

To Be Ambiguous or Not at All?: The Moderating Effect of Drug Felony on Fraud in the U.S. SNAP

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Abstract

The federal government of the United States declared a “war on drugs” with the enactment of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. To reduce fraud, the federal government recommends a life-ban policy under which SNAP recipients cannot enroll in the SNAP for the rest of their lives, whereas state governments want to adopt a modified policy or nothing at all. Under this background, we analyze the moderating effect of three types of drug-ban policies in the context of the relationship between decentralization and the welfare fraud. Previous literatures revealed that a higher level of decentralization can increase fraud because of its ambiguity. Also, in principal-agent theory, the agents abuse information asymmetry caused by ambiguous and complex regulation. According to our empirical analysis, decentralization increases welfare fraud, especially when the ambiguous modified ban was adopted. Despite the general belief, obscure regulation or fraud prevention policies have caused more fraudulent behavior rather than the absence of such regulations. For these reasons, the U.S. federal government should guarantee free choice of state government and reduce the cost of identifying eligibility under ambiguous regulations. Investing more resources for managing chronic drug addicts can be relevantly reduce welfare fraud than adopting ambiguous regulations.

Key Words: SNAP, drug felony, decentralization, welfare fraud, principal-agent theory, information asymmetry

I . Introduction

As the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) act was enacted in 1996, the U.S. federal government started a “war on drugs.” The federal government especially tried to penalize drug crime and connect it to the eligibility of one of the largest

welfare policies for no- or low-income people, the Supplemental Nutrition Assistance Program (SNAP). Among three types of drug felony policies, the federal government prefers the life-ban policy, a penalty that regulates convicted drug criminals to enroll in the SNAP permanently to eradicate drug-related crimes effectively (Luna, 1997) because drug-addicted SNAP recipients frequently sell their vouchers to drug dealer or trade vouchers with drugs. However, the state governments and nongovernment organizations have different points of view. According to them, the life-ban policy does not reflect the reality that most convicted criminals are chronic addicts who cannot stop doing drugs by themselves. For this reason, half the United States chose a no-ban policy without any penalty or a modified ban through which state governments give grace periods or permits to enroll in the SNAP conditionally. In particular, the states who wished against a serious conflict with the federal government usually chose a modified-ban policy located in the relatively gray area, between a life-ban and a no-ban policy.

Then which drug-ban policy can be the most effective instrument in reducing welfare fraud and drug-related crimes among the three different policy types? Also, between a no-ban policy and a modified-ban policy, which is more effective? To answer this question, we will analyze the moderating effect of the three types of drug felony policies in the context of the relationship between fiscal decentralization and fraud. As Krause (2010) stated, decentralization can increase welfare fraud because of its embedded complexity and ambiguity. In other words, an ambiguous modified regulation can worsen the negative effects of decentralization on welfare fraud.

This study gives several implications. First, we will reconsider the relationship between fiscal decentralization and welfare fraud. Although the majority of studies prove the positive effect of fiscal decentralization on reducing fraud empirically, some mixed results exist in the battlefield. Scholars who warn about the negative effect of decentralization argue that under a highly decentralized system are agents who abuse the gap between complex, ambiguous federal and local policies. We will empirically analyze how decentralization affects fraud using 50-state panel data spanning 11 years. Second, we consider fraud as one type of principal-agent problem and try to draw an effective policy instrument from a behavioral economic point of view. From an incentive-oriented perspective, we will especially show how agents abuse information-asymmetric situations under ambiguous regulations or policies and worsen the relationship between decentralization and fraud possibility. Practically, our analysis suggests policy implications to policy decision makers. Specifically, as mentioned above, there are fiery debates between the federal government, which incessantly prefers a life-ban policy, and the local government, which aims to eliminate drug felony policies and invest more budgeting to control chronic drug addicts. Our empirical results warn of ambiguous modified-ban policies that initiated as a compromise. Also, SNAP is one of the largest welfare policies that originally helped

no- or low-income recipients. Our results suggest a relevant way to prevent the situation where people in dire need of benefits cannot receive them. Furthermore, proving the effect of three drug felony policy types can help reconsider the effective policy instrument and incentive in controlling and managing drug-related crimes.

II. Literature Review

1. SNAP and Drug Felony in the United States

The food stamp, started in 1939, is a food-purchasing assistance mechanism for low- and no-income people living in the United States. The food-stamp program changed its name to SNAP (Supplemental Nutrition Assistance Program) in 2009. State governments distribute food stamps to low- and no-income citizens eligible enough to receive welfare benefits. Each state government can have the authority to manage most of the distribution process, such as distinguishing eligible recipients, enacting its own policies, and tracing fraudulent behavior, although SNAP benefits are funded 100% federally. Although the federal government was willing to decrease welfare budget waste and other problems caused by the lack of relevant qualification verifications through the PRWORA, state governments maintain their authority. The PRWORA made substantial changes, including a drug felony policy that gave state governments the discretion to opt out of or modify the ban (USDA, 1999). Along with the “war on drugs,” the federal government tried to imposed a denial of federal welfare benefits to recipients who committed drug crimes (Mauer and McCalmont, 2014). In principle, the federal government banned federal benefits if the recipients were convicted of any type of drug crime and gave states the discretion to opt out of or modify the drug-felony policy (Mauer and McCalmont, 2014).

⟨Table 1⟩ shows three different types of drug felony policies. The first is the life-ban policy, the harshest among the three policies because recipients cannot enroll in the SNAP again if they commit drug crimes. On the other hand, in states where the state governments choose no-ban policies, SNAP recipients are not regulated to any restrictions even if they commit drug crimes. The modified ban is relatively more complicated than the other two policies. The state government requires recipients who committed drug crimes to fulfil several conditions and limit the circumstances in which the permanent disqualification applies to participate in the SNAP again (McColl, 2016). For instance, the state government can require convicted recipients to submit to a drug-testing or drug-treatment program.

〈Table 1〉 Three Types of Drug Felony Policy

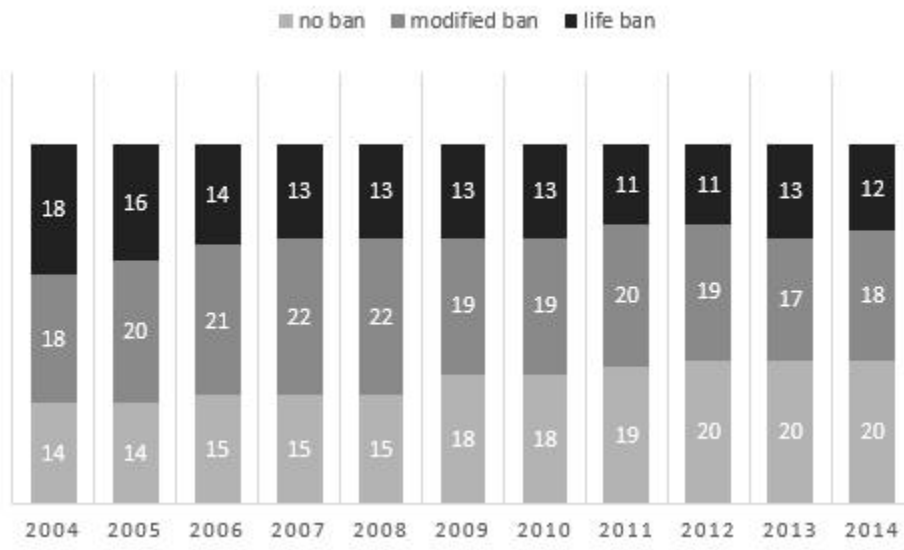
Drug Felony	Description
Life ban	• Life penalty
Modified ban	• Limiting the circumstances in which the permanent disqualification applies • Requiring the person convicted to submit to drug testing • Requiring participation in a drug treatment program
No ban	• No penalty

One main goal of drug felony policies is reducing the fraudulent behaviors of recipients related to drug crimes (Luna, 1997). According to Mauer and McCalmont (2014), recipients exchange drugs with SNAP vouchers and commit welfare fraud crimes. The *San Diego Union-Tribune* (1996) also introduces a SNAP recipient who traded their federal benefits for prohibited items such as alcohol and cigarettes. For this reason, one of the federal government's desires is to deter drug use and to reduce fraud incidences. As McCarty et al. (2015) stated, the U.S. federal government prefers the life-ban policy because they believe, as the most conservative policy, it can prohibit fraudulent behavior and budget wasting effectively. However, several state governments and scholars criticize this perspective because they believe the life-ban policy is too harsh for a welfare policy, which originally helped no- and low-income minorities. Born (2018) introduced the case of a woman who was restricted from participating in the SNAP permanently because of the life-ban drug felony policy in West Virginia.¹⁾ Also, critics of the life-ban drug felony policy stress that since most of the recipients convicted of drug crimes are unstable—low- or no-income chronic addicts—drug-related crimes cannot be reduced through such a policy. Rather, those banned from welfare benefits may participate in other poverty crimes (Godsoe, 1998). Ultimately, the life-ban policy will increase recidivism and fraud-controlling costs. Thus, several state governments and NGOs criticize the life ban as “over-inclusive” and argue that state governments should adopt modified or no bans to give another chance to convicted recipients.

〈Figure 1〉 shows how 50 state governments chose drug felony policies from FY 2004 to FY 2014. As shown below, 18 state governments chose life-ban policies in FY 2004, but the trends showed an incremental decrease after FY 2004. In FY 2014, 12 states out of 50 chose life-ban policies; their tendencies showed an exact opposite trend. It started with 14 states in FY 2004 but incrementally increased for the next 10 years. As a result, in FY 2014, no ban policy was the most dominant among the 50 states. Eight more states chose no-ban rather than life-ban policies. Modified-ban policies maintained a similar level of adoption. In FY 2004, 18 state governments adopted modified bans and kept them 10 years later.

1) Ibid.

〈Figure 1〉 Adoption of three types of drug felony policies by year



2. Decentralization and Welfare Fraud

Tambulashi and Kayuni (2007) defined decentralization as the “transfer of power from the centric to the periphery.” According to Rondinelli et al. (1985), decentralization is the “transfer of responsibilities for planning, management, and the raising and allocation of resources from the central government and its agencies to field units of the central government, semiautonomous public authorities, regional authorities, or nongovernmental, private, or voluntary organizations.” Generally, decentralization is categorized in three parts—fiscal, political, and administrative—so its theoretical base lies on fiscal federalism, public administration, and political science, as Schneider (2003) stated. To analyze the effect of decentralization on social values such as corruption, fraud, and transparency, scholars selectively adopt one out of three dimensions of decentralization or use more than two dimensions simultaneously. For example, Fan et al. (2009) used political decentralization as an independent variable to analyze how decentralization affects corruption. On the other hand, Arikian (2004) studied the relationship between fiscal decentralization and the possibility of corruption. However, as Tambulashi and Kayuni (2007) described, fiscal decentralization can either be political or administrative or both. Since political decentralization is usually defined as the “creation of bodies separated by law from the nation center, in which local representatives are given formal power to decide on a range of public matters” (Manhood, 1993), fiscal and political decentralization seem to have many things in common as usually, the creation of a new branch implies the distribution of fiscal resources from

the central to local government. The specific way of measuring the level of fiscal decentralization varies by scholar; many scholars agree that fiscal decentralization includes the subnational share of total government spending.

Over the years, majority of empirical studies concluded that decentralization is a relevant solution to reduce fraudulent behavior and corruption (Lessmann and Markwardt, 2009). Huther and Shah (1998) analyze the effect of fiscal decentralization on corruption using Pearson correlation. Fisman and Gatti (2002) studied how fiscal decentralization affects the CPI index, and Freille et al. (2007) found that fiscal decentralization effectively reduced corruption through empirical analysis. Scholars who believe in the positive effect of decentralization on corruption or fraudulent behavior argue that higher levels of decentralization will result in greater accountability and transparency (Tambulasi and Kayuni, 2007). In other words, as Chemerinsky (1983) mentioned, fraud cannot be perfectly controlled by only one government because of the lack of budget and time. Orgen (1973) warned that a larger or federal government may have difficulty acquiring enough resources to monitor and managing fraud. Another possible explanation suggested by scholars is efficient and rapid management. GAO (2010) reported that the federal government traced only a limited number of fraud cases in 1970s. Also, Chemerinsky (1983) stressed the effect of decentralization on reducing fraud because lower government levels can take direct and rapid actions to manage corruption, especially the actions that best suit their conditions.

Although several scholars defend the positive effect of decentralization, it seemingly cannot be the only remedy for controlling fraud and corruption. Tanzi (1994) argues that a larger government can be more powerful in controlling fraud because the direct personal links among actors can be prohibited. Also, lower government levels usually cannot have enough fraud-management resources. Persson, Tebellini, and Trebbi (2001) also pointed out that relatively smaller voting districts showed higher levels of corruption for this reason. In other words, a higher level of decentralization needs more budget and time to monitor fraudulent behavior (Lessmann and Markwardt, 2009). Krause (2010) also warns that high decentralization leads the administrative and fiscal complexity between legislations and acts. Since the federal and local governments' specific rules are different, some recipients or public officials abuse or misuse these complexities (Madison, 2011). For this reason, Krause (2010) stresses the importance of a strong penalty, and similarly, Tambulasi and Kayuni (2007) pointed out that corruption and fraud cannot be reduced without public education for citizens and civic consciousness.

3. Fraudulent Behavior as a Principal-Agent Problem and Its Regulation

mentioned that differentiating corruption from “rent-seeking behavior” is difficult. According to some scholars, fraud can be interpreted as the utility-pursuit behavior of rational human beings in specific, conditional situations. Groenendijk (1997) stated that corruption can be interpreted as an individual’s rational decision, so he suggested understanding fraudulent behavior in social science using a very traditional economic theory: principal-agent theory. Under the principal-agent theory, the interests of the principal and agent differ, so the agent pursues their own interest—fraud or corruption in this context—using information asymmetry (Demski and Feltham, 1978). Scholars such as Rose-Ackerman (1975), Bakker and Schulte Nordholt (1996), and Andvig and Moene (1990) analyzed the origin and effects of fraudulent behavior based on the principal-agent theory.

Since the fraudulent behavior of agents can be understood using the principal-agent theory, scholars studied the economic incentive theory-based regulations to suggest a relevant solution to reduce fraud and corruption. One solution would be eliminating ambiguous regulation as it worsens the information asymmetry problem. Specifically, scholars such as Ensor and Duran-Moreno (2002) warned that the risk of ambiguous and complicated rules in preventing corruption occurred in the health sector. According to their study, missing important information to solve principal-agent problems is easy when ambiguous and complex regulations are adopted. Also, Taylor (2000) mentioned that ambiguous regulations and practices can degenerate information asymmetry and ultimately increase corruption. From a similar point of view, Podgor (1994) suggested that eliminating unnecessary, complicated statutes can effectively reduce white-collar crime by reducing the exploitation of missing information, adding that preparing transparent legislation is important in preventing crime.

Instead of ambiguous regulation, Nunez (2007) suggested self-regulation to reduce fraud effectively. Gunningham (1991) argues similarly as self-regulations, such as peer pressure and social norms, are often better informed to the public. Although several scholars focused on the potential of self-regulation as an effective fraud-reduction tool, it could not have enough spotlight as self-regulation incentives are unclear. For this reason, as Gunningham and Rees (1997) pointed out, the self-regulation policy has an extremely tarnished image. Also, Nunez (2007) criticized that self-regulation cannot detect possible fraud effectively because under such a strategy, governments or organizations must invest resources and efforts to extract fraudulent behavior. Thus, the “no regulation at all” strategy can be preferred if the social goal is reducing fraud (Nunez, 2007). In fact, several European countries such as Norway and the Netherlands legalize free heroine to drug addicts to manage not only the quality of life of chronic addicts but

also drug-related crimes by investing more budgets and resources.

Some scholars argue that ambiguous regulations should be restricted by stronger instruments such as legislation and citizen education. Easley and O'Hara (2009) also stress the importance of legal rules and structure to relieve the dangerousness of ambiguous regulation and information asymmetry. Ogas (2001) pointed out that the level of fraud is low in more democratic countries and that empowering citizens to have political accountability can be very effective in controlling fraudulent behavior.

III. Data and Methods

1. Empirical Models

To analyze the relationship between fiscal decentralization and welfare fraud and the moderating effects of the three different drug felony policy types, we used data produced by the USDA government. The dependent variable of our analysis is the log of SNAP fraud determined by the state government's prosecution, measured in the 2009 U.S. dollar. The independent variable is the fiscal decentralization ratio. We measured this data by dividing the state government's administrative cost by the sum of the federal share and state government's administration costs. The moderating variable, the drug felony policy, is measured as 0, 1, and 2. If the state government chose a no-ban policy, we coded it as 0, and if the state government adopt a modified-ban or life-ban policy, we coded them as 1 or 2, respectively. Also, to control the effects of the third variable, we added several control variables in the model. Lastly, we added year dummy variables from 2004 to 2014 to control the time-trend effect.

〈Table 2〉 Empirical Model

Category	Research Design
Regression Model	$Y_{it} = \mu + \beta_1 D_{it} + \beta_2 X_{it} + \beta_3 D_{it} X_{it} + \lambda_t + \phi_i + \eta_{it}$
	α : constant
	β_1 : effect of fiscal decentralization
	β_2 : effect of drug felony policy
	β_3 : moderating effect of drug felony policy
	η_{it} : error term

2. Data and Variables

To analyze the effect of the three different drug felony policy types on welfare fraud, we constructed 50-state panel data spanning 11 years, from FY 2004 to FY 2014. Most of the data were collected from the U.S. government's official reports or webpage, such as the USDA quality control report, the GAO report, the USDA state activity report, and the State Options Report. We first found the official reports that included relevant data and information and converted them into usable electronic data.

⟨Table 3⟩ shows the four types of variables used in this study as well as data sources. The dependent variable of this study is fraud, defined as the "log of [the] total amount of fraud determined from prosecution." The fraud variable is measured in 2009 USD, and we take a log to create a normal distribution. The information on the total amount of fraud of each state can be collected from the State Activity Report. The independent variable is decentralization. Among the three different decentralization types, we used financial decentralization, measured as the "state government's share administration cost divided by [the] federal share administrative cost." The moderating variable is the three types of drug felony policy. As described above, the U.S. federal government authorizes state governments to choose drug felony policies that best fit their circumstances. We give 0 when the state government chose a no-ban policy, implying zero restrictions. Also, we give 1 or 2 if the state government chose a modified-ban or life-ban policy, respectively.

To control the effect of variables other than independent and moderate variables, we insert several variables that are mostly related to the economic background of the state government to the empirical model. The population variable, measured as a log of the total population and unemployment rate, is a traditional control variable used in welfare error and fraud analysis, as previous studies pointed out. Also, the log of state real GDP data is also included because the level of economic wealth significantly affects the levels of corruption and fraud. Also, we insert the log of number of state crimes collected from the FBI, which represents the atmosphere level in which crime can happen.

〈Table 3〉 Variable Measurement

Type	Variable	Definition	Description	Source
Dependent variable	fraud	Log of “total amount of fraud determined from prosecution ”	U.S. dollar	State Activity Report
Independent variable	decentralization	State share administration cost/Federal share administrative cost	Percent	State Activity Report
Economic background	Population	Log of total population	Number	U.S. Census Bureau Database
	poverty rate	Poverty rate of state	Percent	US Census Bureau Database
	unemployed_rate	Unemployment rate of state	Percent	U.S. Census Bureau Database (FY 2004–FY 2011) US Department of Labor Bureau of Labor Statistics (FY 2012–FY 2016)
	gdpcapita	Log of state real GDP	U.S. dollar	US Department of Commerce Bureau of Economic Analysis Database
	logcrime		Number	FBI
Moderate variable	Drug felony		1 = no ban 2 = modified ban 3 = life ban	State Options Report
Political background	governor	Political party of governor	1 = democratic 0 = others	State government homepage

〈Table 4〉 shows the descriptive statistics of string variables and categorical variables inserted in the regression model. The string variables used in this study are the log of total population, poverty rate, unemployed rate, and GDP per capita of each state. All four variables have 550 as the number of observations. The mean of log of population is 8.216, and its standard deviation is 1.018. The poverty rate and GDP per capita show relatively a big difference between maximum and minimum values. The maximum value of poverty rate is 25.754, and the minimum value is 5.4. The standard deviation of poverty rate is 3.439.

〈Table 4〉 Descriptive Statistics of Independent and Control Variables

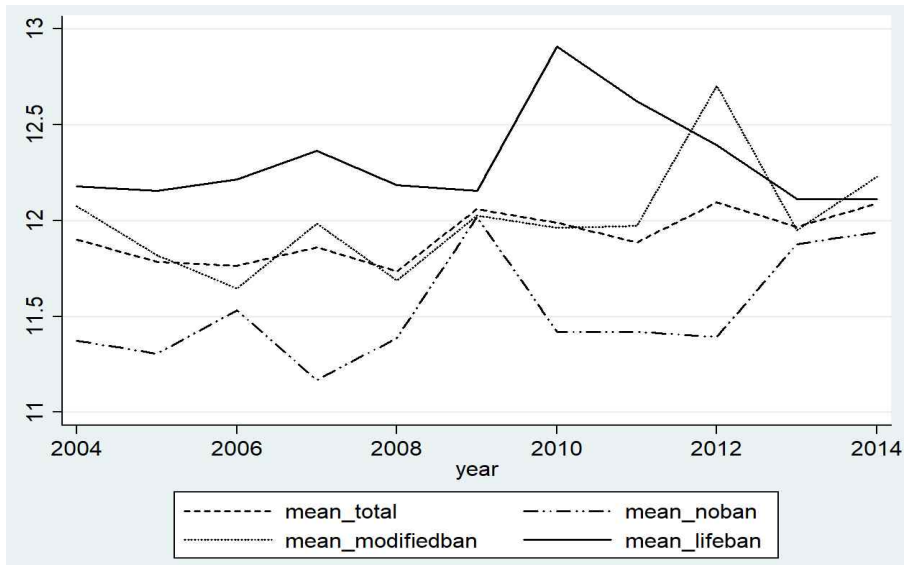
String Variables					
Variable	Obs.	Mean	Std. Dev.	Min.	Max.
logpop	550	8.216	1.018	6.207	10.563
povertyrate	550	13.051	3.439	5.400	25.754
unemployed_rate	550	6.325	2.206	2.500	14.900
gdpcapita	550	47.584	9.191	30.963	77.832
logcrime	550	11.726	1.106	9.246	14.164
Categorical Variable					
Frequency				Percent	
governor_d	Other party	294		53.45	
	Democratic	256		46.55	
drug	No ban	188		34.18	
	Modified ban	215		39.09	
	Life ban	147		26.73	

IV. Results

1. Overall Trends

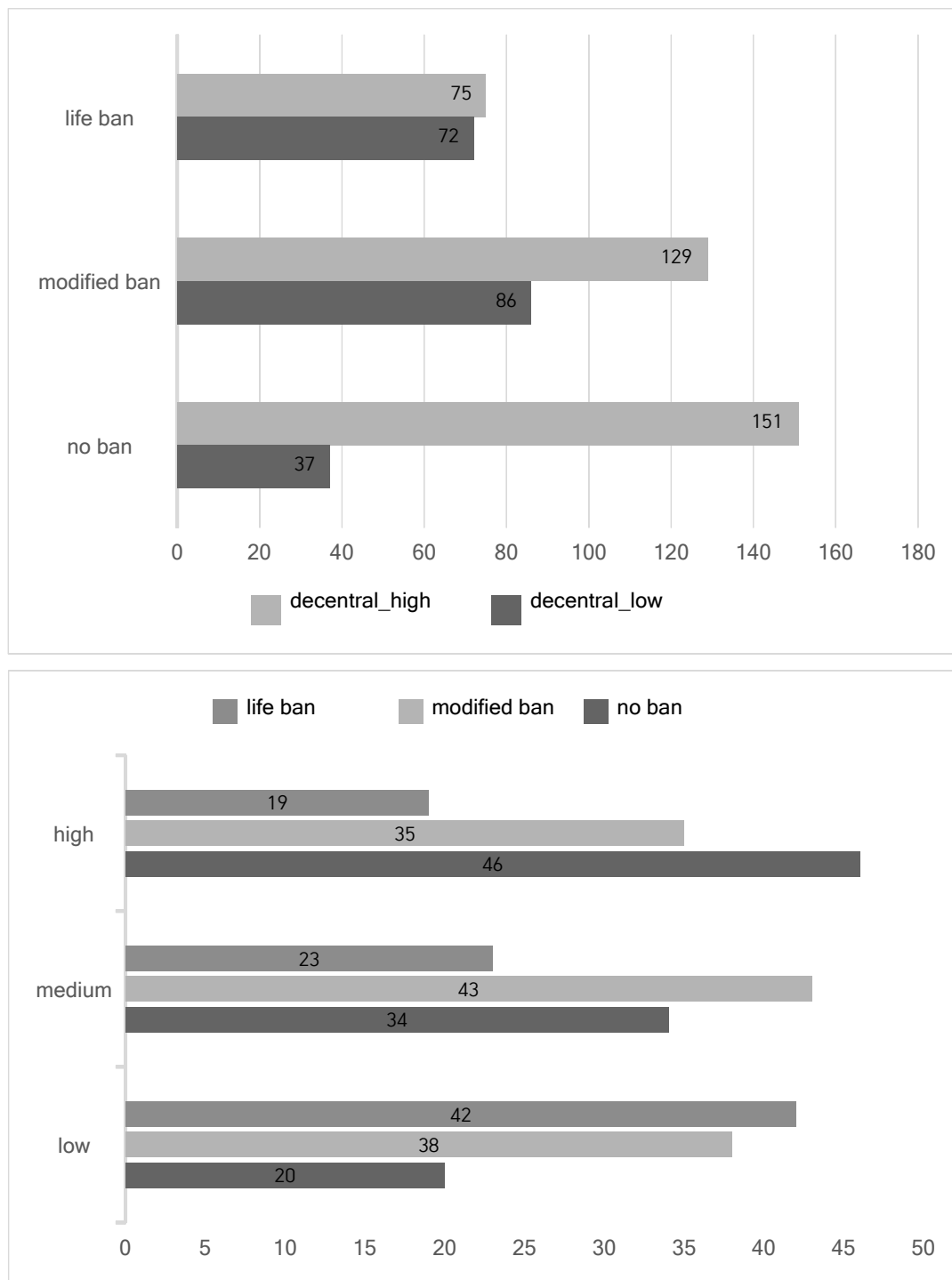
In this section, we analyze the overall trends of the dependent variable, the log of total amount of fraud determined by prosecution. Specifically, we draw two-way graphs to show the overall relationship between the year and the dependent variable. Also, to indirectly show the effect of moderating variables, we draw three different types of line graphs by drug felony policies. Figure 2 represents how the welfare fraud rate changes as time goes by. When we first look at the overall trend of mean of welfare fraud rate in total, we can see that the small dotted line shows the gradual increase. This trend coincides with results from previous studies. Welfare fraud incrementally increases, initiating the policy struggle to control fraudulent behavior. Especially with the start of the Clinton administration and New Public Management reform, government and policy reform were started based on these considerations. When scrutinizing graphs by drug felony policy separately, we find that the life-ban policy shows the highest level of welfare fraud rate in average. For example, in FY 2010, the fraud rate of the modified ban is even higher than that of the no-ban policy. In 2014, the fraud rate of the modified-ban policy scores the highest fraud rate among the three drug felony cases.

〈Figure 2〉 Trend of fraud by three types of drug felony policies.



Additionally, we analyze how the choice of drug felony policy changes as the level of decentralization varies. In the bar graphs in Figure 3, the x-axis represents the number of observations, and the y-axis represents the type of drug felony policy. Also, we categorized observations by decentralization level. As a result, the light-gray bar graph represents the number of observations of groups whose decentralization levels are above average, whereas the dark-gray bar graph represents the number of observations of groups with below-average decentralization levels. The groups with higher decentralization chose the no-ban policy the most. The next most chosen policy by decentralized group is the modified ban. Over 42% of the observations of high-level decentralization adopted no-ban policies. On the other hand, the most preferred drug felony policy in the below-average decentralization-level group is the modified-ban policy. The no-ban policy, which is the most chosen policy by the counterpart, is the least preferred drug felony policy in lowly decentralized groups. Only 37 out of 195 observations chose the no-ban policy contrary to the above-average decentralization group. In conclusion, the higher the decentralization, the more the state government is likely to adopt a no-ban or modified-ban policy, and the lower the decentralization, the more the state government is likely to adopt the life-ban policy. In sum, highly decentralized state governments tend to choose no-ban policies, whereas the less decentralized states decide to adopt life-ban policies, as the federal government strongly recommends. State governments with moderate decentralization levels seem to choose modified-ban policies as a compromise.

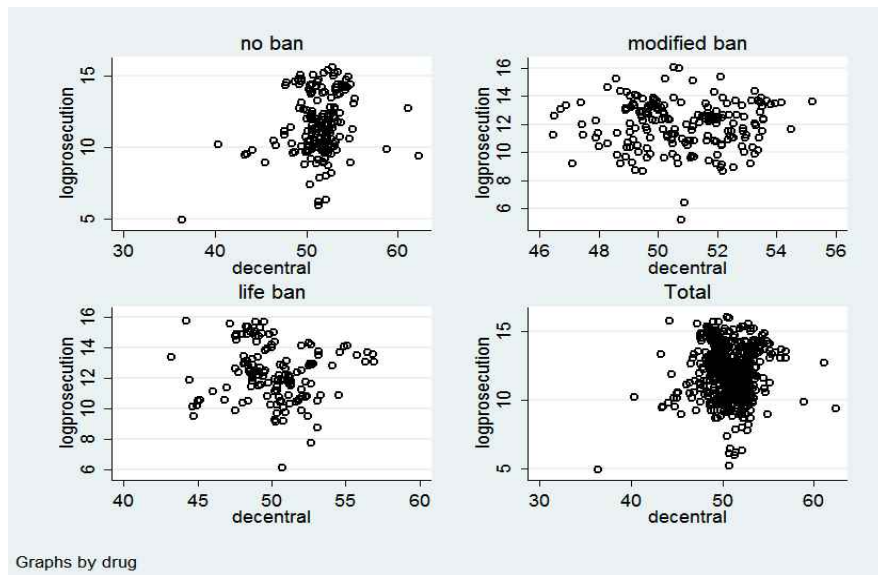
〈Figure 3〉 Adoption of drug felony policy and level of decentralization



2. Cross-Sectional Observations

We drew a dispersion graph to observe the relationship between decentralization and fraud as well as three different types of dispersion graphs by drug felony policy to study the moderating effect of each policy. Figure 4 shows several characteristics among fraud, decentralization, and drug felony policies. First, the relationship between decentralization and the log of fraud seems positive. In all four graphs, the level of log of fraud determined by government prosecution increases as the percent of financial decentralization increases. Second, when drawing the dispersion graph of decentralization and the log of fraud determined by the three types of drug felony policy, the modified-ban policy shows the highest level of scattering. Compared to the modified-ban policy case, the dots are relatively on one side when state governments choose no-ban or life-ban policies. This graph implicates that the positive relationship between decentralization and fraud might be strongest under the modified-ban policy.

〈Figure 4〉 Dispersion graph of decentralization and fraud by drug policy



3. Panel Fixed-Effect Analysis

〈Table 5〉 shows the empirical results from the panel fixed-effect analysis. The dependent variable of Model 1 is the log of welfare fraud determined from state-government prosecution. Also, we use the delta of dependent variable of the first model as the dependent variable for Model 2. In the first model, the independent variable, the decentralization variable, is strongly

significant, and its sign is positive. This result does not coincide with previous studies as it implies that the higher the level of decentralization, the higher the level of fraud. The moderating variable, the drug felony variable, is also strongly significant, and the interaction term between the independent and moderating variables is also strongly significant. According to the empirical results from Model 1, the moderating effect of the drug felony policy can be proved, but its sign is negative. We will explain how the drug felony policy moderates the relationship between dependent and independent variables in the latter part using a moderating-effect graph. Among the control variables, the log of total population and the state's GDP per capita are strongly significant. These results are similar to what was found in the previous literature. The more people there are, the greater the possibility of fraud because governments only have restricted budget and time for managing and driving welfare programs. Also, if the government is wealthy, it is willing to invest more budget to welfare policies to help no- or low-income people. The more people are involved and enrolled in the welfare program, the higher the possibility of fraud. Although the independent variable is not significant anymore in Model 2, the moderating variable and the interaction term are still strongly significant.

〈Table 5〉 Result of Panel Fixed-Effect Analysis

Log_prosecution	OLS		Panel FE			
	Dependent variable: log_fraud 〈Model 1〉		Dependent variable: log_fraud 〈Model 2〉		Dependent variable: of log_fraud 〈Model 3〉	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
decentral	0.292***	0.066	0.139***	0.051	0.172	0.124
drug	7.418***	1.623	4.040***	1.387	6.042*	3.488
decentral*drug	-0.144***	0.032	-0.076***	0.027	-0.127**	0.069
logpop	1.268***	0.326	3.860***	1.814	-2.576	4.598
povertyrate	0.056***	0.027	-0.002	0.034	-0.006	0.086
unemployed_rate	-0.054	0.051	0.025	0.062	-0.109	0.153
gdpcapita	-0.017**	0.009	0.091***	0.025	-0.026	0.060
governor_d	-0.034	0.135	-0.103	0.117	-0.230	0.278
logcrime	-0.110	0.316	0.597	0.797	2.301	1.860
_iyer_2005	-0.156	0.301	0.139*	0.195	0.000	(omitted)
_iyer_2006	-0.138	0.301	-0.316	0.205	0.102	0.501
_iyer_2007	-0.041	0.305	-0.352	0.217	0.874*	0.517
_iyer_2008	-0.130	0.301	-0.302	0.218	0.820	0.531
_iyer_2009	0.292	0.348	0.064	0.312	1.324*	0.758
_iyer_2010	0.182	0.374	-0.249	0.350	0.793	0.869
_iyer_2011	0.113	0.364	-0.322	0.348	1.036	0.858
_iyer_2012	0.073	0.333	-0.214	0.309	1.537***	0.737
_iyer_2013	-0.156	0.333	-0.343	0.311	1.531	0.757
_iyer_2014	-0.014	0.328	-0.233	0.317	1.017	0.741
_cons	-11.974	3.717	-38.825	19.202	-1.661	46.858
N of obs.	510		510		500	
R-squared	0.4104		0.4778		0.0525	

Then we divide our panel data in two based on decentralization level. In Table 6, Model 4 indicates the empirical result of observations whose decentralization level is below average, and the empirical result suggested in Model 5 is the drawn observations with higher decentralization level. As observed in Table 6, the moderating effect of the drug ban policy is significant in the data set with below-average decentralization observations. Unlike Model 4, when state governments are highly decentralized, the moderating effect is insignificant. This result can be explained in relation with what was found in Models 1, 2, and 3. The higher level of fiscal decentralization usually implies that the state government is financially rich. For this reason, if the modified ban is adopted in the highly decentralized state, the state government still has room to pay for identifying the eligibility of recipients as well as monitoring and managing chronic drug addicts.

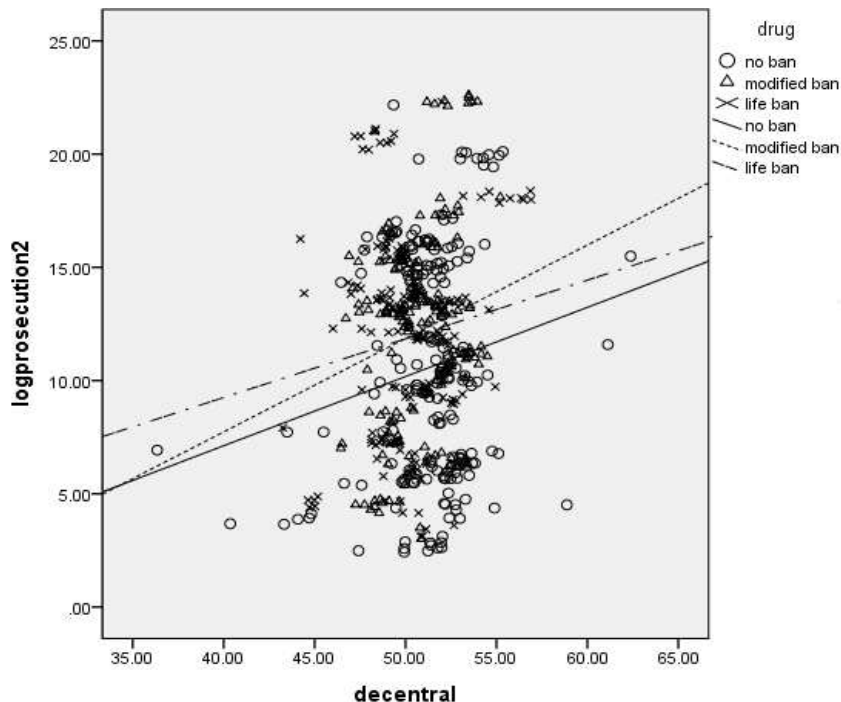
〈Table 6〉 Result of Panel Fixed-Effect Analysis by Level of Decentralization

Log_prosecution	Decentralization_high		Decentralization_low	
	Coef.	Std. Err.	Coef.	Std. Err.
decentral	0.017	0.106	0.385***	0.087
drug	5.853	3.596	6.840***	1.960
decentral*drug	-0.110	0.069	-0.146***	0.042
logpop	4.048**	2.172	8.800***	3.407
povertyrate	-0.004	0.044	0.036	0.046
unemployed_rate	0.047	0.080	-0.138	0.107
gdpcapita	0.105***	0.030	-0.021	0.054
governor_d	-0.122	0.150	-0.514***	0.169
logcrime	0.737	0.964	-0.199	1.419
_iyear_2005	-0.248	0.233	-0.371	0.285
_iyear_2006	-0.341	0.249	-0.563***	0.307
_iyear_2007	-0.297	0.269	-0.667***	0.319
_iyear_2008	-0.451*	0.268	-0.732***	0.336
_iyear_2009	-0.029	0.397	-0.136	0.488
_iyear_2010	-0.792	0.480	-0.035	0.534
_iyear_2011	-0.833**	0.437	-0.120	0.565
_iyear_2012	-0.390	0.372	-0.450	0.540
_iyear_2013	-0.556	0.370	-0.839	0.559
_iyear_2014	-0.212	0.378	-1.548***	0.600
_cons	-36.528	23.843	-75.067	32.046
N of obs.	339		171	
R-squared	0.4325		0.4274	

To understand the relationships among decentralization, SNAP fraud, and the drug felony

policy, we draw a moderating effect graph as shown in Figure 5. Similar to what we have found from the above dispersion graph and the empirical analysis, the relationship between dependent and independent variables is positive. Next, we classify and categorize the data by the three different types of drug felony policies and see how the different levels of drug felony policy moderate the relationship between decentralization and welfare fraud. Among the three moderating linear graphs, the small dotted modified-ban graph shows the steepest slope, which means it has the strongest moderating effect. In other words, the circumstance of higher decentralization levels equaling higher frauds is most serious when the state government adopts the modified ban as a drug felony policy, even more serious than the circumstance with no ban at all. The most slow-grade slope was shown in the life-ban policy graph. Specifically, decentralization stimulates fraud the least under the life-ban policy.

〈Figure 5〉 Moderating-effect graph of drug felony policies.



V. Conclusion

In this study, we analyze the effect of decentralization on SNAP fraud, especially based on the moderating effects of three types of drug felony policies in the United States. We especially

interpret the fraud criminal's behavior based on the principal-agent theory. According to our empirical analysis, decentralization turns out to be the critical factor that increases the possibility of fraud. As mentioned in previous studies such as Taylor (2000), decentralization can be a significant factor of high levels of fraudulent behavior as it can enable corrupt agents to abuse niche spaces. In other words, under a highly decentralized system, agents can monopolize and abuse information from ambiguous and complex policies and therefore worsen information asymmetric situations. We also find that a drug-ban policy variable moderates the relationship between decentralization and fraud. We determine that in state governments where ambiguous drug-regulation policies (modified bans) are adopted, this moderating effect was largest, even larger than in circumstances with no-ban or life-ban policies. Also, the moderating effect of the modified ban is even larger than that of the no-ban policy, which represents no penalty conviction at all.

The fact that the modified ban is the worst policy instrument used in the “war on drugs” implies several theoretical and practical implications. First, unlike majority of empirical studies suggested, higher decentralization levels might not be the relevant solution to regulate fraud. The embedded ambiguity can be the prey of the beasts. Second, when an ambiguous regulation is actually adopted, the effect of decentralization on fraud worsens because drug dealers and drug-addicted SNAP recipients abuse and misuse the niche space intentionally. For these reasons, the modified ban cannot be the relevant solution for completing the “war on drugs.”

As shown in the descriptive statistics section, the modified-ban policy is chosen as a compromise plan by medium-level decentralized states. Since the federal government bears all the SNAP benefits, the midlevel states can hardly ignore its instructions. However, this compromise has created a bigger problem than no penalty at all. First, as explained above, under ambiguous regulation, the agents abuse the information-asymmetry problem. Second, the state government cannot invest enough resources in tracing and monitoring fraudulent behaviors because they have to distinguish the eligibility of possible recipients under a complex, ambiguous policy. Another argument from critics of the modified- or life-ban policy is that most of the drug-related convicts are chronic addicts. The government regulation policy is simply the barrier that must be overcome. For this reason, it can be more effective if the state government invests more budget in managing, training, and rehabilitating drug addicts, not limiting the eligibility of one of the most essential basic welfare programs in the country.

In sum, to win the “war on drugs,” the U.S. federal government should let state governments choose relevant drug regulation policies on their own and stop connecting drug problems to welfare eligibility. Those two problems need their own solutions, and the state governments might have the relevant answer. Also, to resolve fraudulent behavior, both state and federal

governments should give transparent instructions to people. Ambiguous, complex policies only spark corruption and fraud.

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이사빈(李思賓): 2017년 서울대학교 행정대학원에서 박사 학위를 취득하였다. 박사 과정에서 전자 정부, 기술 정책 및 혁신 정책에 대한 연구를 진행해왔으며, 2017년에는 ‘음식물 쓰레기 종량제 RFID 도입 요인과 효과성 분석: 인센티브를 통한 정책 활성화의 관점에서’으로 행정학 박사학위를 받았다. 이후 박사 학위 논문을 발전시켜 “Exploring Effective Incentive Design to Reduce Food Waste: a natural experiment of policy change from community based charge to RFID based weight charge”을 출간하였다. 이사빈은 현재 연세대학교 행정학과 BK 사업단의 박사 후 연구원으로 일하고 있으며, 최근 연구 주제는 지방 자치, 정책 수단, 정책 실험에 대한 것들이다(sabinneelee@yonsei.ac.kr).

국문요약

모호할 것인가 존재하지 않을 것인가:
미국 SNAP 마약 범죄 규제 정책의 복지 부패 조절효과를 중심으로

이 사 빈

미국 연방 정부는 1996 년 Personal Responsibility and Work Opportunity Reconciliation Act 제정과 함께 “마약과의 전쟁”을 선포하면서, 복지 부패와 만성적 마약 범죄를 줄이기 위하여 세 가지 종류의 정책을 도입하였다. 첫 번째는 life ban policy로 마약 범죄에 한번이라도 연루되면 다시는 복지 정책에 등록할 수 없게 하는 정책이며, 두 번째는 아예 아무런 규제도 가하지 않는 no ban, 마지막 세 번째는 주 정부가 요구하는 일정 규정을 만족하면 복지 정책 수혜를 조건부로 가능하게 하는 modified ban 이다. 이러한 배경에서 우리는 탈 중앙화와 복지 부패의 관계와 관련하여 세 가지 유형의 정책의 완화 효과를 분석하였다. 본 연구의 분석 결과, 재정 분권화 수준이 높을수록 복지 부패 수준이 증가하였으며, 이러한 경향은 특히 주 정부가 모호한 modified ban을 채택하였을 때 가장 심각하였다. 오히려 규제 정책이 전혀 존재하지 않는 경우보다 심해짐을 알 수 있었다. 따라서 향후 마약과 연루된 복지 부패를 줄이고, 만성 약물 중독자의 관리를 위하여 모호한 규제 정책을 시도하는 것보다, 오히려 만성 약물 중독자에 대한 직접적 관리에 더 많은 자원을 투입해야 할 것으로 보인다.

주제어: 분권화, 복지 부패, 주인-대리인 이론