

## An analysis of the influence of post act factor structure on the intellectualization of criminal case adjudication

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**Abstract:** Judicial decision control is the most effective way to limit the application of heavy penalty in drug crimes, and the research on the judicial application mechanism of sentencing circumstances is the basis of judicial control. Through data and case analysis, based on the dichotomy of social harmfulness and personal danger, this paper attempts to build a model of heavy penalty discretion mechanism for drug-related crimes, which can effectively identify the current situation of the application of the plot of criminal justice for drug-related crimes. By using the method of random sample selection, 500 samples were selected from 8179 first instance felony judgments of drug cases, and 1409 pieces of data were obtained. Taking 25 sentencing scenarios extracted from the sample as independent variables, and "whether to sentence heavily" as dependent variables, the data were analyzed by binary logistic regression using statistical product and service solutions v.26. The results show that: in the non joint crime, social harmfulness dominates whether to impose heavy penalty.

### 1. Introduction

The related research is as follows: a typical mathematical model of drug-related crime is to establish the state model and dynamic evaluation model of drug-related crime. Through the combination of the two models, the overall analysis of the real drug-related crime system is obtained, and then the reasonable comprehensive governance strategy is obtained (Yu Zhigang, Yu Chong, 2013). [1] China has been recognized as a major progress in the world to implement the criminal policy of leniency, strict and economic, and to carry out the judicial path of less killing and careful killing of drug crimes. [2] However, so far, many studies have pointed out that drug crimes account for almost half of all cases of severe punishment (including death penalty). [3] In this regard, relevant studies have put forward four hypotheses, one of which is the heavy penalty oriented legal structure. The death penalty for drug transportation crime accounts for 33% to 67% of the total death penalty for drug crimes (Zhao Guoling et al., 2011). [4] In all cases sentenced to more than 10 years of imprisonment, the proportion of drug trafficking crime is as high as 97% (GAO Pengli). [5] This phenomenon is obviously contrary to the original intention of legislation, and does not conform to the law of the severity of drug crimes. The laws of all countries believe that manufacturing and trafficking in drugs are the source of drug-related crimes, and have the most serious harm, so we should focus on cracking down on them. Transportation of drugs is only attached to the follow-up behavior of manufacturing and trafficking drugs, there is no need to use too much judicial resources, resulting in the uneven allocation of judicial resources, which is not conducive to the effective punishment of drug crimes objectively; second, the function of litigation structure is insufficient. In the drug cases that may be sentenced to severe punishment, only about 5% of the defense opinions put forward by lawyers are accepted by the court, which leads to the high application rate of severe punishment (Moulin Xiong, Liu Siyu and Liang Bin, 2018). [6] Third, the emotional support of public opinion. China's public opinion support rate for severe punishment is generally high, about 10-30 percentage points higher than that of the United States and Japan, and 60 percentage points higher than that of Germany (S. Qi&D. Oberwittler, 2009). [7] The results of the investigation conducted by the German Mapu and Peking University show that 91.2% of the legal professional groups, such as lawyers, prosecutors and judges, support death penalty,

which is 34% higher than that of the general public; [8] A survey conducted by the German Institute of justice and Peking University shows that 91.2% of the respondents support death penalty, which is 34% higher than that of the general public; fourth, the negative effect of insufficient deterrence. We can use the econometric model to analyze the relationship between the recall of the right to review the death penalty of drug-related crimes and drug-related crimes. From the existing evidence, the decentralization of the right to review the death penalty of ordinary crimes or drug-related crimes, as well as the related death penalty expansion policy, cannot lead to a statistically significant decline in the crime rate of provinces, autonomous regions and municipalities directly under the central government. In short, the expansion of the death penalty policy has not received the effect of deterring crime. On the micro level, the crime rate data of each province, autonomous region and municipality are not affected by the expansion and restriction of the death penalty policy, that is, there is no statistically significant fluctuation. At the same time, after controlling the relevant variables, giving some provinces and autonomous regions the right to review the death penalty for drug-related crimes and making them have a more expanded death penalty policy does not make these provinces and autonomous regions have a different impact on the crime rate from other provinces, autonomous regions and municipalities directly under the central government. On the contrary, some factors other than the penalty policy, such as the proportion of population and income level, have a significant impact on the crime rate (Wu Yuhao, 2018). [9]

## **2. Research hypothesis and theoretical model**

From the itslaw.com Through descriptive statistical analysis of 500 first instance judgments of drug-related crimes, it is found that 84% of them mentioned social harmfulness (including "social harmfulness", "social harmfulness" and "harmfulness"), which is mainly related to the nature of behavior and the quantity of drugs, and a small number of them are judged according to the nature of drugs and the legal heavier circumstances; they belong to the category of personal danger The proportion of confession, confession, recidivism and recidivism was relatively high, accounting for 19.9%, 20.6%, 18.6% and 13.5% respectively; the remaining truthful confession, major meritorious service, general meritorious service and voluntary surrender were relatively small, only 7.3%, 5.8%, 1.4% and 2.1%, and a small number of samples had 2.7% trafficking, 2.7% support and 0.9% special intervention.

Through the descriptive statistical analysis of the preliminary results, we can not only get the exact role of the proportion in the heavy penalty discretion, but also need to carry out logistic regression analysis. After the establishment of the regression model of the heavy penalty discretion mechanism of drug crimes, the specific effects of different sentencing circumstances in the heavy penalty discretion mechanism are identified quantitatively through the model. In order to make the model more targeted, before the regression analysis, we can put forward the following two hypotheses according to the dichotomy: Hypothesis 1: social harmfulness decides whether to impose heavy penalty; hypothesis 2: personal danger decides whether to impose death sentence with a reprieve.

Taking the above 500 judgments as samples, taking "whether to sentence heavily" as the dependent variable and the extracted sentencing circumstances as the independent variable, the logistic regression analysis was conducted. If the regression results show that whether or not to impose a heavy penalty is only or mainly affected by the circumstances of social harm, then hypothesis one is true; if the regression results show that whether or not to impose a heavy penalty is only or mainly affected by the circumstances of personal danger, then hypothesis two is true. If both of the two hypotheses are true, it indicates that the heavy penalty control scheme of the theoretical circle is consistent with the judicial practice, and can be extended on the basis of the theory; if either of the two hypotheses is not true or both of them are not true, it indicates that there is a certain distance between the scheme proposed by the theoretical circle and the judicial practice, and the judicial control of heavy penalty of drug crimes should be reconsidered and designed on the basis of empirical research Plan.

In order to better meet the purpose of the study, the following two factors are specially dealt with: the relationship between the type of criminal act and the result of severe punishment. From the

normative level, the characteristics of selective charges determine that the four acts of "smuggling, trafficking, transportation and manufacturing" should have homogeneity in sentencing, but in practice, it is still doubtful whether the criminal act has no influence on the heavy penalty discretion. Therefore, the determination of the crime in the judgment is also regarded as the determination of the type of behavior, that is, smuggling, trafficking, transportation and manufacturing; the different behaviors of the same defendant are regarded as independent variables; and the determination of the number of different behaviors depends on the description in the judgment document: if there is a clear distinction in the judgment document, it should be determined separately.

The relationship between the number of drug crimes and the result of severe punishment. There is a complex relationship between the number of drug-related crimes and the types and regions. Therefore, after dualization, drug-related crimes can be divided into standard or substandard. In the later regression analysis, the independent variable is uniformly written as "quantity standard", which means that the quantity of drugs reaches the actual quantity standard of severe punishment in each province.

According to the above methods, 25 independent variables were extracted from 500 judgment documents: Smuggling (5.7%), manufacturing (4.8%), trafficking (76.1%), transportation (44.8%), quantity up to standard (82.2%), principal offender (26.9%), accomplice (24.0%), employment or instigation (3.2%); confession (19.9%), truthful confession (0.8%), good attitude of confession and repentance (20.6%), and refusal to confess (3.6%) 6%), criminal record (0.6%), recidivism (18.6%), recidivism (13.5%), first offense (3.7%), attempted crime (2.9%), drugs not flowing into the society (9.9%), general meritorious service (1.4%), major meritorious service (5.8%), drug trafficking (2.7%), voluntary surrender (2.1%), resisting arrest (0.2%), actively paying fines (2.1%), special inducement (0.9%). [10]

### 3. Empirical test of regression equation

By substituting 25 independent variables into logistic regression, only 8 independent variables with P value less than 0.05 were obtained: smuggling, trafficking, transportation, drug quantity, principal offender, accomplice, attempted crime and major meritorious service. The p value less than 0.05 indicates that these 8 independent variables have significant influence on the dependent variables. The logistic regression of these 8 independent variables is performed again to get Table 1.

Table 1 results of logistic regression analysis on whether or not to sentence heavily.

independent variable	P value	Exp (B)	Nonstandard regression coefficient	Standardized regression coefficient
smuggle	.000	3.075	1.123	.260
Peddling	.002	1.746	.557	.238
transport	.000	2.308	.836	.416
Quantity up to standard	.000	44.687	3.800	1.454
principal	.000	1.907	.646	.287
accessory	.000	.041	-3.192	-1.365
Attempt	.009	.336	-1.091	-.183
Make great contributions	.000	.302	-1.198	-.281
constant			-4.574	-1.283

Table 2 shows that the regression model established by using 8 independent variables correctly discriminates 714 and wrongly discriminates 181 samples from 895 samples without severe punishment, with a correct rate of 79.8%; correctly discriminates 355 and wrongly discriminates 159

samples from 514 samples with severe punishment, with a correct rate of 69.1%; and the overall correct rate is 75.9%, which belongs to a high level.

Based on the good goodness of fit and high prediction accuracy, a prediction model (hereinafter referred to as "model 1") can be established according to the nonstandard regression coefficients of each variable:

$$P=1/(1+e^{-1 \times (1.123X_1+0.557X_2+0.863X_3+3.800X_4+0.646X_5-3.192X_6-1.091X_7-1.198X_8-4.574)}) \quad (1)$$

Among them, P represents the probability of severe punishment or not; E is a natural constant, about 2.71828; X1 to X8 represent the eight independent variables of smuggling, trafficking, transportation, drug quantity, principal offender, accomplice, attempted crime and major meritorious service. When predicting whether or not to impose a heavy penalty, the facts of the case can be typed and substituted into the equation. If there is a certain circumstance, enter 1; if there is no circumstance, enter 0. When the output result is between 0 and 1, it is generally believed that if the result is greater than 0.5, it will be sentenced to heavy punishment; if the result is less than 0.5, it will not be sentenced to heavy punishment.

Table 2. Prediction accuracy of logistic regression model for severe penalty or not.

	The predicted result is no severe penalty	The predicted result is a heavy sentence	Accuracy rate (%)
Sample of no severe penalty	714	181	79.8
Sample of severe penalty	159	355	69.1
Overall percentage			75.9

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#### 4. Conclusions

The first hypothesis holds that social harmfulness decides whether to impose heavy penalty. From the first model, we can see that there is only one sentencing case of major meritorious service, and its effect is significantly lower than the number of standard. Although principal and accessory can express personal danger, they only exist in the special situation of joint crime. Therefore, in the non joint crime, social harmfulness is the result of severe punishment.

The second hypothesis is not tenable, personal danger cannot decide whether to sentence heavily. From the second model, we can see that whether or not to impose a heavy penalty is mainly affected by the number of drugs and the fact that drugs do not flow into the society, and these two circumstances belong to the category of social harmfulness. Even if the principal offender and recidivist belong to the personal danger, it is difficult to think that the personal danger can reach or even surpass the social harmfulness. To sum up, the concept of heavy penalty control scheme for drug-related crimes is basically reasonable in the current theoretical circle, but there is still insufficient agreement with judicial practice. Especially in the stage of whether or not to impose heavy penalty, it needs to be amended. The results of model one show that the circumstances that have a significant impact on whether or not to impose heavy punishment are: criminal act, drug quantity.

To sum up, the concept of heavy penalty control scheme for drug-related crimes is basically reasonable in the current theoretical circle, but there is still insufficient agreement with judicial practice. Especially in the stage of whether or not to impose heavy penalty, it needs to be amended. The results of model one show that the circumstances that have a significant impact on whether or not to impose heavy punishment are: criminal act, drug quantity.

## References

- [1] Yu Zhigang and Yu Chong: Analysis on the effectiveness of mathematical modeling in drug crime evaluation and governance, *Journal of China People's Public Security University (SOCIAL SCIENCE EDITION)*, No. 6, 2013, P. 15.
- [2] Margaret K. Lewis, Leniency and Severity in China's Death Penalty Debate, 24 *Columbia Journal of Asian Law* 303 (2011); Stephen Minas, 'Kill Fewer, Kill Carefully': An Analysis of the 2006 to 2007 Death Penalty Reforms in China, 27 *UCLA Pacific Basin Law Journal* 36 (2009); Susan Trevaskes, The Death Penalty in China Today: Kill Fewer, Kill Cautiously, 43 *Asian Survey* 393 (2008).
- [3] Moulin Xiong, The Death Penalty after the restoration of Centralized Review: An Empirical Study of Capital Sentencing, in Liang Bin & Lu Hong eds, *Death Penalty in China*, Columbia University Press, 2016, pp. 226 - 229.
- [4] Zhao Guoling and Liu canhua: Empirical Analysis on criminal policy of drug crime, *Journal of law*, 2011, No. 5, P. 51.
- [5] Gao Pengli: Reflection on the imbalance between crime and punishment of drug trafficking crime from the perspective of practice, *Journal of Guizhou Police Vocational College*, No. 1, 2019, P. 39.
- [6] Moulin Xiong, Liu Siyu & Liang Bin, Criminal Defense and Judicial Sentencing in China's Death Penalty Cases, 24 *Psychology, Crime and Law* 414 (2018).
- [7] S. Qi & D. Oberwittler, On the Road to the Rule of Law: Crime, Crime Control, and Public Opinion in China, 15 *European Journal on Criminal Policy and Research* 149 (2009).
- [8] He Zhijun: on the choice of crime and punishment and the guidance of public opinion in China's death penalty reform: an analysis based on the empirical survey data of public opinion on death penalty, *China Journal of criminal law*, No. 1, 2009, P. 112.
- [9] Wu Yuhao: Empirical Research on the deterrent power of death penalty -- Based on the analysis of the crime rate before and after the withdrawal of the right to review death penalty, legal and commercial research, No. 4, 2018, P. 106.
- [10] Shi Zezhong: on meritorious service in criminal law, published in *theory monthly*, No.2, 2004, p.105.
- [11] Xue Wei: data analysis based on SPSS (Fourth Edition), Beijing: China Renmin University Press, 2017, P. 254.