

Behavioral Economics Study on Criminal Offenses by Ethnic Minorities Floating Population in Cities--with Chengdu City as Instance

Yang Quan

Southwest Minzu University, Chengdu 610041, China

ABSTRACT. First, this paper random select the crime data of some comprehensive information application platform in Chengdu, Sichuan Province, and gives a statistical description of criminal phenomena with the constructed crime index, gender index, crime rate, and educational level. The results indicate that the crime rate of ethnic minorities in Chengdu is higher than Han, and the criminals of ethnic minorities are almost floating population. And then the crime phenomena are analyzed from multiple perspectives through typical models, including rational criminal decision-making model and criminal selection modal under risk environment and the analytical approaches in behavioral economics, such as social culture, incentive, criminal market, cost-benefit and correlation analysis. Finally, the author brings forth conclusions as follows: with low education level, unsteady income, insufficient property and forced by living, the urban minorities floating population have a strong demand for committing crimes. They believe that crimes are likely committed with impunity and thus deem the cost of crime offenses low. Also, unhealthy “sub-culture” environment and unfamiliar society they live in make the shame and social reputation, that most likely refrain from offenses, lose effectiveness. All those factors mentioned probably trigger criminal offenses and high crime rate in the city where they live. At the end of this paper, the correlation analysis between poverty, education level and crime rate is used to verify the conclusion of the study, and base on the conclusion the prevention and control recommendations on criminal offenses by the urban minorities floating population are listed.

KEYWORDS: Ethnic minority floating population in cities, Criminal offenses, Behavioral economics

1. Introduction

With the advance of the urbanization, a growing number of ethnic minorities engaged in farming in the countryside choose to work in cities in recent years. Some of them smoothly integrate themselves into city life, while the other, widely criticized, embark on the road of crime for various reasons. Moreover, there is an emerging body of phenomena that certain ethnic minorities are evilly labeled and “stigmatized” that contribute to the disunity of the people of all ethnic groups. For instance, some in cities tend to refer to Yi as “pipe-climbing burglary’s Que Bo”. Likewise, the Zang are regarded as robbers and car stealers, and Xinjiang people as purse-cutters. Actually, what is the criminal status of every ethnic group? What causes crime and how? How can city authorities effectively prevent and control crime?

2. Description of Offenses from Economic Methods

According to the Criminal Law of the People’s Republic of China, Crime is an act. In psychology, it is believed that the act of human beings is controlled and regulated by purposeful consciousness. Act has its purpose. In order to achieve one certain purpose, the individual will weigh the advantages and disadvantages upon considering whether and what means to fulfill the goal and purpose. Economic factors existing within the advantages and disadvantages cannot be neglected or, to some extent, can be the most significant element that needs be considered. As Marx and Engels point out that “offenses are usually caused by the economic factors that are not transferred by the wills of the legislator”, economic factor is an indispensable factor in determining whether and how an individual commits a crime. S. Levitt (2006) deems that adopting the economic methodologies to study offenses has at least the common characteristics, such as incentives emphasis and usage of cost-benefit methods. Therefore, psychological and economic methods such as individual needs, incentives, costs, and benefits can be used to analyze the crime phenomenon, which can better reveal the factors affecting crime and more effectively prevent and control it.

This study is based on the hypothesis that the provincial capital is more representative of the urban crime

phenomenon and longer time span is more reflective of the crime phenomenon by using the criminal data of Sichuan Chengdu, which randomly selected from all the administrative provinces in mainland China, from January 1, 2008 to January 1, 2018 at 18 June 1 PM 3. Because the statistics of 2010 is the most accurate statistics in recent years, the population data of that year is selected for statistical analysis.

2.1 Crime Rate

The urban crime rate of major ethnic in Sichuan Province in 2010 is shown in Fig 1. It is assumed in this study that all those subjects to coercive measures are eventually convicted of a crime by the court. Figure 1 presents the number of ethnic minorities criminal offenders in Chengdu from 2008 to 2018. It can be seen from Fig. 1a that Uygur has the highest crime rate of 1.41, while the crime rate of Han (Fig. 1b) is 0.014, which is much lower than ethnic minorities. However, criminal urban minorities are almost all floating people whose population are hardly to tell that's why the specific data is not shown in Fig. 1.

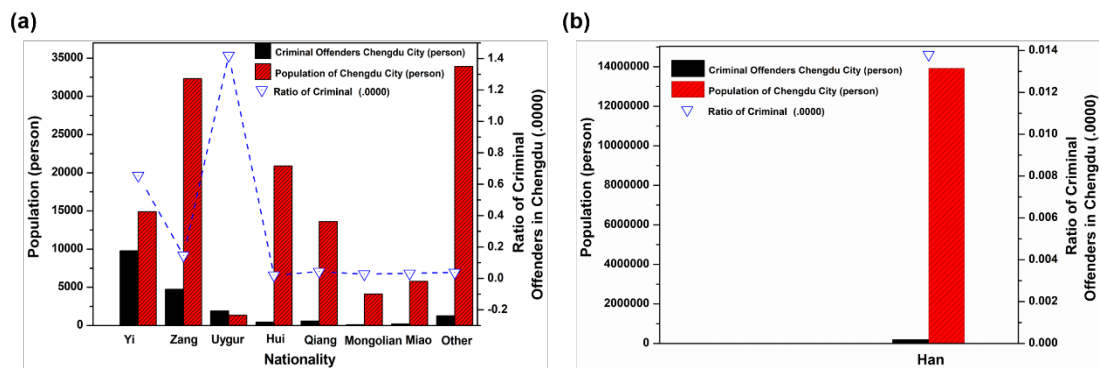


Fig.1 Number of Ethnic Minorities (a) and Han (B) Criminal Offenders in Chengdu from 2008 to 2018.

Source: 1. Data of 2010 Population Census in Sichuan Province. China Statistical Publishing House. 2012. 1-6. 2. Calculation from the data of some comprehensive information application platform in Chengdu, Sichuan Province.

2.2 Criminal Behavior Index

The possibility of the offenses committed by ethnic groups is more intuitively perceived by using criminal offenses index. From Table 1, it can be seen that the crime index of ethnic minorities is 1.47, which is higher than 0.97 of the Han. The data means that ethnic minorities are more likely to commit crimes. More specifically speaking, floating people in ethnic minorities, such as Yi, Zang, Uygur, Hui and Mongolian, harbor a stronger probability for committing crimes. While the other ethnic minorities are less likely to turning criminal offenders than Han.

Table 1 Criminal Offenses Index of Ethnic Minorities from 2008 to 2018

Nationality	Han	Ethnic minorities	Yi	Zang	Uygur	Hui	Qiang	Mongolian	Miao	Other
proportion	0.939	0.061	0.0329	0.0186	0	0.0013	0.0037	0.0005	0.002	0.0188
Offenders proportion	0.91	0.09	0.0462	0.0224	0.0091	0.0021	0.0028	0.0005	9E-04	0.0061
Criminal behavior index	0.97	1.47	1.4	1.2	374.79	1.6	0.76	1.18	0.42	0.32

Source: 1. Data of 2010 Population Census in Sichuan Province. China Statistical Publishing House. 2012. 1-6. 2. Calculation from the data of some comprehensive information application platform in Chengdu, Sichuan Province.

2.3 Gender Ratio Index

The gender ratio index of ethnic minorities criminal offenders in cities is shown in Figure 2. As can be seen from Fig 2, the male criminal offenses index is 9.69, regardless of nationalities, whose standard value should be equal to the ratio of male to female. However, this study finds that vast majority of perpetrators of criminal offenses are male, which is the same in all ethnic groups. Among them, the male crime rate of Zang and Yi is especially high, while the female crime rate of Uygur exceeds that of other nationalities.

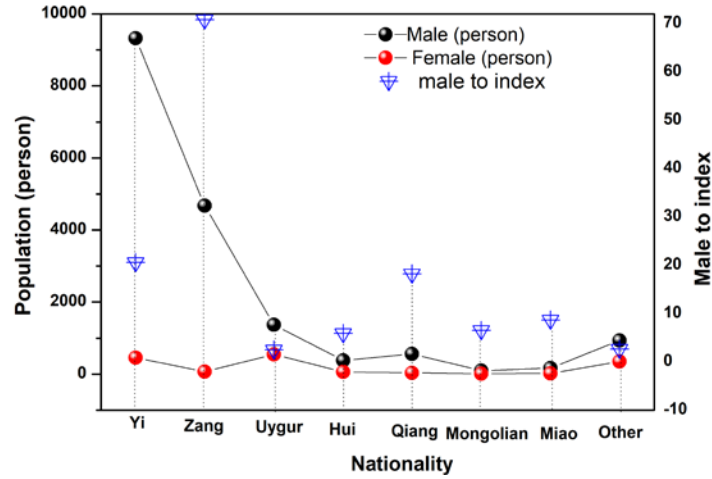
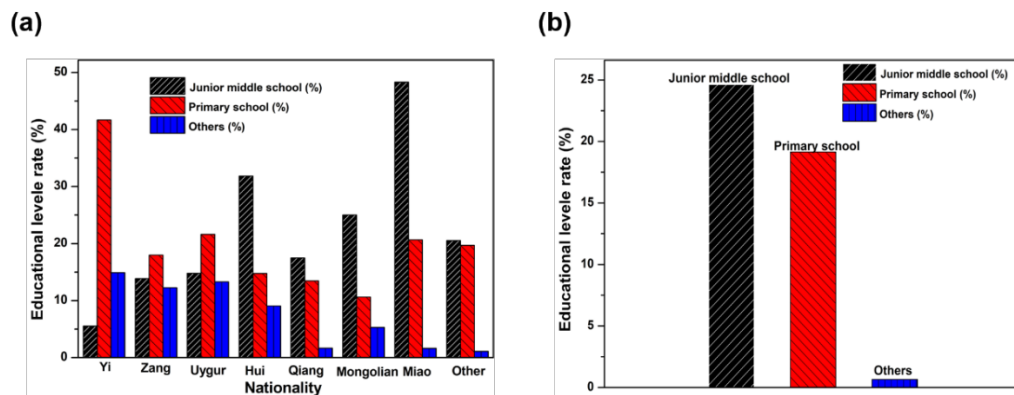


Fig.2 Criminal Offenses Index of Male Ethnic Minorities from 2008-2018

Source: 1. Data of 2010 Population Census in Sichuan Province. China Statistical Publishing House. 2012. 1-6. 2. Calculation from the data of some comprehensive information application platform in Chengdu, Sichuan Province.

2.4 Educational Level

It is listed in Figure 3a and b that 24.63% of the perpetrators of criminal acts have received junior middle school education. The offenders with primary school education are 19.15% of the total and the uneducated accounts for 0.65%. The number of people who have received junior middle school, primary school and other education accounts for 44.43% of the total number of perpetrators of crimes. Others in the Fig 3 refers to those lack of formal national education. In other words, the crime rate will be vanished if all ethnic minorities are educated above junior high school.



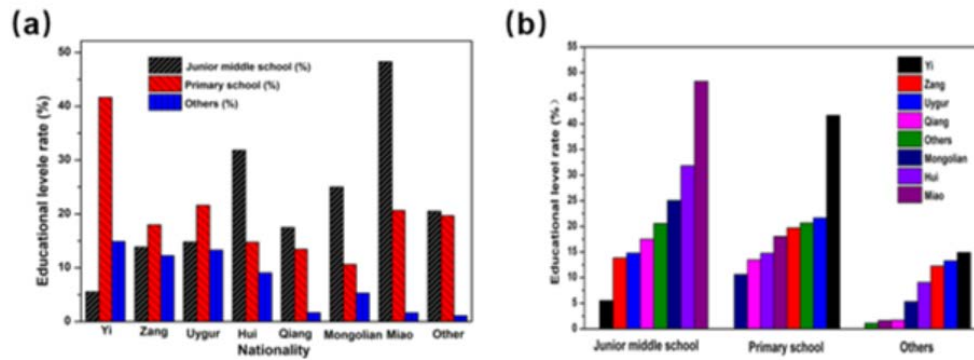


Fig.3 (a) Educational Level of Ethnic Minorities Criminal Offenders from 2008-2018; (B) Educational Level of All Criminal Offenders.

Source: 1. Data of 2010 Population Census in Sichuan Province. China Statistical Publishing House. 2012. 1-6. 2. Calculation from the data of some comprehensive information application platform in Chengdu, Sichuan Province.

2.5 Categories of Criminal Offenses

Based on the above results of crime rate and criminal behavior index, in order to be able to give further analysis, it's highly important to know the main categories of ethnic minorities crimes. Figure 4 exhibits the most five main categories among ethnic minorities crimes, which are the infringement of property, the obstruction of social management order, the infringement of citizens' personal rights and violation of democratic rights, destruction of the order of socialist market economy and endangerment of public safety. Obviously, infringement property is the most common crime committed by the ethnic minorities. The proportion of infringement property of Yi, Zang, and Uyghur is 95.11%, 83.2% and 97.16% respectively, which is much higher than other minorities.

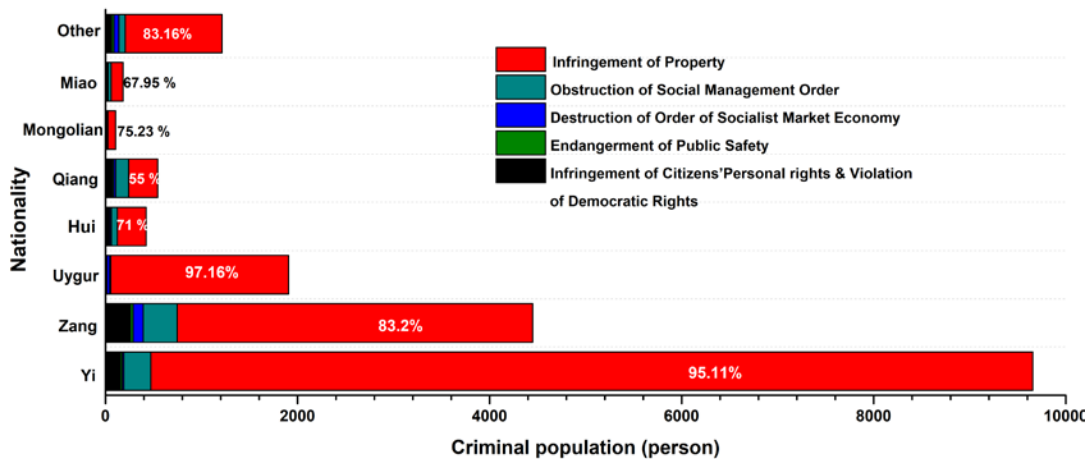


Fig.4 Main Categories of Ethnic Minorities Criminal Offenses from 2008 to 2018

Source: 1. Data of 2010 Population Census in Sichuan Province. China Statistical Publishing House. 2012. 1-6. 2. Calculation from the data of some comprehensive information application platform in Chengdu, Sichuan Province.

3. Summary of Criminal Offenses

From the illustrated demonstration of the criminal offenses by using economic methods, the characteristics of the crimes are concluded into several points as follows:

The minority criminals in Chengdu are almost all floating population, which is different from the Han criminals.

In accordance with crime rate and criminal offenses index showed above, ethnic minorities indeed harbor a higher tendency of committing crimes than Han, which corroborates the data that the crime rate of ethnic minorities is higher compared to that of Han.

In terms of gender, males in all minorities are more likely to commit offenses than females, while female in Uygurs and other ethnic minorities, compared to the another nationalities, possess a higher probability to offend.

To the perspective of level of education, the level of education received by the ethnic minorities offenders is lower than that of the Han. Moreover, nearly half of total criminals' educational level is less than the national nine-year compulsory education standard.

From the perspective of crime types, there is no difference among all nations, and most of them commit crimes against property and social management order.

4. Behavioral Economics Perspective Analysis of Crime

According to Becker's (1968) rational crime decision-making model, criminal offenses will occur only when the proceeds of crime overstep a critical point and exceed the cost. Lattimore and Witte. etal absorbed more findings and achievements of psychological researches and further considered the criminal acts individuals choose in uncertain risk environment. Then they establish the risk-taking behavior decision-making mode. They believe that offenses perpetrators will firstly ponder the probability, profit and loss of being caught and punished, the sense of shame and their social reputations, etc. and then determine whether and how to commit the crime. Obviously, the situation of criminal decision-making in real life can be better illustrated this way. When it comes to the rational crime decision-making model or risk-taking behavior decision-making model, the subject, under uncertain circumstances, considers what the offenses cost and then chooses the appropriate way to commit the crime. However, the social being is the subject of crimes. The essences and reasons of the offenses can be better elaborated by taking the subject's macro-cultural background and the specific situation of his or her behavior under considerations therefore.

4.1 Psychological Analysis of Criminal Offenses

In psychology, it is convinced that behaviors are carried out under the stimulation, guidance and maintenance of a certain need (goal or objective). The process of psychological behavior inherent in behavior is also regarded as motivation. From the perspective of the relationship between behavior and motivation, motivation has the functions of activating, pointing, maintaining and adjusting behavior. That is to say, the ethnic minorities criminal offenses are also the result of stimulation. Without sufficient food and clothing, the needs of food and clothing will occur to the ethnic minorities. Then criminal offenses will be committed on account of the needs of food and clothing under a state of abject poverty and the edge of subsistence. With the residence in the strange city and society and no or few acquaintances around, the offenders' guilty and social reputation that are the most likely impediment to crimes lose the effectiveness when they are caught and punished. In other words, to their foothold, the positive incentive for the demand for property exist. However, no negative incentive to prevent criminal crimes is available. It is inevitable for them to commit criminal offense therefore.

4.2 Cultural Analysis of Criminal Offenses

The sociologist Mr. Yan Jingyao points out that crime is nothing else but a side of culture and changes along with cultural changes. The ethnic minorities leave their familiar relatives and friends to come to unfamiliar cities. Most of them are undereducated and possess no skills that can make themselves adapted and fully established in the industrial and commercial cities. They gathered together by geography, kinship and blood, forming groups of large and small owing to the pressure of survival and the sense of belonging to culture. Because of differences in language, writing, living habits, values, and world-views, they see people as strangers except those who are closely related in terms of geography, kinship, and blood. With the passage of time, a consensus and even a kind of recognized "sub-culture" that include the criminal experiences of the offenders will come into being in each group. They share successful experiences and learn lessons from failures in order to maximize the benefits,

reduce the probability of being caught and minimize the legal punishment after being arrested in the next criminal offense. Most of the ethnic minorities flooding into the city live in such an environment filled with sub-culture. It is inevitable that ethnic minorities in this cultural context will commit criminal offenses.

4.3 Cost-Benefit Analysis of Criminal Offenses

Benefits are the factors relative to costs. For the ethnic minorities without skills and wealth, there is no cost without the skills that can earn the necessary income for survival. According to Becker's rational crime decision-making model and risk-taking behavior decision-making model, it is believed that the probability of being punished is seriously underestimated or even overlooked by the ethnic minorities in cities due to the influences by the social environment and educational level. In addition, even if the criminal offenders are arrested and sentenced, Chinese courts in normal conditions adopt a tolerant attitude toward those who cannot afford economic punishment. As a result, the economic punishment is hardly sentenced. In this way, when criminal offenses are about to be carried out, under the condition of no cost and no possibility of being caught and punished, the expected utility is obviously high.

According to the improved version of the rational crime decision-making model, the cost of crimes can be determined jointly by the wealth or income (W) available to the subject of the criminal offense and the time (T) at its disposal. On the basis of the analysis of the ethnic minorities' characteristics, it can be obviously seen that W infinitely tends to zero but T infinitely approaches its maximum value. The criminal offenses are inevitable thus from the perspective of cost-benefit analysis.

4.4 Analysis of Criminal Market

The criminal market cannot be regarded as a place of trading and transaction in a strict sense. The crimes are completed the instant the criminal offenders control the facts of the "target". The supply side in the criminal market is characterized by the factual possession of the "subject", the involuntary nature of crimes, and the hysteresis of the perception of criminal offenses. Criminal offenses are accompanied by the physical and psychological harm of the supplier, which brings huge utility losses to the attacking party and belongs to the weak party in the criminal market. Nevertheless, the demand side which is the dominant and facilitator of the criminal market harbor a violent appetite for "target" and criminal offenses as well as diverse demand for "target". The utility of offenses is far less than the utility loss of the supplier. Therefore, the criminal market is referred to as a distorted market with a huge loss of utility. For this reason, the government departments crack down on criminals and prohibit offenses.

5. Correlation Analysis of Crime Rate, Educational Level of Ethnic Minorities and Ethnic Autonomous Areas' Economy

From the above analysis, it can be seen that ethnic minority criminal offenses are related to their educational level and economic status. With the available data, this study selects the per capita regional production value of Sichuan prefectural autonomous region as an alternative variable to their economic situation and choose the per capita regional production value of Chengdu as an alternative variable to the Han. The correlation analysis of the relationship among the crime rate, the educational level and economic status can be further done.

Table 2 Relationship among the Crime Rate, the Educational Level and Economic Status of Ethnic Minorities

Nationality	Crime Rate (.0000)	Per capita GRP (RMB)	Junior middle school (%)	Primary School (%)	Others (%)
Han	0.0138	86911	25.98	18.06	2.88
Qiang	0.0438	31487	17.48	13.45	1.68
Zang	0.1501	22097	13.85	18	12.26
Yi	0.6557	30669	5.52	41.66	14.9
Correlation Coefficient	1.00	-0.41	-0.89	0.98	0.82

Source: 1. Data of 2010 Population Census in Sichuan Province. China Statistical Publishing House. 2012. 1-6. 2. Calculation from the data of some comprehensive information application platform in Chengdu, Sichuan Province.

It can be seen from Table 2 that the correlation coefficient between the crime rate and the economic status of Sichuan minority crimes and the junior high school education is negative, while the correlation coefficient with the education level for primary school and others is positive. It is shown that the crime rate of ethnic minorities is negatively correlated with economic status and junior high school education, and the negative correlation coefficient of junior high school education is closer from -1 to -0.89, and the negative correlation coefficient with economic status is closer to -0.5. It can be found that the more ethnic minorities receive junior high school education, the less crime rate changes there is. The better the economic situation is, the less the crime rate of ethnic minorities is seen in the autonomous region. The correlation coefficient between ethnic minorities and the level of primary education and other education levels is close to 1, indicating that ethnic minorities with these two levels of education are more likely to commit crimes.

Table 3 Relationship between the Educational Level and Economic Status of Ethnic Minorities

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Zang	22097	13.85	18	12.26
Yi	30669	5.52	41.66	14.9
Correlation Coefficient	1.00	0.79	-0.20	-0.55

Source: 1. Data of 2010 Population Census in Sichuan Province. China Statistical Publishing House. 2012. 1-6. 2. Calculation from the data of some comprehensive information application platform in Chengdu, Sichuan Province.

Analysis of the relationship between the economic status of ethnic minorities and the level of education shows that the correlation between economic status and junior high school education is positively correlated with a coefficient of 0.79, and is negatively correlated with the level of education for primary schools and others, which reviews that for ethnic minorities, a lower level of education and economic conditions creates a vicious circle.

6. Conclusion

The following conclusions can be drawn through the analysis from multiple perspective and description of ethnic minorities' offenses from economic methods.

First, for ethnic minorities, a lower level of education leads to a poorer economic situation; a poorer economic situation leads to lower crime costs, which may lead to higher crime rates.

Second, the economic situation of ethnic minorities is poor and their education level is low. The total amount of available wealth or income tends to be zero while the amount of time at their disposal approaches its maximum. In addition, the probability of cognitive punishment is relatively low or can even be not considered. The implementation of economic punishment is accomplished in a half-baked way and thus the crime cost is deemed low, which offer them idea that committing crimes is cost-effective.

Third, there is no public opinion supervision from the acquaintance society in the unfamiliar city, which leads to the negative incentive of crime prevention -- shame cannot play a role, and it is in the pathological "subculture" environment, which may also lead to the urban minority floating population to choose crime.

7. Public Policy Recommendations

In order to reduce ethnic minorities criminal offenses, policies and recommendations can be proceeded from the aspects as follows:

The coverage of the social security system for ethnic minorities should be expanded to meet their basic living needs. Criminal offenses can be diminished by the demand reduction and slump of the demand of the "target" of crimes.

Nine-year compulsory education should be thoroughly implemented in the areas and regions where ethnic minorities gather and reside. New urban and rural service institutions should be established in each city. Moreover, vocational training courses that are suited to the demand in the urban market in the new era. Vocational skills training for ethnic minorities should be also conducted. Through the approached mentioned

above, stable income and more wealth will be gathered into the ethnic minorities, which can increase the cost of offenses and being caught and diminish crimes to some extent.

Various cultural activities in which the experiences of people with breadth of vision of their integration into the city life can be shared and in which professional personnel should be hired for preaching of legal knowledge and criminal cases to advance the ethnic minorities' understanding and awareness of criminal punishment and laws should be regularly organized in ethnic minorities residential areas. This way a positive and healthy cultural atmosphere can be built. Encouragement from both positive and negative aspects should be made to lower the occurrence of criminal offenses.

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