxes on tobacco consumption, which are by nature a fine on smokers, are trying to cover insufficient taxes and guarantee tax revenue;
3. The sharp increase in cigarette prices should be criticized by the National Assembly and political circles as a tax hike made without public opinion or consensus.

Since the third argument illuminates one more aspect of policy frames (i.e., the lack of civil participation in the policy process), which was relevant to the Park administration, researchers classified two frames from this argument.

Seventh, the above processes were applied to other stakeholders, which resulted in a total of 130 frames. With these 130 frames reconstructed from 160 arguments, the researchers double-checked whether the frames identified by the six stakeholders were arranged according to the three-tier policy structure together with the policy process.

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