

의약분업 정책지지도와 지역주의

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Patient satisfaction versus political support: Korea's drug-dispensing law revisited

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In 2000, Korea enacted a controversial law prohibiting doctors from dispensing drugs. Doctors have opposed this law, and in theory, the law inconveniences patients. We assessed the relationship between patients' satisfaction with drug dispensation and their overall support for the law by using a logit model to determine the effects of the law on patients and which patients are likely to support the law. We employed random digit dialing and obtained a sample of 540 adults who had used drugs since the law was enacted. We collected the data through phone interviews. The results indicate that the respondents were generally dissatisfied with the law regardless of socio-demographic or regional characteristics. However, with other factors controlled for, those respondents from the same region as the ruling political party were significantly more likely to support the law. This implies that regional politics influenced the policymaking process through which the law was crafted and enacted.

Keywords: Health policy; Regionalism; Drug dispensation

Introduction

In 2000, Korea enacted a law prohibiting doctors from dispensing drugs mainly to prevent the misuse or overuse of drugs, control drug expenditures through appropriate drug use, and improve the quality of health-care services. Before the law, doctors prescribed and dispensed drugs through their clinics, and pharmacists could give prescriptions for minor conditions such as colds and

migraines. Pharmacists could dispense drugs without a prescription, including powerful drugs such as antibiotics and steroids. Under the law, only doctors are allowed to prescribe drugs, and prescription drugs are dispensed only through pharmacies. Patients' complaints about increased medical care costs (i.e., paying for both prescriptions and drugs) and the inconvenience of visiting both clinics and pharmacies have focused the public's attention on the effectiveness of the law. Despite the

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justifiable objectives of the law, there has been strong opposition from various interest groups, particularly from doctors. Doctors went on strike for months, and many healthcare researchers have questioned the law's intentions [1,2]. These interest groups have paid close attention to various issues surrounding the law, such as increases in healthcare expenditures and patients' inconvenience. They have argued that the law allows large pharmaceutical firms to enter the market, which has traditionally favored small pharmacies [3].

Some political scientists have insisted that the Korean government enacted the law to obtain additional support from the public, infringing on vested rights of doctors, who have been recognized as a politically powerful group. They have argued that the law was enacted based on political considerations, not on healthcare implications, although the law has serious healthcare implications. Hwang [4] raised the question of why the law received support from the Dae Jung Kim administration, although it failed to secure sufficient support from previous administrations, and focused on the role of the government and the president in the policymaking process, whereas most studies have focused on the role of civic groups such as non-governmental organizations [5-11]. This argument provides a new perspective on healthcare policymaking by suggesting that healthcare policies can be implemented by governments driven by political interests, not by professional decisions.

This study addresses three important policy questions from the patients' perspective: whether patients (consumers) are satisfied with the law, whether they support the law, and whether their political alignment influences their satisfaction with and support for the law. For this, the study considers Korea's regional characteristics to evaluate the effects of political alignment on the policy decision because presidential candidates from specific

regions have historically been elected as presidents. In addition, the study assesses patients' rational decision on the law by considering their satisfaction with the use of healthcare services.

1. Political background

Korea's political parties or factions can be geographically divided into Gyeongsang (hereafter "the southeastern region"), Jeolla (hereafter "the southwestern region"), and others. Today's political differences stem mainly from the regional background of political parties back in the 1970s. However, these regional differences have a long history, reflecting Korea's 5,000-year history. For instance, there were two countries - "Baekje" in the southwestern region and "Silla" in the southeastern region - in ancient times, and a long-standing feud between them continued until they were united to become "Unified Silla." The political party based in the southeastern region maintained its power by achieving the unification, whereas the southwestern region became politically alienated because it was used as a place of exile. This propensity continues to this day. From 1962 (the start of the industrialization era), three presidents from the southeastern region were consecutively elected, and they intensified the regional divide by prioritizing certain regions and implementing policies that benefited residents in the southeastern region [12,13]. This continued until the election of president Dae Jung Kim, who was supported mainly by the southwestern region. This reflects Koreans' tendency to choose presidential candidates based on their regional identity, not on their long-term political views [14].

Although the Dae Jung Kim administration assumed office with 95% of the votes from the southwestern region in the 1997 presidential election, its political base was weak in other regions[15]. In that election, 40.3% of

Table 1. Votes for presidential candidate Dae Jung Kim by region

	%
National capital region (Seoul)	42.0
Southeastern region	13.5
Southwestern region	94.5
Western region	44.0
Eastern region	23.7

From Dong-A Daily. Votes for presidential candidates. 1997 Dec 20 [16].

the voters chose Kim, but his opponent received a similar number of votes (38.7%), indicating weak political support for the Kim administration (Table 1). For this reason, the administration pushed various policies in conjunction with progressive civic groups. This was mainly to curb the establishment through participatory democracy, inducing the public and laborers to become more involved in the decision-making process [17]. The drug-dispensing law and the unification of national health insurance were part of Kim's electoral platform and became the main policies to be implemented.

The drug-dispensing law was a key policy enabled by support from progressive civic groups, which made efforts to fortify their organizational competency and increase their political leverage by participating in the policymaking process [8-11,18]. In other words, the government, the ruling party, and civic groups were united in favor of the law, whereas healthcare professionals, particularly doctors, were against of it. Progressive civic groups supported the law to expand their political power, and doctors opposed it, claiming that it would worsen patients' access to medicine [9-11]. However, the government pushed ahead, despite three strikes in June 2000, which involved more than 70% of all hospitals and clinics.

The law provoked intense conflicts between the two stakeholders and has been constantly criticized as a failure since its implementation. A policy assessment

executed by a National Assembly member a year after the enactment of the law suggested that the misuse and overuse of drugs actually increased under the law [19]. In addition, a public survey showed that most Koreans complained about the inconvenience of the law [20,21]. In 2010, a decade since the enactment of the law, scholars, National Assembly members, and even the government called for a reevaluation of the law. Recently, it has been contended that the separation of prescription and dispensation should be terminated because the law has failed to achieve its original goals [22].

Some, particularly doctors, have believed that the law was enacted mainly for pursuing political interests, not for improving the healthcare system. Therefore, this study examines the effects of political interests on the policymaking process for the law by using survey data on drug use and political preferences after the law was enacted.

Data and Descriptive Statistics

By using random digit dialing, we obtained a random sample of 540 Korean adults (age>19) who used healthcare services and prescription drugs after the enactment of the law and interviewed them by telephone in March 2002 to obtain data.

The data focused on the respondents' selection and use of healthcare services (including prescription drugs), their level of satisfaction with healthcare services and drug dispensation under the law, and their willingness to support the drug dispensing law. We evaluated the respondents' satisfaction with the law by using a five-point Likert-type scale ranging from "very dissatisfied" (1) to "very satisfied" (5). We determined their support for the law by asking whether they supported it. In addition, we obtained data on their sociodemographic charac-

Table 2. Characteristics of respondents (n=540)

Characteristics	No.
Gender	
Male	240
Female	300
Age (yr)	
20-39	246
40-59	214
60+	80
Education	
High school	342
College or higher	198
Occupation	
Office worker/professional	102
Self-employed worker	137
Blue-collar worker	51
Unemployed	250
Monthly income	
≤USD 1,000	104
>USD 1,000 to ≤3,000	284
>USD 3,000	152
Region	
National capital region (Seoul)	226
Western region	68
Eastern region	19
Southeastern region	162
Southwestern region	65

teristics, including their age, gender, education level, occupation, monthly income, and place of residence.

Table 2 shows the characteristics of the respondents. Among the 540 respondents, 44% were male; 46% were between the ages of 20 and 39; 53% had a monthly income between USD 1,000 and USD 3,000; and 42% and 30% lived in Seoul and the southeastern region, respectively. Their characteristics generally reflect those of the general population in terms of their age, gender, and place of residence.

Methods

We analyzed the relationship between the respondents' support for/satisfaction with the law and their sociodemographic characteristics by using the χ^2

statistic. To examine the causal relationship between their political alignment and support for the law, we employed a logit model by controlling for their socio-demographic characteristics and satisfaction with the law. We used the place of residence as a proxy for political supports to capture the effects of the respondents' political alignment on their support for the law.

We used a bivariate probit model to check the robustness of the results. Even if patients' satisfaction with and support for a healthcare law may be correlated, it is often difficult to find theoretical or empirical evidence of the causal relationship between these two variables. In this regard, the bivariate probit model has several useful features, including the consideration of the correlation between patients' satisfaction with and support for the law through a regression. In this study, we con-

$$\begin{aligned}
 y_1^* &= \chi_1' \beta_1 + \varepsilon_1, y_1 = 1 \text{ if } y_1^* > 0 \text{ and } 0 \text{ otherwise,} \\
 y_2^* &= \chi_2' \beta_2 + \varepsilon_2, y_2 = 1 \text{ if } y_2^* > 0 \text{ and } 0 \text{ otherwise,} \\
 E[\varepsilon_1 | \chi_1, \chi_2] &= \text{Var}[\varepsilon_2 | \chi_1, \chi_2] = 0, \\
 \text{Var}[\varepsilon_1 | \chi_1, \chi_2] &= \text{Var}[\varepsilon_2 | \chi_1, \chi_2] = 1, \\
 \text{Cov}[\varepsilon_1, \varepsilon_2 | \chi_1, \chi_2] &= \rho,
 \end{aligned}$$

sidered the following bivariate probit model:

where y_1^* denotes a latent variable for the patient's support for the law and is coded as 1 if the patient supports the law and 0 otherwise; y_2^* is a latent variable for the patient's satisfaction with the law and is coded as 1 if the patient is satisfied with the law and 0 otherwise; the error terms in the two equations are assumed to be correlated; and ρ represents the correlation between the patient's support for and satisfaction with the law.

Results

1. Respondents' satisfaction with the law

Table 3 shows the descriptive statistics for the res-

Table 3. Descriptive statistics for respondents' satisfaction (n=540)

	Level of satisfaction (%)			χ^2
	Dissatisfied	Moderate	Satisfied	
Gender				10.2**
Male	40.0	48.0	12.0	
Female	53.3	35.4	11.3	
Age (yr)				8.8
20-39	43.9	45.9	10.2	
40-59	50.5	39.2	10.3	
60+	40.0	40.0	20.0	
Education				3.4
High school	43.0	45.0	12.0	
College or higher	51.0	37.9	11.1	
Occupation				13.0*
Office worker/professional	49.0	40.2	10.8	
Self-employed worker	54.7	35.8	9.5	
Blue-collar worker	45.1	39.2	15.7	
Unemployed	40.0	47.6	12.4	
Monthly income				5.8
≤USD 1,000	45.4	40.1	14.5	
>USD 1,000 to ≤3,000	48.2	42.6	9.2	
>USD 3,000	40.4	45.2	14.4	
Region				14.8
National capital region (Seoul)	47.4	42	10.6	
Western region	54.4	35.3	10.3	
Southeastern region	44.6	40	15.4	
Southwestern region	44.4	45.7	9.9	
Eastern region	15.8	52.6	31.6	

* $P<0.05$, ** $P<0.01$.

pondents' satisfaction with the law. Approximately half (248, 46%) were not satisfied with the law. Their satisfaction was significantly related to their gender and occupation but not to their education level, monthly income, and place of residence.

2. Respondents' support for the law

Table 4 shows the descriptive statistics for the respondents' support for the law. Slightly less than half (227, 42.1%) did not support the law. There were significant relationships between their support for the law and all their sociodemographic characteristics except for gender. As in the case of their satisfaction with the law, those between the ages of 40 and 59 were less likely to sup-

port the law. College graduates and office workers/professionals were more likely to support the law than high school graduates and blue-collar workers, respectively. Those from the southwestern region were most likely to support the law, and those with a monthly income less than USD 1,000 were more likely to support the law than those making more.

3. Effects of respondents' political alignment on their support for the law

Table 5 shows the results of the logit regression, which indicate that the respondents who were satisfied with the law were more likely to support it. In addition, those over the age of 40 were more likely to support the law. Blue-collar workers were less likely to support the law

than office workers/professionals (odds ratio [OR]=0.23). In addition, those respondents living in Seoul (the national capital), the eastern region, and the southwestern region were much more likely to support the law than those living in the southeastern region (OR=1.55, 3.04, and 3.99, respectively). In particular, the coefficient of region was much higher for the southwestern region than for other regions.

4. Robustness

Table 6 shows the results for the bivariate probit model (with the correlation between the respondents' support for and satisfaction with the law controlled for). These results verify that the respondents' place of

Table 4. Descriptive statistics for respondents' support for the law (n=540)

	Support for the law (%)		χ^2
	Not support	Support	
Gender			0.4
Male	43.5	56.5	
Female	40.9	59.1	
Age (yr)			27.3***
20-39	30.2	69.8	
40-59	53.9	46.1	
60+	46.8	53.2	
Education			9.9***
High school	47.2	52.8	
College or higher	33.3	66.7	
Occupation			23.3***
Office worker/professional	27.4	72.6	
Self-employed worker	47.1	52.9	
Blue-collar worker	66.7	33.3	
Unemployed	40.3	59.7	
Monthly income			9.6**
≤USD 1,000	31.6	68.4	
>USD 1,000 to ≤3,000	46.1	53.9	
>USD 3,000	46.6	53.4	
Region			34.2***
National capital region (Seoul)	36.3	63.7	
Western region	63.2	36.8	
Southeastern region	23.1	76.9	
Southwestern region	51.2	48.8	
Eastern region	21.1	78.9	

** $P<0.05$, *** $P<0.01$.

residence had a significant effect on their support for the law but not on their satisfaction with it. Those from the southwestern region were significantly more likely to support the law than those from Seoul, but this was not the case for their satisfaction with the law. Those from the southeastern region were less likely to support the law, but their place of residence had no effect on their satisfaction with the law.

Discussion

The study employs cross-sectional data obtained

Table 5. Logit result for respondents' support for the law

Variable	Odds ratio	Standard error
Gender		
Female	1.00	–
Male	1.35	0.30
Age (yr)		
20-39	1.00	–
40-59	0.45**	0.10
60+	0.53*	0.19
Education		
High school	1.00	–
College or higher	1.24	0.30
Occupation		
Office worker/professional	1.00	–
Self-employed worker	0.60	0.19
Blue-collar worker	0.23***	0.11
Unemployed	0.74	0.23
Monthly income		
≤USD 1,000	1.00	0.36
>USD 1,000 to ≤3,000	0.73	0.18
>USD 3,000	1.00	–
Region		
National capital region (Seoul)	1.00	
Southeastern region	0.62**	0.14
Southwestern region	2.48**	0.91
Western region	0.39***	0.12
Eastern region	1.84	1.19
Satisfaction Level		
Satisfied	1.00	–
Moderate	0.41***	0.16
Dissatisfied	0.13***	0.52

* $P<0.1$, ** $P<0.05$, *** $P<0.01$.

through telephone interviews to investigate how patients' political alignment influences their satisfaction with and support for the law in the context of the policymaking process. The study uses a logit model and a bivariate probit model to capture the effects of patients' political alignment on their satisfaction with and support for the law. To the authors' knowledge, no study has provided an empirical analysis of the effects of regional characteristics on healthcare policymaking. In this regard, this study contributes to the literature by being the first to provide such an analysis, revealing new insights into the relationship between political alignment and healthcare policymaking in Korea.

Table 6. Results for the bivariate probit model for respondents' support for the law and satisfaction

	Support for the law			
	Coefficient	SE	Satisfaction	SE
Gender				
Female	–	–	–	–
Male	0.10	0.13	-0.25**	0.12
Age (yr)				
20–39	–	–	–	–
40–59	-0.51***	0.13	-0.22*	0.13
60+	-0.30	0.21	-0.03	0.20
Education				
High school	–	–	–	–
College or higher	0.06	0.14	-0.22***	0.10
Occupation				
Office worker/professional	–	–	–	–
Self-employed worker	-0.28	0.20	-0.07	0.18
Blue-collar worker	-0.75***	0.27	0.11	0.26
Unemployed	-0.12	0.18	0.16	0.17
Monthly income				
≤USD 1,000	-0.07	0.21	-0.14	0.21
>USD 1,000 to ≤3,000	-0.25*	0.15	-0.20	0.10
>USD 3,000	–	–	–	–
Region				
National capital region (Seoul)	–	–	–	–
Southeastern region	-0.24*	0.14	0.11	0.13
Southwestern region	0.50***	0.20	0.03	0.18
Western region	-0.56***	0.19	-0.16	0.18
Eastern region	0.64*	0.35	0.86**	0.36
Constant	0.81***	0.21	0.41**	0.20
rho	0.45***	0.06	–	–

SE, standard error. * $P<0.1$, ** $P<0.05$, *** $P<0.01$.

In order to capture the effect of the political alignment on the law, we used the place of residence as a proxy for the respondents' political propensity because presidential candidates from specific regions have been elected with unquestioning support of the people from the same area historically. For example, Dae Jung Kim, who implemented the law, won the presidency with approximately 95% of the votes from the southwestern region but only about 14% from the southeastern region.

This implies that the Kim administration was established through strong regional support. In other words, if the variable for the region is regarded as a proxy for

political alignment, then our results implies that the respondents' political alignment had considerable influence on their support for the law. In short, our results suggest that the respondents' political alignment was a significant determinant of their support for the law but not of their satisfaction with it.

Conclusion

The results provide empirical evidence that regional characteristics have considerable influence on political support and the policymaking process. The level of satisfaction with the law was low across the country. The respondents from the southwestern region, the political base of the ruling party when the law was enacted, were most likely to support the law, whereas those from the southeastern region were less likely

to support it than those from other regions. That is, the respondents' place of residence was not significantly related to their satisfaction with the law, but it was to their support for the law, particularly for those respondents from the same region as the ruling party.

These results suggest that patients' political preferences are much more likely than their need for convenience to influence the policymaking process and that political power may induce undesirable outcomes for healthcare policies. This indicates an urgent need for a systematic reform that can prevent a repeat of such trial-and-error policymaking in the design and imple-

mentation of healthcare policies. Such a reform can be based on education programs for the public and politicians, the wide dissemination of information, and the facilitation of decision-making processes that make active use of expert opinions on healthcare policies.

This study is limited in that the telephone survey overlooked those individuals without a telephone at home or those who did not answer the call. Nonetheless, the study provides a better understanding of the role of political power in the policymaking process.

핵심용어: 보건의정책; 지역주의; 의약분업

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Peer Reviewers' Commentary

이 논문은 의약분업 실시 10년이 지난 후 재평가라는 취지에서 2000년 의약분업당시의 정책만족도와 정책적 지지도를 자료를 통해 분석을 시도하였던 점에서 의미가 있으며, 지역주의와 보건의료정책결정과의 관련성을 재조명하고 자료를 통해 실증적으로 분석한 논문으로서 시의성이 있는 것으로 판단된다.

[정리: 편집위원회]