

MUNICIPAL CRIME INCIDENCE STATUS AND ASSESSMENT IN SUPPORT TO SUSTAINABLE DEVELOPMENT GOALS 2030

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ABSTRACT - This study aimed primarily to analyse the crime incidents reported in the Binmaley Police Station within a period of two years (2017-2018) and to profile the frequency of crimes for future intervention programs and predictive policing in support to the sustainable development goals 2030. Secondary data analysis was used in reference to reports filed in the station. The data collected were analysed through strategic crime analysis, frequency count, rank, percentage, crime volume, crime rate, crime solution efficiency and crime clearance efficiency. Findings of the study revealed that the crime volume of Binmaley decreased from 2017- 2018. The decline of non-index crimes is lower compared to the decrease of index crimes. November has the highest crime volume both on 2017 and 2018, physical injury has the highest number of index crime incident while violation of R.A. 9165 or Comprehensive Dangerous Drugs Act of 2002 has the highest increased on non-index crimes. The reduction of crime in Binmaley is supported by the national data on the total crime reduction in the Philippines.

KEYWORDS: municipal crime incidence status and assessment in support to sustainable development goals 2030

I. INTRODUCTION

Crime has long been known as a social problem that continuously affect both the quality of life and economic development of a society. [1] It has been a focus of various studies written locally and internationally as a means of addressing the different problems arising from the occurrence of crime.

Crime, according to Edwin Sutherland, is regarded as a social phenomenon. He suggested that criminal behavior is often the result of socialized learning. [2] Likewise, on Durkheim's Functional Theory of Crime, he stated that crime or deviance is not a pathological aberration in the character structure of particular individuals, but rather, it is 'an integral part of all healthy societies.' Because crime is found in all healthy societies it must be performing some necessary, positive function or else it would disappear as society's progress and become more complex and civilized. [3]

Crime has been a part of the society's rearing and considered to be normal on its occurrence. Thus, it is subjected to continuous observation, evaluation and analysis through different methods. Crime reporting statistics have long been used by law enforcement all over the world to show the public the status of crime in a certain area and a period of time. Crime statistics provides data for use in budget formulation, planning, resource allocation, assessment of police operations, etc., to help address the crime problem in various levels. [4] The collection of crime statistics is expensive and involves a long period of time. Money and time spent in the collection effort will be wasted if not used properly. [5]

The United Nations first considered in 1853 the collection of statistics. Since then, UN-CTS or the United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems aimed to collect data on the incidence reported crime and the operations of criminal justice systems with a view of improving the analysis and dissemination of that information globally. [6]

In the Philippines, LOI 02/09 or known as Unit Crime Periodic Report (UCPER) prescribes a uniform procedure for the Philippine National Police in reporting and collecting crime data including cases reported to other law enforcement agencies involved in the Criminal Justice System. The purpose of the collected data shall be the working basis for policies and programs on various anti-criminality measures. [7] It is essential that decision making in law enforcement and creation of policies must be backed up by figures and collected data to practically address the problem of the community.

Crime volume and crime rate are two quantitative tools in showing the statistical data related to crime incidents. Crime volume is the number of crime incidents committed in a given period of time which includes the index and non-index crimes. Index crimes are serious in nature and occur with sufficient frequency and regularity such that they can serve as an index to the crime situation (murder, homicide, physical injuries, carnapping, cattle rustling, rape, robbery and theft). Non-index crimes on the other hand are less serious crime offenses and violations of special laws such Comprehensive Dangerous Drugs Act of 2002, illegal logging and other ordinances. Meanwhile, crime rate is the number of crime incidents in a given period of time for every 100,000 inhabitants of an area. [7]

Understanding and analysing how these quantitative tools work gives an overall view to the standing of an area over a period of time whether the efforts of the law enforcement agencies in executing the laws take effect thru crime reduction since it is one of the primary goals of collecting crime data.

The Philippine figures on crime volume continues to decrease yearly based on the annual reports of the Philippine National Police. PNP records show 473,068 crimes reported on 2018 compared to the 520, 641 crimes reported on 2017, a 9.13% decreased on total crime volume of the country.

The index crimes of 2018 decreased by 28.14% from 107,254 cases in 2017 to 77,

068 of 2018. Nationwide, crimes against properties deteriorated. Robbery cases decreased the highest with 32.38% drop from 16, 076 to 10,870. Likewise, theft incidents also decreased by 31.49% from 34,435 to 23, 590. On crime against persons, incidents of physical injury also poses a big decreased from 30,691 to 21, 498, a 29.95% decreased. Murder cases dropped by 22.20%, from 8,826 to 6,886 and homicide cases dropped by 17.01% decreased from 2,592 to 2,151. The PNP attributed the decrease on crime volume due to the efforts of the administration of the President Rodrigo Duterte on crime reduction. The decrease in the crime volume nationwide was an aggregate effort of all the regions in the country. [8]

In long term panel view, during 2015 there were 675,816 crime incidents reported nationwide. If compared to the 2018 crime volume of 473,068, the crime in the country actually decreased by 30% in 4 years. [8] This strongly implies that crime reduction efforts of the agency is effective.

In spite of the reduction of crimes in the country, crime still is undeniably present. The number of non-index crimes in the country since it is the combination of violation of special laws and less serious crimes such as violation of R.A. 9165 or the Comprehensive Dangerous Drugs Act of 2002 has a lower rate of reduction compared to index crimes. Due to the “War against Drugs” campaign of the government, which focuses on combating any illegal drug activities, reported incidents of violation of

R.A. 9165 contributes the highest on the total number of index crimes in the country.

Locally, the same trend on crime incidents happened in the municipality of Binmaley, a 1st class municipality with a population of 98,430 (2018) [9] and an annual regular income of Php 160,401,850.71 (2016) [10]. Crime volume

and crime rate decreased on 2018 compared to 2017. In the same manner, the number of index crimes reported both on 2017 and 2018 is lower than non-index crimes but the reduction rate of non-index crime is lower compared to index crimes. It is challenging for the PNP Binmaley to keep their area of responsibility safe for investors and its inhabitants from any kind of malefaction.

With this background at hand, the researcher ventured to analyse the reported crime incidents in Binmaley and profiled the frequency of crimes in the area on a two year period as a basis for future intervention programs and researches.

II. OBJECTIVES OF THE STUDY

The general objectives of the study is to analyse the crime incidents reported in the Binmaley Police Station within a period of two years (2017-2018) and to profile the frequency of crimes for future intervention programs and predictive policing.

Specifically, the study aims to

Present and analyse the reported incidents in the municipality in terms of index crimes and non- index crimes.

- annual crime volume
- monthly crime distribution
- Profile the reported crime incidents categorized in index and non-index crimes.
- Evaluate the crime clearance and solution efficiency of the station.

III. METHODS

RESEARCH DESIGN

This study utilized the secondary analysis method of research. Secondary analysis method involves analysing data collected by someone else [11]. All other analyses of data collected for specific research studies or analyses of data collected for other purposes (including registry data) are considered ‘secondary analysis of existing data’, whether or not the persons conducting the analyses participated in the collection of the data [12]. This method is used mostly on social science researches.

DATA SOURCE

The data used in this research are the crime incidents reported in the Philippine National Police Binmaley Police Station through Unit Crime Periodic Reporting during 2017-2018 excluding vehicular traffic incidents.

DATA ANALYSIS

The main statistical tool used in the study were strategic crime analysis, frequency count, rank, percentage, crime volume, crime rate, crime solution efficiency and crime clearance efficiency.

Strategic crime analysis was performed in the analysis of the data collected. Strategic crime analysis provide data relative to long-term increases or decreases in crime (crime trend data) [13]. This was used to compare the crime trend in 2017-2018.

Crime % Increase/Decrease

$$= \frac{\text{Year 1} - \text{Year 2}}{\text{Year 1}} \times 100$$

* positive-increase negative-decrease

To identify the frequency of index and non-index crimes frequency count, rank, and percentage was employed.

Crime volume was also used. To determine the crime volume, index crimes and non-index crimes were added together.

CV = Index Crimes + Non Index Crimes Crime rate was also used to identify

the number of crime incidents in a given period of time for every 100,000 inhabitants of an area.

$$CR = \frac{\text{Crime Volume}}{\text{Population}}$$

RESULTS AND DISCUSSIONS

Table 1 presents the crime volume of Binmaley during 2017-2018.

Table 1. Crime Volume of Municipality of Binmaley (2017-2018)

Population/100,000

Crime solution efficiency was used Year Index Crimes

Non- Index

Crime Volum

Crime Reduction 9.43% 0.45% 1.43%

out of the total number of crime incidents handled by law enforcement for a given period of time.

2018	48	436	484
2017	53	438	491
	-5	-2	-7

Crime Volume

A crime can be considered solved when the following elements occurred: the offender has been identified; there is a sufficient evidence to charge him; the offender has been taken into custody; and the offender has been charged before the prosecutor’s office or court. A case shall be considered solved when some elements beyond police control prevent the arrest of the offender, such as when the victim refuses to prosecute after the offender is identified or the offender dies or absconds. .

Lastly, crime clearance efficiency was used to determine the percentage of cleared cases out of the total number of incidents handled by the PNP for a given period of time.

$$CCE = \frac{CC}{CV} \times 100\% CV$$

A crime is considered cleared when at least one of the offenders has been identified; there is sufficient evidence to charge him and he has been charged before the prosecutor’s office or any other court. Solved cases are included in this category

Statistical Package for Social Sciences (SPSS) software was used in the computation.

(%)

Table 1 shows that there is a 1.43% or 7 crimes decreased on 2018 compared to the crime volume of 2017; 9.43% or 5 crime decreased on index crimes; and 0.45% or 2 crimes decreased on non-index crimes. It can be deduced that the aggregate crime volume decreased on 2018 was relatively affected from the low decrease of the non-index crimes of the municipality. Index crimes despite of its seriousness, garnered a higher number of decrease compared to the less serious crime and violation of special laws, the non-index crimes.

This finding is supported by the Philippine National Police annual reports of 2017 and 2018 where the crime volume in the Philippines decreased by 9.13%. Thus, this also means that the municipality contributed in the nationwide decreased in crime volume [8]. Though, the volume of non-index crimes reported on 2017-2018 was greatly affected by violation of R.A. 9165 in compliance to the “War against Drugs” of the current administration.

Table 2 presents the distribution of index crimes in 2017 and 2018 in Binmaley. It shows that the months of January projected the highest reduction on index crimes with 66.7% decrease, followed by

August with 55.6% downsize, December with 40% reduction, March with 33.3% drop, September with 28.6% and July with 25.0% decreased.

Since index crimes involved much serious offenses, most of the months that have colder weather showed significant reduction. Physical injuries and other crimes that involves violence are index crimes that usually occurs greatly on hot weather since crime is affected by “seasonal crime fluctuation”. According to Quetelet, a Belgian statistician, the seasons in their course, exercised a very marked influence: thus, during summer, the greatest number of crimes against persons are committed and the fewest against property; the contrary takes place during winter/cold weather.

Table 2. Distribution of Index Crimes in

Month	<i>Binmaley</i>				SCA
	<i>CF</i>	<i>%</i>	<i>CF</i>	<i>%</i>	
<i>2017</i>					<i>2018</i>
January	6	11.3	2	4.1	-66.7

February	3	5.6	4	8.3	33.3
March	6	11.3	4	8.3	-33.3
April	2	3.7	5	10.4	150.0
May	3	5.6	6	12.5	100.0
June	4	7.5	4	8.3	0.0
July	4	7.5	3	6.25	-25.0
August	9	16.9	4	8.3	-55.6
September	7	13.2	5	10.41	-28.6
October	3	5.6	4	8.3	33.3
November	1	1.8	4	8.3	300.0
December	5	9.4	3	6.25	-40.0
Total	53	100%	48	100%	-9.4

It can also be gleaned from the data that the consistency of crime reduction is not achieved since February, April, May, October and November increased in non-index crime while June projected 0% crime reduction. Again, dry or hot months are considered affected in crime increase. Meanwhile, February showed an increase in crime rate since this particular month is the month of the town's fiesta. June on the other hand, showed no increase nor decrease. This could be attributed to two factors. First, June is the start of classes in most of public school.

Though consistency is not achieved by PNP Binmaley, the total projected strategic crime analysis resulted to -9.4% which means, crime reduction was still achieved on panel view.

Table 3 presents the non-index crimes in Binmaley.

Table 3. Distribution of Non-index crimes in Binmaley.

Month	CF	%	CF	%	SCA 2017	2018
January	6	11.3	2	4.1	-19.51	
February	3	5.6	4	8.3	-44.19	
March	6	11.3	4	8.3	63.89	
April	2	3.7	5	10.4	-33.33	
May	3	5.6	6	12.5	-31.82	
June	4	7.5	4	8.3	-37.50	
July	4	7.5	3	6.25	3.03	
August	9	16.9	4	8.3	-11.76	
September	7	13.2	5	10.41	47.37	
October	3	5.6	4	8.3	45.16	
November	1	1.8	4	8.3	116.00	
December	5	9.4	3	6.25	0.00	
Total	53	100%	48	100%	-0.46	

Table 3 on the other hand projected a reduction of 0.46% on volume of non-index crimes. In the same manner experienced by the PNP on index crimes the consistency of crime reduction was not achieved through the study period.

Likewise, it can also be gleaned that on the month of November the crime increase was recorded to 116%, an increase of 3 crimes comparing November of 2017 to 2018. Same was observed on the months of March, July, September, and October. Meanwhile, on the month of December 0% crime reduction was experienced by the

municipality. Though, on strategic crime analysis, the overall projected crime reduction resulted into 0.46% on index crimes.

Comparing the profile of index and non-index crimes, it can be deduced that the non-index crimes projected a lower reduction rate of 0.46% compared to the 9.4% crime reduction rate of index crimes.

The data suggests that crime reduction consistency of the municipality was not achieved which means intervention on this matter is needed by the station.

Table 4 above shows the rate of index crimes in Binmaley during 2017-2018. As seen on the illustration, rape projected the highest reduction on numbers from 15 of 2017 to 4 of 2018 that resulted to 275% from the 5.01 average monthly index crime rate of 2017.

The crime of physical injury peaked both in 2017 and 2018 in AMCR. Followed by rape, robbery, murder and theft.

Table 5 presents the crime rate of Binmaley through the profile of non-index crimes.

Table 5. Crime Rate in Binmaley

(Non-Index Crimes) through crime profile

decreased on the said crime. Likewise, the number of murder decreased by 75% and physical injuries by 17.6%.

Index

Crimes

RIR

CF	AMC	CF	AMC	SCA			
		R		R			
						2017	2018
6	0.6	7	0.7	14.29			

Table 4. Crime Rate in Binmaley

(Index Crimes) through crime profile Homicide

RIR	151	14.3	125	11.8	-20.80
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Physical

CF	AMCR	CF	AM
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SCA

Injuries

Crimes

CR

2017	2018
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RIR

Damage

217	20.5	221	20.9	1.81	
Murder		7	0.7	4	0.4
Homicide	0	0.0	0	0.0	0.0

Physical	20	1.9	17	1.6	-17.6	to	Property	38	3.6	71	6.7	46.48
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Injury

Rape	15	1.4	4	0.4	-275
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Robbery	6	0.6	10	0.9	40.0
Theft	4	0.4	7	0.7	42.9
Carnapping	1	0.1	0	0.0	0.0
(MV) of SL					
Others	26	2.5	12	1.1	-116.67
Total	43841.42		436	41.23	-0.46

Table 5 shows the rate of non-index crimes. The average monthly crime rate of non-index crimes in Binmaley on 2017 is

Carnapping

(MC)

Cattle

0	0	6	0.6	100.
0				
0	0	0	0	0.0

41.42%, 0.46% higher than 2018 which is 41.23%. Violation of special laws contributed the highest increase which has

Rustling

Total	53	5.01	48	4.45	-10.4
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*Legend

AMCR – average monthly crime rate CF – crime frequency

SCA – strategic crime analysis

Meanwhile, it can also be gleaned that carnapping of motorcycle peaked the highest on 2018 by 100%. Robbery and theft also increased by 40.0% and 42.9% respectively.

Cattle rustling recorded 0 on the municipality since cattle business is not abundant in the area compared to fish culture business.

In 2018, the average monthly index crime rate in Binmaley is 4.45. This means that every month, the crime occurrence perstrategic crime rate of 46.48%. From the 38 violations of violation of special law, the figure increased by a total of 33 violations of SL which came from violation of R.A 9165 or the Comprehensive Dangerous Drug Act of 2002 and followed by violation of PD 1602 (Illegal Gambling). As projected nationwide, index crimes follows the same trend.

Table 6 below shows the crime clearance and crime solution efficiency of the station.

Table 6. Crime Clearance and Solution

Year	<u>Efficiency of Binmaley</u>					
	CV	CC	CS	AMCR	CCE	CSE
	%			%		
2017	491	439	413	46.44	89.41	84.11

population of the area is low. It decreased

2018	484	431	402	45.78	89.05	83.06
%CR	-1.45	-1.86	-2.74	-1.44	-0.40	-1.26

As table 6 projects, since crime clearance and solution differs on definition, the projected results also differs. The crime clearance efficiency decreased by 0.40% and crime solution efficiency also decreased by

1.26 % when 2018 data is compared to 2017. The AMCR of Binmaley is considered low when compared to other municipality. The average monthly crime rate also increased by 1.44%.

This just support the claims of PNP that the crimes in the Philippines has decreased since the time of the new administration.

IV. CONCLUSIONS AND RECOMMENDATIONS

The decrease of crime volume both on index and non-index crimes in Binmaley suggests that the PNP Binmaley has contributed on the national crime decreased of the Philippines. This also means that the PNP Binmaley efforts on reducing crime, enforcing the law and maintaining criminal justice is effective.

As also observed in the study, the crime volume in Binmaley decreased in the two year span, the consistency of crime reduction as seen on monthly basis is not achieved. This means that the PNP, on this matter must put efforts on identifying the weaknesses observed on the month of November. Since this is the month where decline in crime volume was not achieved rather an increment was observed.

Crimes against persons are highest on hot weather and less on cold. Crimes against properties on the other depicts the vice versa as supported by seasonal crime fluctuation.

The study also showed that crimes against properties need the attention of PNP since the result showed a high increase particularly on robbery, theft and carnapping. Meanwhile on non-index crimes, violation of the Comprehensive Dangerous Drugs Act of 2002 (R.A. 9165) showed the highest inflation. As felt in the entire country, PNP Binmaley resiliently conducted their Oplan Tokhang and other measures in preventing violations of R.A. 9165.

Both crime clearance and solution efficiency depicts high percentage on PNP Binmaley. Both 2017 and 2018 have more than 80% of efficiency on the two efficiency measurements. This again supports the decrease and continuous efforts of PNP Binmaley.

PNP Binmaley should strengthen their strategies in consistently reducing crime volume and continuously pursue crime prevention.

Lastly, future researchers are advised to conduct supplementary research on crime reduction consistency.

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