

**FACTORS INVOLVED WITH THE COOPERATION OF TRAFFIC  
POLICE IN ACCORDANCE WITH LAW ENFORCEMENT  
ON ROAD SAFETY POLICY IMPLEMENTATION:  
A CASE STUDY OF NON-HELMET USE  
AMONG MOTORCYCLISTS**

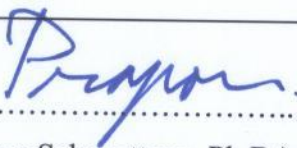
**Police Lieutenant Colonel Supachat Wechaporn**


**A Dissertation Submitted in Partial  
Fulfillment of the Requirements for the Degree of  
Doctor of Public Administration  
School of Public Administration  
National Institute of Development Administration  
2016**

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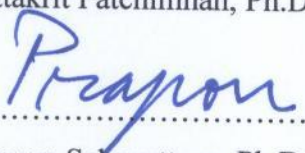
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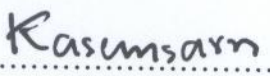
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September 2016

## ABSTRACT

<b>Title of Dissertation</b>	Factors Involved with the Cooperation of Traffic Police in Accordance with Law Enforcement on Road Safety Policy Implementation: A Case Study of Non-Helmet Use Among Motorcyclists
<b>Author</b>	Police Lieutenant Colonel Supachat Wechaporn
<b>Degree</b>	Doctor of Public Administration
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This study aims to analyze the causal relationship among three factors, viz. individual traffic police officers, police stations, and communities, and the impact of cooperation on road safety policy implementation on law enforcement as it relates to motorcyclists in Bangkok with no helmets. The population sample is composed of 342 traffic police officers in Bangkok's Metropolitan Police Bureau generated from a multiple sampling technique. The study uses the methodology of a rating scale questionnaire (1-10) for SPSS correlation analysis and HLM for multilevel analysis.

Findings show that three factors-individual traffic police officers, including both length of service and policy perception and understanding; police stations, including democratic leadership style; and communities, including the homicide rate-have a positive influence on the cooperation of traffic police in according with law enforcement on road safety policy implementation. On the other hand, the role conflict factor has a negative influence on this issue.

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Police Lieutenant Colonel Supachat Wechaporn

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Significance of the Problem**

High incidence of traffic accidents is a major challenge facing many nations, with thousands of people being killed or injured on roads on a daily basis. According to the World Health Organization (WHO) statistics, every year 1.2 million people, an average of more than 3,000 people per day, are killed in traffic accidents, while from 20 to 50 million are injured or disabled. Indeed, traffic accidents are credited as being the first leading cause of death for those between 15 and 29 years old. Without renewed commitment to prevention and the continuation of current trends, figures for road traffic deaths will increase annually by about 2.4 million people. (World Health Organization, 2015) In view of this, many stakeholders are calling for a reduction in the numbers of deaths and injuries on the roads via a comprehensive road safety program. In the context of the Moscow Declaration, “UN Decade of Action for Road Safety 2011-2020”, efforts have been initiated to make progress on tackling the leading causes of global road deaths and injuries. All nations have called for the implementation of a practical and viable road traffic injury prevention framework with the objective of achieving a 50% reduction in road accidents by 2020.

In Thailand, a significant amount of effort has been put into the prevention of traffic accidents since 2004. Statistics for 1998 to 2009 reveal that the traffic accident mortality rate was alarmingly high: approximately 29.92 fatalities per 100,000 people. In 2009 Thailand ranked high for the number of traffic fatalities on a global level: 36.2 fatalities per 100,000 people. Even though the government put more effort into the reduction of road deaths, fatalities from traffic accidents steadily increased, resulting in a serious national loss of more than 200,000 million baht per year, or 3% growth of GDP (more than 13,000 people of Thailand’s overall deaths, a large amount of these were disabled people). This was because traffic injuries and deaths created

considerable social problems, including the loss of family breadwinners. In 2013 WHO ranked Thailand in second place among the 182 countries surveyed for the number of traffic accident fatalities. The survey indicated that the total number of road traffic fatalities in Thailand had plateaued at 36.2 per 100,000 people per annum, followed by Libya. (See Table 1.1)

**Table 1.1** Total Number of Deaths due to Road Accidents (Thailand and Other Nations)

Rank	Country	Reported Number of Road Traffic Deaths	Estimated Road Traffic Death Rate per 100,000 Population
1)	Libya	4,398	73.4
2)	Thailand	13,650	36.2
3)	Malawi	5,732	35
4)	Liberia	-	33.7
5)	Democratic Republic of the Congo	498	33.2
6)	United Republic of Tanzania	3,885	32.9
7)	Central African Republic	58	32.4
8)	Iran	17,994	32.1
9)	Rwanda	520	31.6
10)	Mozambique	1,744	

**Source:** World Health Organization, 2015.

Additionally, in the context of ASEAN members, Thailand ranked first for road traffic fatality rates.

**Table 1.2** Total Number of Deaths due to Road Accidents (Among ASEAN Nations)

Rank	Country	Reported Number of Road Traffic Deaths	Estimated Road Traffic Death Rate per 100,000 Population
1)	Thailand	13,650	36.2
2)	Viet Nam	9,845	24.5
3)	Malaysia	6,915	24
4)	Myanmar	3,612	20.3
5)	Cambodia	1,950	17.4
6)	Indonesia	26,416	15.3
7)	Lao's People Democratic Republic	908	14.3
8)	Philippines	1,469	10.5
9)	Brunei Darussalam	46	6.8
10)	Singapore	159	3.6

**Source:** World Health Organization, 2015.

Statistics for traffic accidents in Thailand show that motorcycle accidents rank the highest (35.64%), followed by automobiles (30.67%) and pickup trucks (16.96%). (See Table 1.3)

**Table 1.3** Statistics of Vehicle Type for Road Traffic Accidents in Thailand

<b>Rank</b>	<b>Type of Vehicle</b>	<b>Number of Road Accidents</b>	<b>Percent</b>
1)	Motorcycle	20,550	35.64
2)	Car	17,683	30.67
3)	Pick up	9,780	16.96
4)	Taxi	2,088	3.62
5)	Pedestrian	1,938	3.36
6)	Truck(6 wheel)	1,019	1.77
7)	Truck(10 wheel and up)	917	1.59
8)	Van	835	1.45
9)	Bus	701	1.22
10)	Bicycle	435	0.75
11)	Motor tricycle	226	0.39
12)	Tricycle	22	0.04
13)	Others	1,464	2.54
Total		57,658	100.00

**Source:** Royal Thai Police, 2014.

The Bureau of Epidemiology's information and statistics on road traffic injuries and deaths show that motorcycles are ranked as the main source of road traffic injuries (83.20%), followed by pickup trucks (6.56%), bicycles and motor tricycle (2.91%). Of these, motorcyclists have been identified as the leading cause of accidents (76.85%), while head injuries are the most common form of injury sustained.

**Table 1.4** Severe Injuries and Deaths from Road Traffic Accidents in Thailand

	Severe Injury		Death	
	Number	Percent	Number	Percent
Vehicle caused injury				
1) Motorcycle	59,170	83.20	3,383	80.05
2) Pick up	4,662	6.56	346	8.19
3) Bicycle and tricycle	2,799	3.94	149	3.53
4) Car	2,069	2.91	190	4.50
5) Truck	586	0.82	36	0.85
6) Motor tricycle	557	0.78	48	1.14
7) Agriculture vehicle	337	0.47	18	0.43
8) Others	938	0.43	29	0.84
Total	71,118	100.00	4,226	100.00
Road user type				
1) rider/driver	57,211	76.85	3,470	75.03
2) passenger	14,179	19.05	783	16.93
3) pedestrian	3,053	4.10	372	8.04
Total	74,443	100.00	4,625	100.00
Injured organ				
1) Head	39,845	32.35	3,658	36.89
2) Injuries of multiple region	22,606	18.35	2,029	20.46
3) Knee and lower leg	11,510	9.35	451	4.55
4) Shoulder	6,940	5.64	290	2.92
5) Others	42,266	34.31	3,449	35.18
Total	123,167	100.00	9,917	100.00

**Source:** Bureau of Epidemiology, 2014.

Bearing in mind the problems listed above, government efforts to reduce traffic accidents include issuing traffic policies and actions for effective implementation by related public sector agencies. In 2003, the Road Safety Directing

Center was established to act as the focal point for traffic accident prevention and to enhance inter-agency collaboration on this issue. For instance, in 2006 the Road Safety Directing Center approved the Road Safety Master Plan 2005-2008 as drafted by the Secretariat (Department of Disaster Prevention and Mitigation). The Master Plan aimed at reducing road traffic injuries and deaths as well as improving pedestrian safety through five key strategies (the so-called '5 Es'): 1) Law Enforcement; 2) Education and Public Relations; 3) Emergency Medical Service System or EMS; 4) Traffic Engineering; and 5) Evaluation and Information. Subsequently in 2009, the 2005-2008 Master Plan was revised to put greater emphasis on multi-level, area-based management, with particular focus on the empowerment of both the public and private sectors as well as the community.

In 2010, the Thai cabinet announced and launched the Decade of Action for Road Safety 2011-2020 along with National Campaigns in line with the Moscow Declaration on the UN Decade of Action for Road Safety 2011-2020: the objective was to reduce the fatality rate to below 10 persons per 100,000 inhabitants by 2020.

The following year (2011) the Regulation of the Prime Minister on Road Traffic Control was initiated and established as a national agenda for road safety promotion. It aimed to fully integrate multi-agency work; make services more effective; and promote greater responsibility.

In spite of this, the highest traffic accident fatality rate occurs among motorcyclists who do not wear helmets. A 2012 survey of motorcycle helmet use in Thailand by the Thai Roads Foundation revealed a helmet use rate of just 43% nationwide: the helmet use of motorcyclists themselves was 53%, while that of pillion riders was less than half of this at 19%. When compared with other ASEAN nations, Indonesia, Laos, Singapore and Vietnam have a higher incidence of helmet-use than Thailand. Though a campaign for helmet use has been initiated, statistics show that conversely motorcycle helmet use in Thailand is actually falling, from 44% in 2010-2011, to 43% in 2012.

The Royal Thai Police is the core agency responsible for the implementation of the first of the '5 Es' strategies, Law Enforcement. The agency has made strenuous efforts to tighten the enforcement of traffic rules and regulations, especially among motorcyclists who are statistically more likely to violate traffic laws relating to

running red lights, drunken driving and riding without helmets, resulting in road injuries and deaths. However, the number of traffic accidents continues to climb during the major holiday periods such New Year and Songkran (Thai New Year).

**Table 1.5** Statistical Data on Road Traffic Offenders During Songkran Periods

<b>Types of Traffic Violations</b>	<b>Number of Traffic Offenders (11-17 April 2013)</b>	<b>Number of Traffic Offenders (11-17 April 2012)</b>	<b>Increased/ Decreased (Percent)</b>
Driving in the wrong lane	32,350	26,815	+ 20.64
No-helmet while driving	233,321	206,990	+ 12.72
Dangerous lane changing	20,412	15,449	+ 32.13
No-driver license while driving	222,601	202,511	+ 9.92
Using cell phone while driving	22,056	16,936	+ 30.23
Violation of traffic lights	32,127	26,070	+ 23.23
No-seat belt while driving	99,549	89,225	+ 11.57
Drunk driver	14,514	13,833	+ 4.92
Equipment failure(motorcycle)	68,397	67,082	+ 1.96
Exceeding speed limit	29,782	30,767	-3.20

**Source:** Department of Disaster Prevention and Mitigation, 2013.



Both national and international research has found that the most common causes of road accidents are speeding; drunken driving; no helmet use; and not wearing seatbelts. Based upon the WHO's report on traffic law enforcement, Thailand has claimed that traffic legislation has been less effectively enforced even though the laws have become tougher (and therefore capable of being more effective). A particularly striking comparison is with Singapore, which has the lowest absolute number of recorded road deaths per 100,000 of the population. (See Table 1.6)

**Table 1.6** Comparison between Singapore and Thailand on Traffic Law Enforcement

Type of Traffic Law Violation	Scale (0-10)			
	2013		2015	
	Thailand	Singapore	Thailand	Singapore
Speed limit law	3	7	3	8
Drink-driving law	5	9	6	8
Motorcycle helmet law	6	9	6	9
Seat-belt law	6	8	6	8

**Source:** World Health Organization, 2013, 2015.

The implementation of road safety policy in the context of law enforcement by the Royal Thai Police is comparatively ineffective due to low levels of helmet use, this being the highest cause of traffic fatalities. Even though serious legal action can be taken against motorcyclists who do not wear helmets, nevertheless there has been a decline in helmet usage. Therefore, this study aims to explore the causes that impact upon the implementation of road safety policy, particularly for motorcyclists who do not wear helmets. The study's ultimate goal is to make recommendations to and suggest guidelines for the Thai government, particularly the Royal Thai Police, in order to promote improved road safety and enhance the lives of Thai citizens.

## **1.2 Research Questions**

1) What factors does have an impact on the cooperation of traffic police officers on road safety policy implementation of law enforcement, particularly among motorcyclists who do not wear helmets?

2) How causal relationships of those factors and the cooperation of traffic police officers on road safety policy implementation of law enforcement could be explained?

## **1.3 Objectives**

This work is a study of the Factors Involved with the Cooperation of Traffic Police in According with Law Enforcement on Road Safety Policy Implementation : A Case Study of Non-Helmet Use among Motorcyclists. There are 2 main objectives:

1) To study the causal relationship between individual traffic police officers of both police station and community level and cooperation on road safety policy implementation of law enforcement as it relates to motorcyclists with no helmet; and

2) To analyze influential factors of individual traffic police officers of both police station and community level towards cooperation on road safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police)

## **1.4 Anticipated Benefits**

This work is conducted to be a fundamental framework and guideline for proposing academic options and proposals that aim at strengthening the road safety policy implementation enforced by the Thai Traffic Police in view of providing recommendations to and suggest guidelines for the Thai government, particularly the Royal Thai Police, in order to effectively transform a road safety policy into action. In turn, it will finally make a road safety policy action more practical and feasible, as well as enhance the lives of Thais.

## **CHAPTER 2**

### **LITERATURE REVIEW**

Objective of this chapter is to survey and review the literatures that are linked to the subject study in order to develop conceptual framework and research hypothesis. The literature review of this work consisted of 5 important elements which are as follow: 1) Current Situation of Road Safety Policy Implementation Regarding to Law Enforcement for Non-Helmet Use; 2) Concept and Theoretical Approach of Policy Implementation; 3) Policy Implementation Models; 4) Studies of Factors that Affect a Success of the Policy Implementation; and 5) Concept Regarding to A Success and Failure of Policy Implementation

#### **2.1 Current Situation of Road Safety Policy Implementation Regarding to Law Enforcement for Non-Helmet Use**

Thailand Road Safety Master Plan 2013-2016, developed by Road Safety Directing Center, has provided guideline for the public sectors to deal with the problems related to road accident and adjust to practicing with the policy implementation in order to increase road safety as well as reduce road traffic injury and death rates. In terms of the law enforcement, Royal Thai Police is assigned as a core agency to responsible for enforcing the law on those who violate the traffic regulations in order to raise people's awareness of traffic rules and make sure they are seriously following the traffic regulations. Royal Thai Police regulates a variety of measures concerning the law enforcement to prevent and reduce risky behavior of the road's user as well as prevent traffic rule violations, resulting in the efficiency to control risk factors that may cause road accidents.

Not using a helmet by motorcyclists and passengers is one of traffic violation behaviors that Royal Thai Police places importance on due to the fact that such

violation behavior could lead to serious injury and death while the accidents happen. Therefore, Royal Thai Police regulates measures to earnestly and concretely enforcing the law on those who violated traffic regulation. This measure is meant to be a guideline for traffic police affiliated with Royal Thai Police to be implemented into the same way across the country regardless of the occasions for changing deviant behavior of both rider and passenger in order to be more careful in their own safety. The traffic police officers are authorized to enforce the law on according to Road Traffic Act, B.E. 2522 (1979) Section 122 which state that “the rider and the passenger of motorcycle shall wear a motorcycle helmet.” under paragraph one, “The character and procedure of using safeguarding crash helmet under paragraph one shall be prescribed in the Ministerial Regulation.” under paragraph two and “The provision under this section is not forced for monks, novices, ascetics, persons of other religions which require wearing of a turban, or any person under Ministerial Regulation.” under paragraph three. The Act also states in Section 148 that “Any person who violates or fails to comply with Section 122 shall be liable to a fine not exceeding five hundred Baht.”

Metropolitan Police Bureau, a main focal unit of Royal Thai Police, is responsible for maintain peace and security in the area of Bangkok. Therefore, Metropolitan Police Bureau is considered to be one of important units to assist Royal Thai Police enforcing the law on wearing helmet to reduce road traffic injury death rates. In order to make this law enforcement more concrete, Metropolitan Police Bureau regulates programs and projects to deter and campaign against such traffic violation behavior as well as encourage traffic police officers to put an effort on their duty to enforce the law on people. For instance, in B.E. 2558 (2015) Metropolitan Police Bureau promoted a campaign of 100% safety helmet wearing for accident reduction in Bangkok area to reinforce people to wear helmet whenever they ride a motorcycle. This campaign is proactive measure which the traffic police officers from all 88 police stations in Bangkok have to hard working hard for arresting those who wear no helmet.

## **2.2 Concept and Theoretical Approach of Policy Implementation**

In the process of public policy implementation, the implementation process is considered as a crucial process for creating understanding and making analysis of the policies due to the fact that this implementation process is an important link between the process of policy formulation and the process of policy evaluation. In other words, the implementation process is a key to successful policy outcomes (Pressman and Wildavsky, 1984).

Previously, there are numerous researchers who conducted researches to propose a model and concept of policy implementation. Besides, there are studies of factors led to success or failure in putting the policy into practice, which could lead to guidelines, solutions and proper tools for a policy maker or professions in terms of implementing a policy and achieving the goals. (Pressman and Wildavsky, 1973; Bardach, 1977; Elmore, 1978; Lipsky, 1980; Mazmanian and Sabatier, 1983).

### **2.2.1 Definition of Policy Implementation**

According to Jones (1970), policy implementation is activities that aimed achieve the results of three programs which are interpretation means transforming the means of program into command for the action plan, organization means establishing the organization and regulation to achieve the program and application means providing services.

According to Pressman and Wildavsky (1973), policy implementation is the operation and accomplishment of a given task which are relationship of process to transform policy into action. In other words, transforming policy into action is a process of interaction between setting of goals and actions that aim to achieve them.

Regarding to O'Toole (1995), policy implementation is viewed as an important link between the expression of governmental intention and the result.

Similarly, Van Meter and Van Horn (1975) defined a policy implementation is the actions of individual or group of both public a private sector to achieve the objectives that have been defined. Relevant to Williams' work (1975), policy implementation is a process between decision and operations. The processes of policy implementation begin with the development of program guidelines or design

specification. Following this, the program will be implementing according to the guideline by technical and administrative team and will terminate when the program is completed.

In accordance with the definitions given by scholars, there are similarities in the idea of policy implementation. In summary, policy implementation is the decision making process and operation of the programs or activities, after the policy is imposed. Additionally, policy implementation is a complex process and might involve with numerous organizations and variety group of people in order to push the policy forward to achieve the goals and eventually benefit the target group.

### **2.2.2 Policy Implementation Models**

Thus far, there are varieties of policy implementation models that are developed by scholars and researchers. Each of them has different viewpoints due to their idea, perspective and research methodology. Goggin (1990) surveyed previous studies of researchers from the first generation to the present and found that model has been developed and changed over time, which can be categorized into three main generations.

1) First Generation: a research approach is focused on searching and describing policy details that are implemented base on a process theory. In other words, this approach is mainly focused on the time sequence of events or the case study that seek to find the generalization fact of each event. Therefore, the major weakness of this approach is that it cannot be applied to other cases or created into a general knowledge.

2) Second Generation: a research approach is focused on the explanation of variations that occurs in the process of policy implementation by drawing a comparison among policies. This approach is based on variance theories which focus mainly on variables that are related to causes. In addition, the study also emphasizes on causality and questioning how can policy formulation process influence the difference in policy implementation? and what are the factors that influence the success of policy implementation?

3) Third Generation: a research approach is aimed to explain why the policy implementation has changed due to the difference time phrase, type of policy

and government. Therefore, the third generation approach is considered to be more scientific than the first and second one. The characteristic of research design is an explicit theoretical model, which include indicator and hypothesis. Additionally, the approach studies the internal comparison among the policies in order to find differences and similarities of how these policies can be implemented.

Majone and Wildavsky (1978) believed and summarized that the model of policy implementation can be classified into three main types.

The first type of model sees that policy implementation is a separate process from the policy setting process. In other word, it is the process which occurs after the policy is imposed. The process can be in form of laws, orders or projects that has clear goals and regulations to be achieved. This kind of model is called “implementation as control” or “rational model” or “classical model” and it consists of a few characters which are as follow:

- 1) There are clear targets as well as objectives, specifying details of the plan and focus highly on regulation.
- 2) The scope of policy formulation and policy implementation are separated.
- 3) Policy formulation is subjected to political, whereas policy implementation is subjected to technical.
- 4) Emphasis on suggestion, order and approval
- 5) Policy implementation will be follow a top to the bottom down regarding the hierarchy of the organization

In accordance with this policy implementation model, it is a study to seek for knowledge or answer to explain the factors which have influences on success and failure of policy implementation.

The second type of model views that policy implementation and formulation cannot be clearly separated from one another. The reason is that policy could be changed regularly during implementation process. This approach is called “Interaction Model” which focus on the process in between transforming policy into action where there are variety of related actors interfere in policy. Also, there are bargaining to adjust the goals and solution of implementation plan to be mutually accepted by these actors. The characters of this model are as follow:

- 1) Emphasis on interaction, bargaining, consensus amongst different groups
- 2) The change of each group is influence by political process, which can be interpreted that process is an important goal.
- 3) The decision is based on options, which are considered in term of the difference rather considered as a whole.
- 4) Means-ends and ends-means are not separated entity and can be change continuously.
- 5) Instrumentalism is to create the satisfaction for each party.
- 6) The model is limited in term of resources and human capabilities

The third type of model is an implementation as evolution which seeing policy implementation in term of evolution process responds to the change of environment. The model has no clear goal of the policy. However, the goals and methods of policy implementation will be adapted based on the experience and situation of the practice. The characters of this model are as follow:

- 1) Policy is hypothesis from what it is tested.
- 2) Policy formulation and policy implementation is considered to be a single process and cannot be separated.
- 3) Pay attention to the changes that come from learning and new discovering.
- 4) Human knowledge still limited to comparing the complex problem.
- 5) The most important actor is the one who implement the policy.

Nevertheless, when considering models and theories of policy implementation as a whole, these models and theories can be classified into three theories which are 1) top-down theories 2) bottom-up theories and 3) hybrid theories. The details of each theories are as follow:

#### 1) Top-down Theories

The foundation principle of top-down theories can be defined that the goals of each policy can be set by those who gave authority to formulate the policy and these goals also are able to achieve by assign and control the agencies to implement the policy. In other word, the theories put high priority to the policy and policy makers. The theories believe that success of policy implementation is



depending on the capability to control the environment of policy makers and agencies that responsible to implement it (Younis and Davidson, 1990: 5-8).

In addition, the theories are keen to study the influence of policy makers on the policy implementation process by begin to analyze at the top level of policy in order to determine the maximum capability of policy makers to transform their intentions into messages and understand their expectation for how agencies will put policy into practice. Following this, the lower level agencies in each process will transform these messages and expectations into practices. In order to implement the policy, the policy makers will set the rules and formulation to take officially control and drive the agencies with the command structure in an official manner (Elmore, 1978). The approach of this theories are mostly study about the problem related to administrative management, organization management of each agencies to implement the policy and political issue of others stakeholders.

## 2) Bottom-up Theories

Bottom-up theories emphasis on study the relationship of both official in unofficial of the smaller components system that related to the process of policy formulation and implementation (Howllet and Ramesh, 1998: 190). The theories are created to criticize top-down theories, due to the fact that research has found that output of policy does not always relate to the objective of the policy. Therefore, this fact is conflict with the top-down theories which believe that output of the policy and objective must be related. As a result, the researchers who study bottom-up theories believe that the suitable approach of policy implementation study is to learn from what actually happened at the operational level. Hence, the study should begin at the bottom level of policy or the street-level bureaucrat who provide direct service to the people, since they are more familiar with the problems in their duty. The bureaucrats who have full authority to manage and control over the service could select the target group, especially in case of unclear policy goals or limit of resource to perform service. Therefore, the street-level bureaucrat is considered to be one of the most important people in policy implementation and formulate the new policy (Lipsky, 1980).

The difference in characteristic between top-down theories and bottom-up theories can be compared and classified in table 2.1 (Pulze and Treib, 2007: 93-95; Paudel, 2009)

**Table 2.1** Compare the Difference between Top-down and Bottom-up Theories

Aspects	Top-down Theories	Bottom-up Theories
1) Research strategy	Top-down: from political decisions to administrative execution	Bottom-up: from individual bureaucrats to administrative network
2) Goal of analysis	Prediction/ Policy recommendation	Description/ Explanation
3) Model of policy process	Stagist	Fusionist
4) Character of implementation process	Hierarchical guidance	Decentralized problem-solving
5) Underlying model of democracy	Elitist	Participatory
6) Policy decision-maker	Policymakers	Street-level bureaucrats
7) Structure	Formal	Formal and Informal
8) Process	Purely administrative	Network, including administrative
9) Discretion	Top-level bureaucrats	Bottom-level bureaucrats

**Source:** Paudel, 2009.

Table 2.1 shows the difference between top-down and bottom-up theories divided into 9 points as follows:

(1) Research strategy of each theories aim to develop the knowledge in the opposite directions. On one hand, top-down theories use research strategy which is based on the believe that political decision is started from top level of political system and continue on to the lower level until it reach the bureaucrats who responsible to turn the policy into practice. On the other hand, the research

strategy of bottom-up theories begin with the study at the street-level bureaucrat who provide the direct service with the people, then study those who is in the same and the higher level in order to indicate the network of those who implement the policy.

(2) Goal of analysis of the top-down theories is to create the theories to be used to forecast or predict whether the policy will be success or fail as well as finding the factors which influence that success and failure. Hence, these theories can be used as suggestion to those implement the policy. However, the bottom-up theories aim to describe and depict the relationship of behavior, decision making process and solution to the problem in policy implementation of the street-level bureaucrats.

(3) Model of policy process of the top-down theories is in form of step by step in which the character of policy can be divided into a clear step after the policy is imposed. In the contrary, the bottom-up theories believe that the process of policy implementation and policy formulation cannot be separated from each other. Therefore, model of policy process of the bottom-up theories will always be in from of the combination of all the process.

(4) Character of implementation process according to the top-down theories view that implementation process is a process of transforming policy into practice without the any political influence. In addition, the process must be implemented in form of administration management in which the highest of policy is those who make the decision at the center who formulate the policy and set the direction to successfully implement the policy. However, according to the bottom-up theories, the policy maker cannot set the clear objective for the policy and also unable to take control on every process of the policy implementation. Therefore, the bottom-up theories suggest that by implementing the policy that still lack of clear goals and have limited in resource to use in the service, it will cause the street-level bureaucrat to use their own discretion in making decision in the policy implementation process. As a consequence, they will implement the policy in their own way and setting their own target group. In order to prevent this problem to happen, the outputs of policy should be depend on the decision to solve the problem of the street-level bureaucrat rather than forcing them to follow guidelines step by step.

(5) Underlying model of democracy in context of the top-down theories believe that the democracy leader is the representative whom received the

authority power from the people. Therefore, the democracy leader must be the person who is in charge in make decision for the people and hold on to act in accordance with the policy objectives. However, in the context of the bottom-up theories, the street-level bureaucrat, duty of the street-level bureaucrat to deliver service is very important to the target group, so that the target group has the right to examine the implementation of the policy.

(6) Policy decision-maker based on the idea of the top-down theories can only be the duty of those from the central, whereas the bottom-up theories believe that the street-level bureaucrat, who is working with people and has freedom to use their own discretion to formulate the guideline of implementation, should always be the one who making decision on the policy.

(7) Structure of policy implementation regarding to the top-down theories have to be the formal structure with clear hierarchical command that can be used to control over the policy implementation. However, the bottom-up theory see that in the reality the agency as well as the street-level bureaucrat that responsible for the policy implementation is required to work under both formal and informal structure in order to satisfy demand of the people use service.

(8) Process implementing the policy according to the top-down theories, in order to successfully implement the policy, the policy implementation process must have the clear management system which specify by the central. In the contrary, the bottom-up theories believe that the management system is not enough to make the policy implementation success. Therefore, it is necessary to seek for the cooperation from the network system that involve with the implementation of the project.

(9) Discretion to implement the policy regarding to the top-down theories have to be clearly specified by high-level or executive bureaucrat of that agency. However, the bottom-up theories believe that in the reality goals of the policy can be vary and unclear. Also, there is a limited in resource to provide the service. As result, the street-level bureaucrat is require to use his or her own discretion to solve the problem in implementing the policy in the actual field.

### 3) Integrated Theories

After the presentation of the top-down and bottom-up theories, there are researchers who criticize on the strength and weakness of both theories. In addition,

there is an attempt to combine them together to become new theories which are more reliable model for the policy implementation study. Enlarge on this, there are two important strengths of the top-down and bottom-up theories which are centralized control and independence of practitioner.

### **2.2.3 Process of Policy Implementation**

Berman (1978: 157-184) study the process of policy implementation and divide it into 2 important levels of process which are 1) macro implementation 2) micro implementation. The details are as follow:

1) Macro implementation is a process that involves the high level agencies to specify the policy which enable lower level agencies to practice in an appropriate way. Macro implementation can also be divided into 2 minor implementation processes. The first one is process transforming the policy into practice or programme. The second one is process to make lower levels agencies accept and adopt into practice.

2) Micro implementation is a process that the low level agencies have to specify their own policy to be conforming with the national policy. The process began after the low level agencies received the policy form the higher level agencies and adopt that policy into practice based on the change in process of each agencies and the decision of the street-level bureaucrats.

According to the idea of Berman's policy implementation which divided into 2 levels which are macro and micro level, the street-level bureaucrats who have duty to work closely with the people are considered the most important actors in the micro level which is the process of converting a national policy to guideline for the actual practice in order to successfully implement the policy. The reason is that these street-level bureaucrats always have to make decision and specify the way to implement their work and develop routine to be able to respond with the demand of people under the limited of resource regarding to their own discretion. Hence, it is not possible to standardize the service practices, especially the practice regarding the social service policy in which the street-level bureaucrats who provide direct service to the people are required a lot of freedom in managing their duty. Since the commander or supervisor could not fully control the practice, the street-level bureaucrats must

interpret their own guideline to implement the policy. However, in the case that the policy is unclear or have an effect on the daily duties of practitioners, it may cause the practitioners to avoid or ignore the policy interpretation process (Lipsky, 1980). Therefore, it is obvious that these street-level bureaucrats are very important to the success or failure of the policy implementation as well as the ability to drive the policy in responding to the intent of policy.

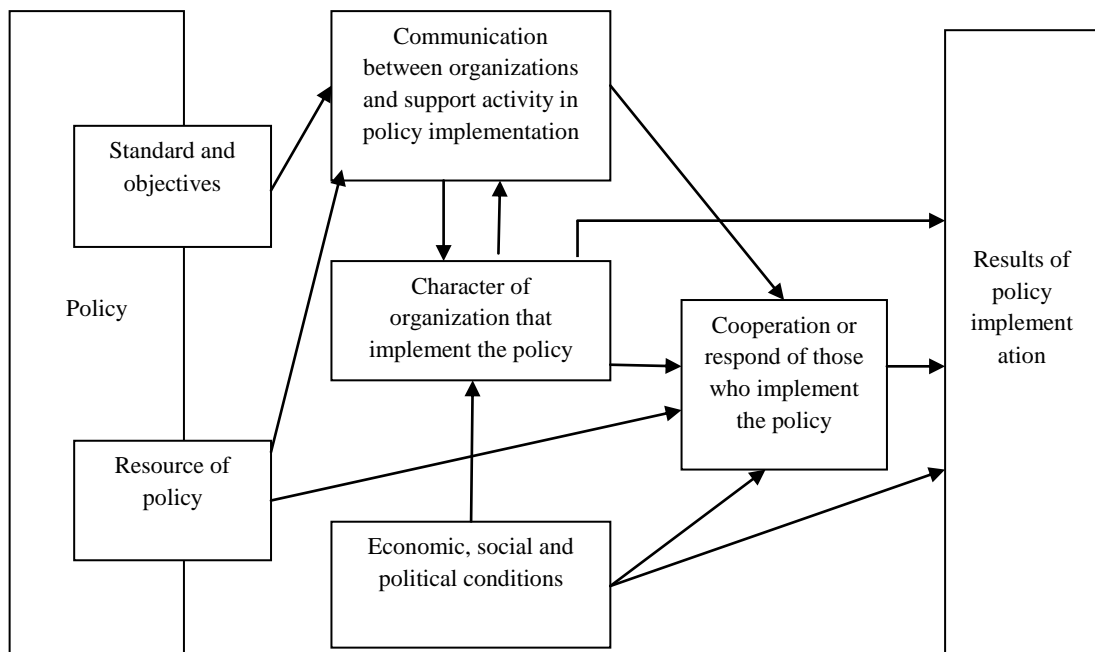
## **2.3 Policy Implementation Models**

The study of researchers about the model of policy implementation is the study about the policy to understand the phenomenon that arising from policy implementation. In order to study on this phenomenon, the researchers have to analyze through different process and variable as well as classify the elements and show the relationship of these elements. As a consequence, they can create knowledge that could benefit the study, especially to know the factors that influence the success and failure of the policy implementation. In this case study, assimilator would like to present the outstanding models of policy implementation that are developed by the following researchers.

### **2.3.1 Van Meter and Van Horn's Model**

The model that Van Meter and Van Horn (1975) study is presented in form of the description of the policy implementation process. The researchers believe that this model can be used to analyze the policy implementation of both single and multiple organizations. Analysis of the policy implementation process according to this model is to view the process as one direction or unidirectional process from top-down perspective. Start with goals and objectives then consider the factors that influence the success and failure of these goals and objectives of the implementation.

This model consist of 6 variables which link between policy and performance as refer in figure 2.1



**Figure 2.1** Model of Policy Implementation by Van Meter and Van Horn

**Source:** Van Meter and Van Horn, 1975: 463.

1) Policy standards and objectives means that the policy must have clear objectives, not ambiguous, conform to reality and standardized, so that it is easy to assessment.

2) Resource of policy such as budget and other supports are aim increase the effectiveness of the policy implementation.

3) Communication amongst the organization and activities to support the policy implementation can be described as a process to deliver goals and objectives to the agency and other people that are involved at every level of the organization in order to create the same understanding.

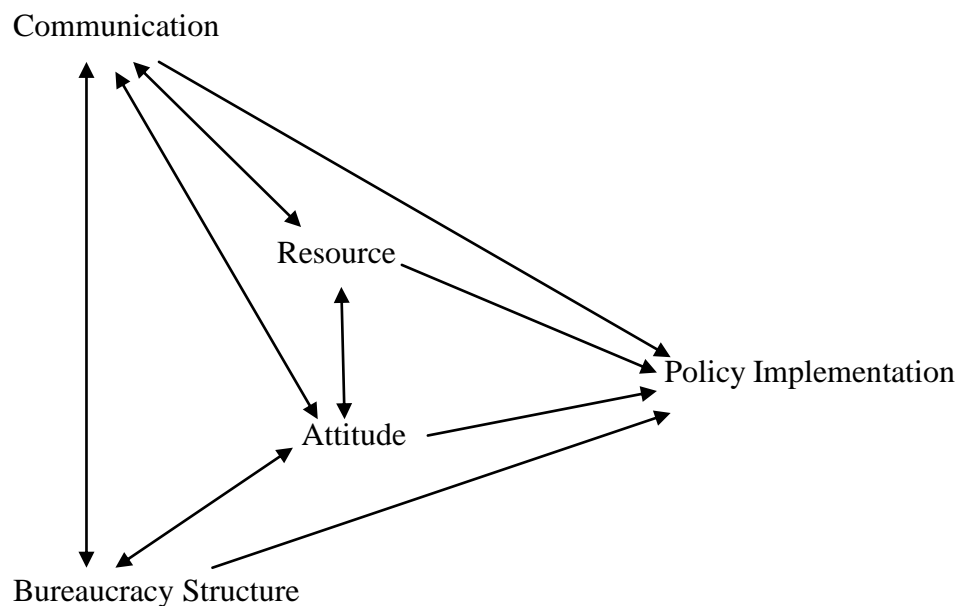
4) Character of the organization that implement the policy are number and quality of personal, control over the chain of command and political resource such as support from the executive, relationship of the official and unofficial policymakers.

5) Economic, social and political condition and resources such as characteristics of public opinion and others stakeholders.

6) Cooperation or respond of those who implement the policy consist of 3 elements which are acknowledgement and understanding of the policy, direction in responding to the policy and degree of policy acceptance.

### 2.3.2 Edwards III's Model

Edwards III's Model (1980). The model is based on the top-down principle as same as the model of Van Meter and Van Horn (1975). Edwards set 4 factors that have influence on the policy implementation which are communication, resources, dispositions or attitudes and bureaucracy structure. The details of these factors can be seen in figure 2.2



**Figure 2.2** Model of Policy Implementation by Edwards III

**Source:** Lester et al., 1987: 202.

Communication is important to those who implement the policy since these people need to know their task and policy decision as well as know how to perform their task. Therefore, it is necessary for the supervisors or leaders to make sure that their subordinates are understand and know the expectation in implement the policy (Scheirer, 1981). There is a possibility that the communication will be distorted, if the beliefs of supervisors are different from the policy or the supervisors do not fully



understand the policy due to the lack of training. This problem conform to the opinion of Moroney (1981) which highlight that there are values contained in a policy, and if the supervisors unable to clearly demonstrate to those who implement the policy, it will cause officers to implement the policy according to their own values and distortion in communication of the intent of a policy.

Direct communication leads to a better accuracy in transmitting information, but if layer of bureaucracy is found within a sector, the deviation of communication is likely to occur accordingly (Williams, 1976). Layer of Bureaucracy is categorized into 2 types which are horizontal and vertical. Horizontal layer of bureaucracy can be seen through internal managerial control and coordination whereas vertical layer of bureaucracy can be shown through the collective responsibility between sectors. Harmoniously to Brewer and DeLeon's idea (1983), the idea reveals that the more layer of bureaucracy, the more self-oriented goals and the information distortion are found.

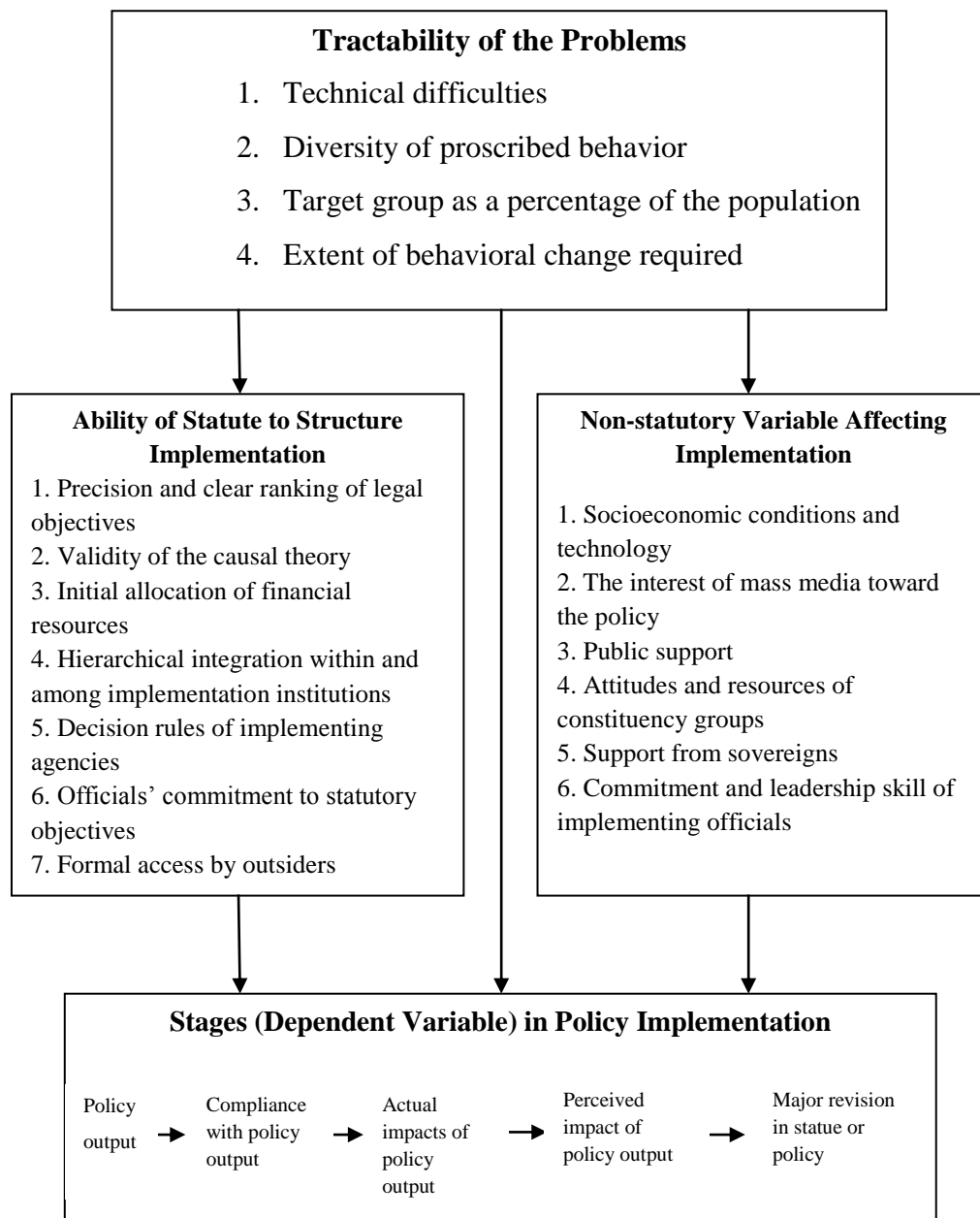
1) Resources including staff, time, financial support, building, machine and equipment are crucial to the application of policy (Scheirer, 1981; Edwards, 1980; Williams, 1976). Prior to other resources, human resource is what Edward particularly emphasized. Staff shortage is considered to be a threat for practicing or applying policy because the lack of the readiness and inadequate skills of staff can cause a failure if that policy requires experienced and skilled staff to operate.

2) The behavior and attitude of individuals are crucial for practicing the policy especially in the case of the discordant between individuals' value and the policy's value. This type of discordant normally occurs in social policy as social policy usually rises from value system (Rein, 1976). Apart from value discordant, the conflict between policy's benefit and self-interest such as job security is showed. To give an example, when new policy is released, but it is inconsistent with individual self-interest, the new policy is likely to have slow implementing process or no process at all.

3) Bureaucratic system is essential factor especially when the failure in practicing policy arises from the default of the system itself. The layer of bureaucracy is a bottleneck for the collaboration of resource which can further create chaos in operation.

### 2.3.3 Sabatier and Mazmanian's Model

Sabatier and Mazmanian (1980) propose a conceptual framework enhancing the effective policy implementation. They identify the factors related to the accomplishment in applying policy which are separated into 3 major variations as in figure 2.3



**Figure 2.3** Model of Policy Implementation by Sabatier and Mazmanian

**Source:** Voradej Chandarasorn, 2005: 85.

1) A resolution of the policy issue consists of 4 minor variables which are; 1) having an accurate and technologically supported theory as a direction, 2) A variety of behaviors of the targeted group, 3) the percentage of targeted group to the whole population, and 4) the scope of changeable behaviors of targeted group.

Based on these 4 minor variables, Sabatier and Mazomanie want to emphasize that the problems arising from applying policy can be simply solved due to 4 components; 1) a reliable and suitable theory that can explain cause and effect of the problem and have the method that is actual solve the problem, 2) the small variation of targeted group's behavior, 3) the small portion of targeted group, and 4) the small scope of changing behavior of targeted group.

2) Structure of policy implementation contains 7 minor variables which are 1) logical policy, 2) clear objective of a policy, 3) sufficient financial resource, 4) solidarity between institution and sectors, 5) standard decision rule, 6) the staff selection, and 7) official third party participation.

These types of variables have a direct relation in policy implementation which highlights on clear objective, organizational structure, resources and all policy's related parties.

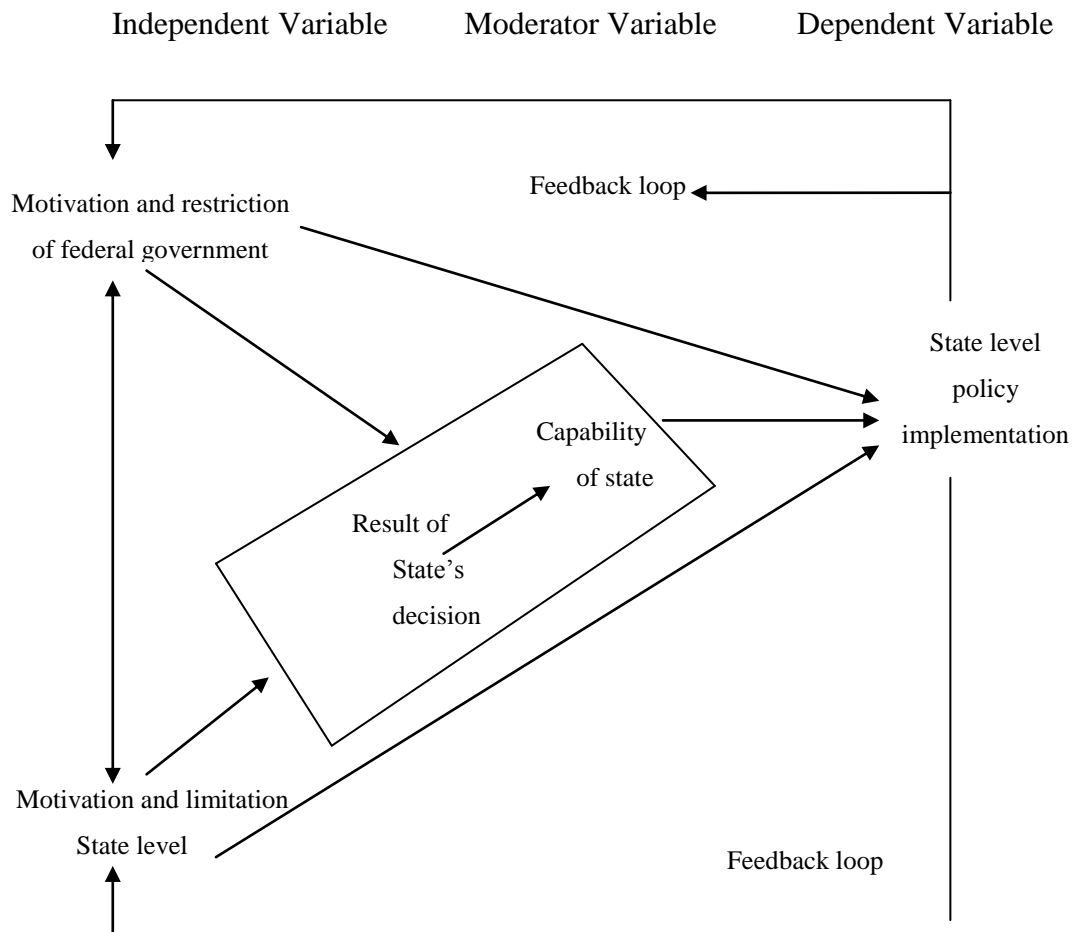
3) External variations that have an influence on policy implementation are listed into 6 variables 1) the economic, social and technological fluctuation, 2) the interest of mass media toward the policy, 3) public support, 4) related parties' resources and attitude, 5) leader's support, 6) leader's skill and the acceptance of implementers toward policy. These variables assist in complying policy with the external environment, coping with the rejection toward policy in short term, and supporting the changing in broader area.

Three groups of major variables above will have an impact on policy implement (independent variables) in an interrelated way 1) policy outputs stage transforms policy objective to implementing method, 2) targeted group comply to the policy, 3) the actual effects toward sector, 4) effects from evaluating policy, 5) revise and improve key point of policy

#### **2.3.4 Goggin et al. Model**

Goggin et al. (1990) propose the idea of policy implementation through comparing the difference of child health care program practices between one state and

many states in order to see the cooperation between central government sector and state sector which can be illustrated as the communication model according to figure 2.4



**Figure 2.4** Model of Policy Implementation by Goggin and Colleagues

**Source:** Goggin et al., 1990: 32.

Figure 2.4 shows the communication between central government sector and state sector as the policy implemented in any states is a result from the motivation and restriction under central government and state level. The dependent variables are divided into 3 groups which are 1) motivation and restriction of central government sector, 2) motivation and restriction of state sector 3) decision and capability of state sector. These 3 variables will have an impact on implementing policy of the state sector which will be discussed below:

### 1) Motivation and Restriction of Central Government

As policy is considered to be government's critical information transmitting to individuals, so the policy itself will contain information, expectations, suggestions, resources and punishments which distinct characteristics of each component are shown and those different characteristics are connected with the result in implementing policy. The characteristics are 1) message content containing credibility as a viable solution, policy efficacy, citizen participation, and policy type 2) message form containing policy clarity, policy consistency, frequency of repetition, and receipt of message and 3) attitude toward a person in federal government containing legitimacy and the credibility of the federal actors.

### 2) Motivation and Restriction of State Sector

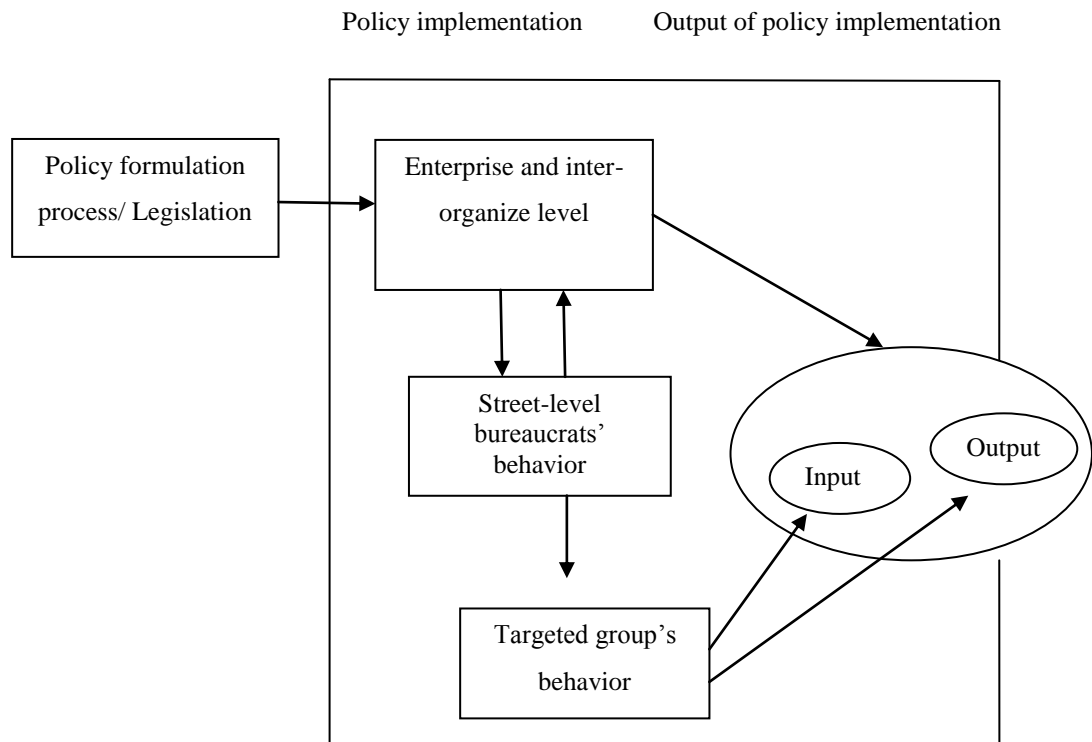
Each state sector's policy implementation is influenced by context or certain situation during applying a policy. The major factors are fixer, supportive members of assembly, management policy, feedback loop for reflecting the voice of those who affected by the policy.

### 3) Decision and Capability of State Sector

This type of variables contains 1) the decision of state sector which can be different even though receiving the same information 2) organizational capacity and state ecological capacity including economy, politics and current situation. The results of implementing policy are shown in 4 forms which are defiance, delay, strategic delay and compliance.

## **2.3.5 Winter's Model**

Winter's (1990) model is a combination of top-down and bottom-up theory explaining 4 significant factors influencing the policy implementation which are 1) legislation 2) enterprise and inter-organize level 3) street-level bureaucrats' behavior 4) targeted group's behavior as in figure 2.5



**Figure 2.5** Model of Policy Implementation by Winter

**Source:** Winter, 1990.

According to Winter's model, Winter holds a strong belief that policy formation is an initial condition of practicing policy as policy formation will lead to another sequential situations and activities in implementing policy. Policy formation involves with at least 2 variables which are politic variable and social variable as both will play a role in a policy's content and support a policy (Sinclair, 2001)

In term of the external factor, Winter gives an important to the method that responsible sector have to be in charge in order to implement the policy accordingly because Winter believes that each sector has its own interests and incentives, so if the policy that sector have to apply is mismatch with the interests and incentives of sector, the failure of policy implementation is likely to occur.

Winter separates street-level bureaucrats that have a duty to implement policy from the enterprise factor due to the effect of restriction and pressure toward officials' behavior, so street-level bureaucrats have authority to use their own judgments in finding method to implement the policy

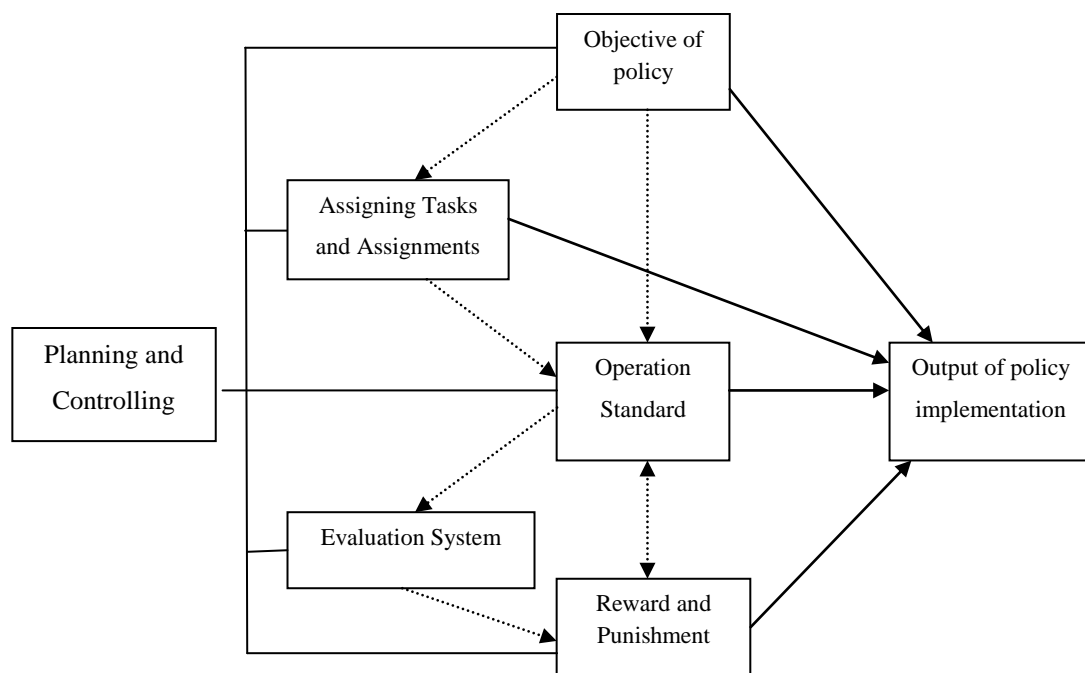
The reaction of targeted group will be various depend on the types of policy. To explain, citizen will be more satisfy and accept the service policy than compulsory one, as a result, the behavior of targeted group indeed have an influence on implementing the policy.

### 2.3.6 Voradej Chandarasorn's Model

Voradej Chandarasorn's (1984, 2000) model is an improved version from the work of policy implementation of important researcher presenting 6 major models 1) rational model 2) management model 3) organization development model 4) bureaucratic process model 5) political model 6) integrative model which will be explained below.

#### 1) Rational Model

Rational model emphasizes the efficiency in planning and controlling through 6 variables which is 1) policy's objective 2) Assigning tasks and assignments 3) operation standard 4) planning and controlling 5) evaluation and 6) reward and punishment (figure 2.6)

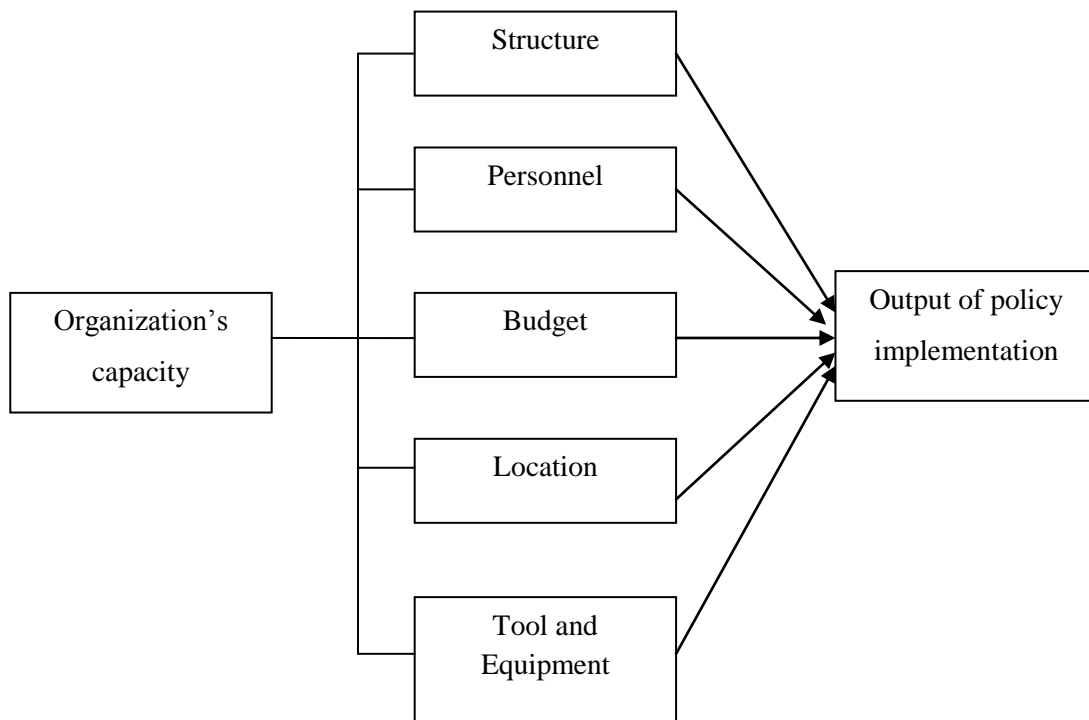


**Figure 2.6** Rational Model by Voradej Chandarasorn

**Source:** Voradej Chandarasorn, 2005.

## 2) Management Model

Management model believes in the capability of organization in driving the policy implementation to be achieved. The potential organization is likely to have a perfect structure where knowledge staff, financial support, location and equipment are ready (figure 2.7)



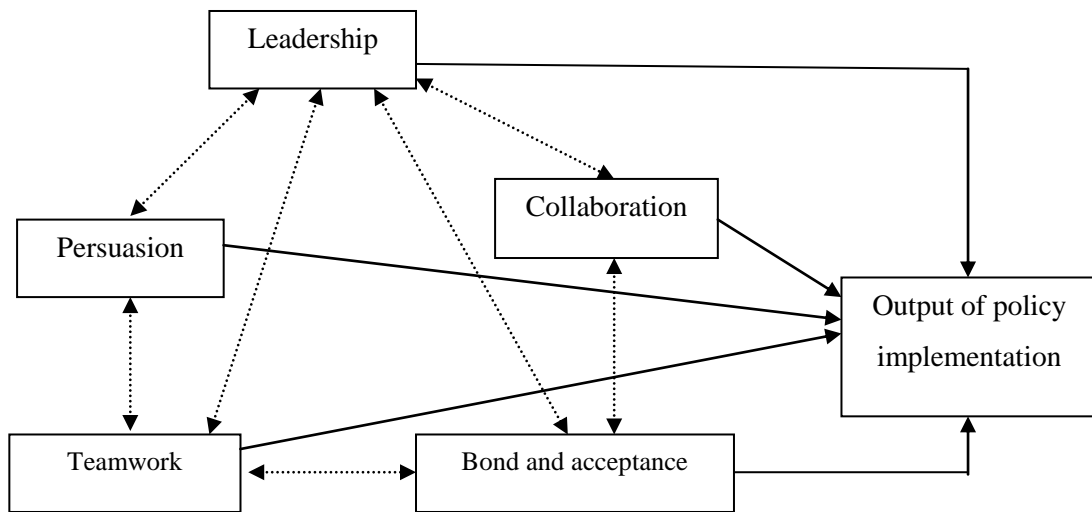
**Figure 2.7** Management Model by Voradej Chandarasorn

**Source:** Voradej Chandarasorn, 2005.

## 3) Organization Development Model

Organization Development Model highlights the collaboration between internal staffs, persuasion, leadership and team building in order to create bond and acceptance of internal staff, let internal staff realize the significance of the policy and support to participate in setting the policy (figure 2.8)



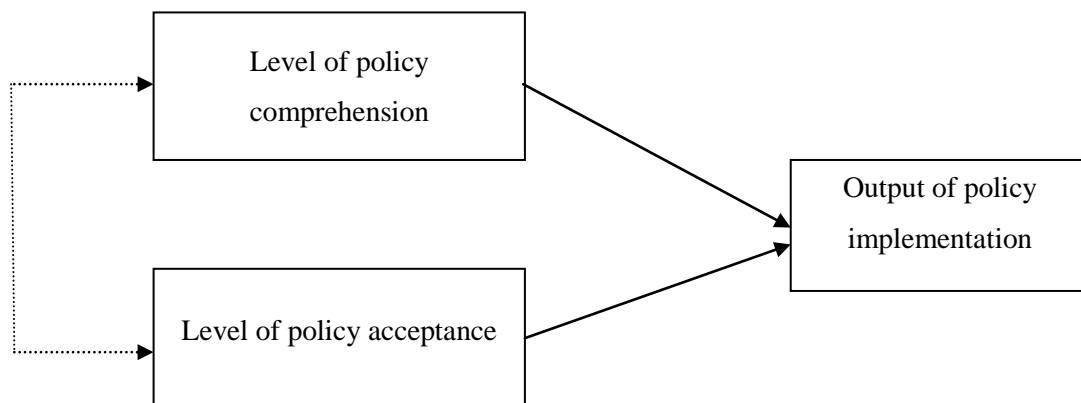


**Figure 2.8** Organization Development Model by Voradej Chandarasorn

**Source:** Voradej Chandarasorn, 2005.

#### 4) Bureaucratic Process Model

Bureaucratic Process model believes that organization is not in formal position, but in individual's discretion especially street-level bureaucrats who are independent in choosing method to interact with citizens. The commander cannot control their decision; as a result, the acceptance of street-level bureaucrats toward policy has tremendous effect toward policy implementation (figure 2.9)

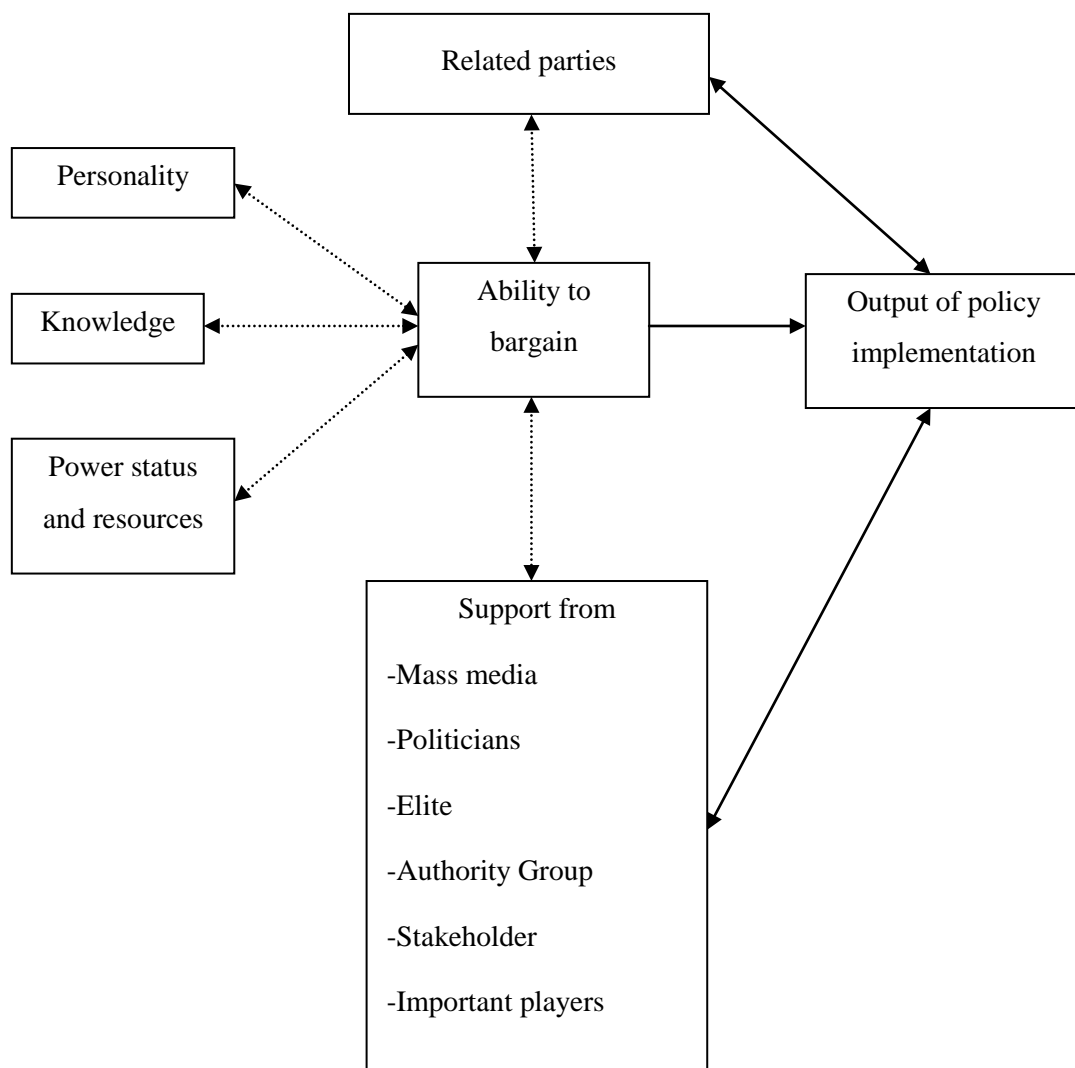


**Figure 2.9** Bureaucratic Process Model by Voradej Chandarasorn

**Source:** Voradej Chandarasorn, 2005.

### 5) Political Model

Political Model shows that the successful policy implementation is about the encounter of all related parties. The factors that identify the success or failure of policy implementation are the ability to bargain, player's position and resources, related sector, support from politicians, mass media and elite, benefit group, and each player's knowledge, personality and bargaining skill (figure 2.10)

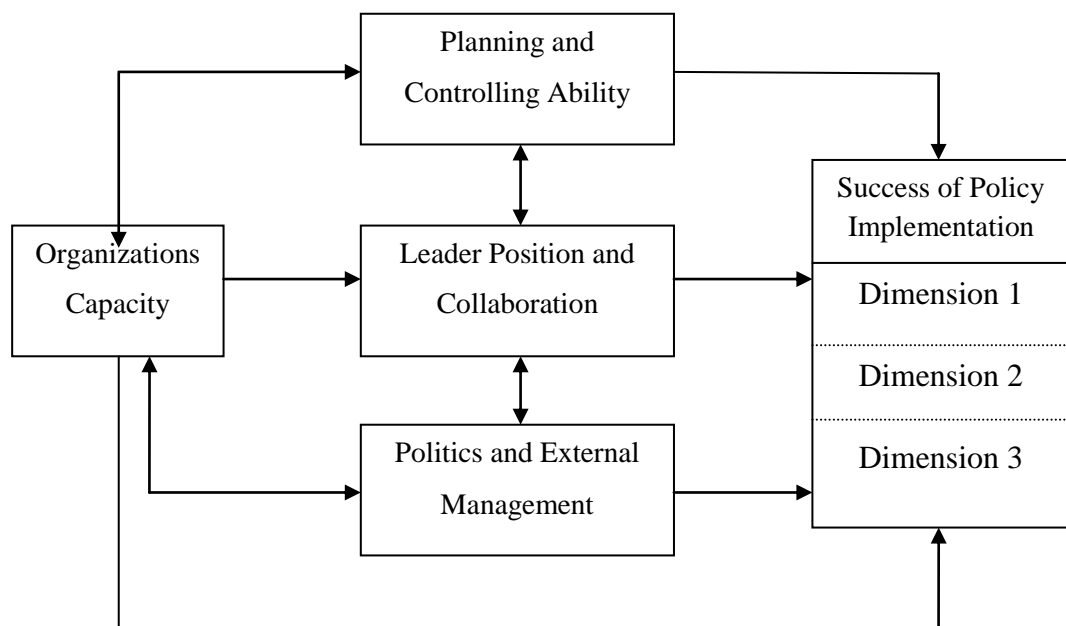


**Figure 2.10** Political Model by Voradej Chandarasorn

**Source:** Voradej Chandarasorn, 2005.

### 6) Integrative Model

Integrative model is a combination of all five models above by identifying the successful variables in implementing policy and prescribing the success into 3 dimensions which are 1) output, result and final result 2) impact of policy 3) whether policy benefit a country or not by having few independent variables which are planning and controlling ability of organization, leader position and collaboration, and politics and external management (figure 2.11)



**Figure 2.11** Integrative Model by Voradej Chandarasorn

**Source:** Voradej Chandarasorn, 2005.

According to all information of policy implementation from researchers above, the summarize of crucial variables affecting policy implementation can be shown in table 2.2

**Table 2.2** Summary of Factors Affecting Policy Implementation

<b>Scholars</b>	<b>Factors that Affect the Policy</b>
Van Meter and Van Horn (1975)	1) Policy standards and objectives 2) Resources 3) Interaction between organization and supported activities 4) Organizational structure 5) Economic, social and political condition 6) Cooperation and response of individuals
Edward III (1980)	1) Communication 2) Resources 3) Behavior and attitude of individuals 4) Bureaucracy structure
Sabatier and Mazmanian (1980)	1) The economic, social and technological fluctuation 2) The interest of mass media toward the policy 3) Public support 4) Related parties' resources and attitude 5) Leader's support 6) Leader's skill and implementers' acceptance toward policy.
Goggin et al. (1987)	1) Motivation and restriction of central government sector 2) Motivation and restriction of state sector 3) Decision and capability of state sector
Winter (1990)	1) Policy formation 2) Organization's internal and external factor

**Table 2.2** (Continued)

Scholars	Factors that Affect the Policy
	3) Street-level bureaucrats' behavior 4) Targeted group's behavior
Voradej Chandarasorn (1984, 2000)	Rational Model 1) Policy's objective 2) Assigning tasks and assignments 3) Operation standard 4) Planning and controlling 5) Evaluation 6) Standard of reward and punishment
Voradej Chantarasorn (1984, 2000)	Management Model 1) Organizational efficiency 2) Structure 3) Personnel 4) Budget 5) Location 6) Tools
Voradej Chantarasorn (1984, 2000)	Organization Development Model 1) Leadership 2) Motivation 3) Team formation 4) Organizational cooperation 5) Relationship and acceptance
Voradej Chantarasorn (1984, 2000)	Bureaucratic Process Model 1) Understandings in the facts of services of the policy makers 2) An acceptance of the policy followers

**Table 2.2** (Continued)

<b>Scholars</b>	<b>Factors that Affect the Policy</b>
Voradej Chantarasorn (1984, 2000)	Political Model 1) Personality 2) Knowledge and skills 3) Power status and resources of the unit 4) Number of the related organizations 5) Ability in negotiation 6) Support (media, politicians, other units' leaders, the influence, benefit group, important persons)
Voradej Chantarasorn (1984, 2000)	Integrative Model 1) Organizational efficiency 2) Proficiency in planning and controlling 3) Leadership and collaboration 4) Politics and management of outside environment

## **2.4 Studies of Factors that Affect a Success of the Policy Implementation**

Factors that affect a success of conducting the policy are the eleven elements that academicians focus on. This is because of the results that can be useful in developing the way in conducting the policy successfully as stated in the objectives. However, it is widely known that the public policy varies depending on the context of each policy (type of the policy, objectives of the policy, target group, location of the policy conduction). Thus, the factors of the successful policies might differ (O'Toole, 2004; Schofield and Sausman, 2004). For the perfect idea improvement of this study, it is crucial to have referred to the studies of academicians in various policies as follows:

### **2.4.1 Studies of the Foreign Researchers**

#### **1) O'Toole**

O'Toole (1986: 189). The studies of various academic researches that are related to the factors affected the success of the policy of more than 300 studies, can be concluded that factors that affect the success of the policy are as follows: 1) policy characteristics especially in a clarity, specificity, flexibility of the goals and procedures, and the validity of the policy's causal theory 2) readiness of the resources 3) implementation-actor, multi-actor structure, and number of actors 4) attitudes and perceptions of implementing personnel 5) alignment of clientele and 6) timing which including the opportunity for learning among implementers.

#### **2) Greenwood et al.**

A study of Greenwood et al. (1975) and working group is a study on planning of the central government in supporting a change in innovations of the primary schools and middle schools. This is to explain a form of changing that utilizes innovations in the schools, and to inform about the factors that bring about success by using the policy. A study has figured out that the factors that influence the variables are the results if the policy as follows: 1) Effects of the project towards the change within the classroom, teachers' teaching behaviors, and students studying behaviors 2) A continuous of the activities after the end of the budgeting from the project and 3) the spread of following actions of other schools which are 1) active actors who continues to support the project 2) a strong support from every level from the board of directors. 3) Flexible operation for an easier adaptation in case of unexpected events. 4) Technical helpers in the classroom-level.

#### **3) Berman and Mclaughlin**

Berman and Mclaughlin (1977) had conducted a research on factors of using policies and a continuity of practicing educational innovative policies in public school. The research shows that there are 3 factors that affect a result of project. The first one is a policy from government which is consists of a goal and plan of a project. Secondly, attributes of a project which are a format of teaching, project's resources, limitation of changing, and practicing of plan. The last factor is organization which considered on environment of the organization, leadership, teachers' and students' characteristics, operating skills, and support of the top positions.

#### 4) Cheema and Rondinelli

Cheema and Rondinelli (1983) They have conducted a study on a local decentralized developing plan in Asia which the variable is the performance result and impact, comprising of level of the achieving-goal plan, a change in proficiency of the local operating team, results and other impacts of the project. The result of the study shows that independent variables that affect the dependent variable are conditional environment, organizational relationship, resources that support the policy conducting, and the ability of the policy actors. Moreover, we also found out that the factors that affect a failure or success of using the decentralized policy of developing countryside are as follow: a clear objective; a form of organization; a sufficient support in politics, finance, and central technical areas.

### 2.4.2 Studies of Thai Researcher

#### 1) Arkom Jaikaew

According to the case study of Arkom Jaikaew (1990), it is a case study on factors that affect the success in using the policy in Southern areas of Thailand. He also has done a research on a policy supporting an education of Thai Muslims. Based on the case study, the factors that bring success towards the policy are as follow: 1) Features of the policy need to be clear and possible, and the policy needs to be accordance with the problems under conditions that are used to specify the policy. 2) Organizational form that is comprised of collaboration and support from top-position institute. 3) Attributes of the officers which are skills and abilities, concentration, and adaptation. 4) Resources which are comprised of budget, number of the personals. 5) Information and connection which are the information from the target group and information usage among the responsible groups of collaboration. 6) Features of the target group of the policy which are needs of the target group and support of that local leader and 7) Nature of the community that comprises of an importance of cultures and traditions of that local society.

#### 2) Klha Thong-kaow

Klha Thong-kaow (1991) Researcher has studied about the problem of bringing national learning policy to conduct and analyze a relationship of factors that affect the success of using the policy. As a result, there are 6 aspects of the



obstruction which are a clear objectives and goals, assignments and missions, active department that conducts the mission, central and local support, control and assessment, and benefits for all of the stakeholders. The core importance of the success is the factor of support from central and local departments.

### 3) Kitti Bunnak

Kitti Bunnak (1993). A study based on bringing value-added tax (VAT) policy to conduct within a first-tier and second-tier hotel industry. It is founded out that a successful factors of conducting the policy are as follow: 1) Goals and objectives of the policy which are a clear communication on goals and objectives of the policy, and also the plans and activities of the project. This should make sure that all of the stakeholders have the same understandings on this. 2) Establishment and assignment of the mission should be clear on the steps and procedures. This also considers on a suitable allocation of the duties among the departments, a sufficient allocation of power among the departments, a flexibility of the process, and an accordance of the performance between the institution and outside institution. 3) Public relation concludes of media that is used to inform, information that is used to communicate the meaning of the policy, and the result and improvement of the policy. 4) Control measure, assessment, and support which comprises of control measure, supervision and assessment, positive motivation, adjustment to fit the objective of the policy, and suggestion from the head of the activity. 5) Efficiency of the institution which comprises of readiness of the personnel in the aspects of skills and knowledge, number of the personnel, sufficient budgets and capitals, the appropriate regulations, readiness of the tools. 6) Creation of the motivation for the operators and people which are benefits that the stakeholders will receive, convenience of the methods, and losses that might occur if they do not follow.

As a result of the studies mentioned above, it provides the successful factors for the policy which could be summarized and illustrated in table 2.3

**Table 2.3** Factors that Affect the Successful of the Policy Implementation

<b>Scholars</b>	<b>Factors that Affect the Successful of the Policy</b>
O'Toole (1986)	<ol style="list-style-type: none"> <li>1) Policy characteristics especially in a clarity, specificity, flexibility of the goals and procedures, and the validity of the policy's causal theory</li> <li>2) Readiness of the resources</li> <li>3) Implementation-actor, multi-actor structure, and number of actors</li> <li>4) Attitudes and perceptions of implementing personnel</li> <li>5) Alignment of clientele</li> <li>6) Timing which including the opportunity for learning among implementers.</li> </ol>
Greenwood et al. (1975)	<ol style="list-style-type: none"> <li>1) Active actors who continues to support the project</li> <li>2) A strong support from every level from the board of directors.</li> <li>3) Flexible operation for an easier adaptation in case of unexpected events.</li> <li>4) Technical helpers in the classroom-level</li> </ol>
Berman and McLaughlin (1977)	<ol style="list-style-type: none"> <li>1) Policies of the government (goals of the project, management strategy)</li> <li>2) Features of the project (education format, resources, limit of the change, and strategy to use)</li> <li>3) Organizational characteristics (environment of the organization and leadership, characteristics of teachers and students, management skills of the top management team)</li> </ol>

**Table 2.3** (Continued)

<b>Scholars</b>	<b>Factors that Affect the Successful of the Policy</b>
Cheema and Rondinelli (1983)	<ol style="list-style-type: none"> <li>1) Conditional environment</li> <li>2) Organizational relationship</li> <li>3) Resources that support the policy conducting,</li> <li>4) The ability of the policy actors.</li> <li>5) Clarity of the organization</li> <li>6) Form of the organization</li> <li>7) Sufficient support of politics, finance, central technics.</li> </ol>
Arkom Jaikaew (1990)	<ol style="list-style-type: none"> <li>1) Features of the policy</li> <li>2) Attributes of the officers</li> <li>3) Attributes of the officers</li> <li>4) Resources</li> <li>5) Information and communication</li> <li>6) Features of the target group</li> <li>7) Nature of the community</li> </ol>
Klha Thong-kaow (1991)	<ol style="list-style-type: none"> <li>1) A clear objectives and goals</li> <li>2) Assignments and missions</li> <li>3) Active department that conducts the mission</li> <li>4) Central and local support</li> <li>5) Control and assessment</li> <li>6) Benefits for all of the stakeholders</li> </ol>
Kitti Boonnark (1993)	<ol style="list-style-type: none"> <li>1) Goals and objectives of the policy</li> <li>2) Establishment and assignment of the mission</li> <li>3) Public relation</li> <li>4) Control measure, assessment, and support</li> <li>5) Efficiency of the institution</li> <li>6) Creation of the motivation for the operators and people</li> </ol>

As the studies on each model of the policy mentioned, they show that there are various methods and ideas depending on different academicians, which comes up with the crucial factors that affect the success of the policy as follows:

(1) Characteristics of the policy needs to have a standard measure and clear objectives with impossibility and accordance with the policy. (Van Meter and Van Horn, 1975; Sabatier and Mazmanian, 1980; O'Toole, 1986; Cheema and Rondinelli, 1983; Voradej Chandarasorn, 1984, 2000; Arkom Jaikaew, 1990; Klha Thong-kaow, 1991; Kitti Boonnark, 1993)

(2) Characteristics of the organization should be focused on communication between personnel within the organization, especially the leader-actor and implementation-actor. It should also focus on the consolation, public structure, collaboration, leadership, and top-level management's support. (Van Meter and Van Horn, 1975; Edward III, 1980; Greenwood et al. (1975); Berman and McLaughlin, 1977; Voradej Chandarasorn, 1984, 2000; Arkom Jaikaew, 1990; Klha Thong-kaow, 1991) (3) Characteristics of the implementation-actor should consist of awareness, understanding, acceptance, attitude, action, relationship and values towards the policy, knowledge and skills, concentration, and adaptation. (Van Meter and Van Horn, 1975; Edward III, 1980; Sabatier and Mazmanian, 1980; O'Toole, 1986; Voradej Chandarasorn, 1984, 2000; Arkom Jaikaew, 1990)

(4) Characteristics of community should be focused on local society and cultures within the community. (Van Meter and Van Horn, 1975; Sabatier and Mazmanian, 1980; Arkom Jaikaew, 1990 )

(5) Others, for example, resources with a focus on budget, personnels (Van Meter and Van Horn, 1975; Sabatier and Mazmanian, 1980; O'Toole, 1986; Arkom Jaikaew, 1990 ), characteristics of the target group and support from the local leader. (Van Meter and Van Horn, 1975; Sabatier and Mazmanian, 1980)

## **2.5 Concepts Regarding to A Success and Failure of Policy**

### **Implementation**

Objective of conducting the studies of the models of the policy conducting are to figure out the factors that might affect success or failure of the policy conduction.

As a result of the researches, there are two points to focus on: first, concepts of success and failure when implementing the policy; second, measurement of success when implementing the policy.

### **2.5.1 Ideas Related to Success or Failure of Implementing the Policy**

Giacchino and Kakabadse (2003: 140) has given the meaning of successful policy implementation interestingly that it is a strategically implementing the policy by the governmental institute who delivered the intended policy decision to the target group with achieved the intended outcomes.

On the other hand, Hogwood and Gunn (1984: 197) has given the meaning of unsuccessful implementation that it is a policy that has already been mostly implemented; however, the result is not satisfied. There could have three possibilities of failure: first, implementation failure, a failure from no implementation or an implementation by a low-potential organization with low skills/understandings or with insufficient number of actors; second, instrument failure, a failure of achieving the goals of the policy; third, failure in normative justification, a failure from unacceptable objectives that might contrast to the values of the society (Kerr, 1976: 359-363).

Moreover, according to Ingram and Mann (1980), he shows that Ideas related to success or failure of conducting the policy is hardly measured because of the high abstract idea with some contraries. The contraries that should be considered are as follows: 1) timing and conditions of the policy environment. This means a policy might be considered successful or fails depending on timing, place, and conditions; if any of them changes, it might affect the result of the measurement. 2) Relationship between policies. In fact, each policy is imposed with a relationship between each other, implementing one policy might has an effect on the other policy. 3) Limitation of the questions on measurement of success and failure might have contrast. From the points of view on the measurement of each academicians, it could be seen that there is a complication which needs an overall consideration on process of the policy, measurement on the result of the policy. These considerations may need to be considered in a various levels such as objectives, outcomes, results, or even the societal acceptance.

### **2.5.2 Measurements Related to Success or Failure of Implementing the Policy**

For the measurements related to success or failure of implementing the policy, there are several academicians' ideas on this, which are varied. For instant, Bardach (1977) said measurements related to success or failure of implementing the policy can be analyzed in three dimensions: 1) objectives are not able to be achieved 2) late implementation of the policy 3) excess usage of the budgets indicated.

However, Patton (1980: 333-336), an expert academician in assessment, had proposed the idea that there are three forms of evaluating the success of the policy: 1) effort evaluation is an evaluation that focus on the quality and quantity that has been put, and focusing on the input as a key evaluating factor. In other words, it does not focus on the output, but focusing on "what have been done?" and "Is the action good enough? How?" 2) Process evaluation is for explaining success and failure, change, outcomes, perception of people, and direction of the policy that is accordant with the policy or not. 3) Evaluation with treatment specification is for measure or specify the needs and aims of the policy; for example, it is different from expectation or not, and it is able to achieve the goals or not. This idea of Patton is quite similar to the ideas of Nakamura and Smallwood (1980). Nakamura and Smallwood has purposed five measurement of success: 1) policy goal attainment is to see whether the goal is achieved or not. 2) Efficiency is for measuring quality of the performance by comparing with the budget. 3) Constituency satisfaction is for measuring satisfaction of people towards the policy. 4) Clientele responsiveness is to measure satisfaction of the target group. 5) System maintenance is measure the consistency and continuous of people implementing the policy, this can be measured from how they manage a usage of the resources. Considering on Ripley and Franklin's point of view (1980, 1982), there are three ways to measure success or failure of the policy implementation:

- 1) Measuring from a level of collaboration of the policy implementers towards the policy makers. If there is a high level of collaboration, there is a high chance of success, and vice versa.

- 2) Measuring from the conditions that an achievement has been reached by a responsibility of the organization without problem or not, a high number of problems indicate a higher chance of failure.

- 3) Measuring from a desirable outcomes and impacts.

It can be seen that ideas on success and failure measurement of the academicians vary, and the criteria using in measure also vary. Some criteria may focus on inputs, some may focus on outcomes, or some may focus on clienteles' responsiveness. Hence, measurement criteria depend on objectives of the users.

## **2.6 Variables of the Studies**

From various studies, academicians have purposed model of implementing the policy to be successful and have found that factors that impact the success differ based on the ideas, theory frames, and contexts of the studies. However, when those factors are reconsidered, it could be concluded that there are four main factors: 1) Characteristics of the policy 2) Organizational characteristics 3) Characteristics of the implementation-actors 4) community's characteristics. Considering on how the metropolitan police implement the policy by a law enforcement with the riders with no helmet, the studies focus on street-level bureaucrats who are the main actors that can bring about success or failure because they are the group of people who directly contact with the people in that area and face with the dilemmas. In other words, the purpose of implementing the project is to respond and satisfy needs of the people within the society. At the same time, street-level bureaucrats need to follow and comply with the policy. However, street-level bureaucrats may face with the problems like limited resources, vague objectives of the policy; therefore, under those pressure, those street-level bureaucrats need to be flexible and be ready for adaptation such as rationing resources, screening the clienteles, and planning a routinizing guideline (Lipsky, 1980).

Thus, the studies mainly focus on the factors that impact the policy implementation-actors which are people (implementation-actors), organization, and community with details as follows:

### **2.6.1 Dependent Variable**

From the ideas of measuring success and failure and studies as mentioned above, one way to measure success is effort evaluation (Patton, 1980). Effort evaluation can be measured by a level of collaboration of implementation-actors. If

the collaboration is high, there is a high chance of success, and vice versa (Ripley and Franklin, 1980, 1982). Therefore, studying on a measurement of success and failure on street-level bureaucrats' cooperation is important. This time studies is about factors that impact a cooperation in implementing the policy of the police under the metropolitan police headquarters, the studies focus on law enforcement with riders with no helmet by having the street-level bureaucrats implementing the policy in the unit of analysis.

The researched of street-level bureaucrat behavior in order to follow the policy in the organization Sorg (1983) have two criteria of consideration which are intention and compliance. These two criteria can be separated into 4 types. Firstly, intentional compliance is the behavior that staff has an intention to successfully follow the policy by adjust himself and agreed to the policy. Secondly, unintentional non-compliance is the staff behavioral that he has attention to follow the rules, but failure. For this type of behavior, the staff may not have a clear direction and objective to follow the policy. Thirdly, the behavior of intentional non-compliance is the purpose of un-follow the rules, and be able to do it. The staff can do this because of disagreed with the policy. Finally, the staff is unintentional compliance which means he has a purpose to not obey the policy, but he cannot do that because of efficiency checking system.

Therefore, the researched of obeying the policy of traffic polices behavioral will be depended on the intention and compliance criteria in order to process the policy.

## **2.6.2 Independent Variables**

### **2.6.2.1 Individual-Level Factors**

In the process of using the public policy, people who are the main role for using the policy or street-level bureaucrats is really important for the successful or failure of the organization because they are the one who use the policy to the target people for achieving the objective. According to the academicians, they have researched about

These can create the impact on whether success or fail of the using the policy in term of awareness, understanding, agreement, attitude, relationship, value of



policy, knowledge, ability, intention and adaptation of the staff (Van Meter and Van Horn, 1975; Edward III, 1980; Sabatier and Mazmanian, 1980; O'Toole, 1986; Voradej Chandarasorn, 1984, 2000; Arkom Jaikaew, 1990). Besides, the researched of the behavior and decidable of the staff to follow the policy and the law enforcement of the officers show that there are many differences actions and deciding behavior of different staffs and officers; for example, the staff who has more experience than others tend to act and has deciding process different from others. (Bittner, 1967; Brown, 1981; Muir, 1977; Walsh, 1985)

#### 1) Work Experience

The police officer is one career that has to use the general knowledge which relate to their career roles in order to create the peace in the society. The experience of the officer is the most significant factor to solve problems in the society. According to Bayley and Bittner (1997), police officer is the science and art kind of career that needs the efficiency experience in order to resolve the different kinds of problems.

Bayley and Garofalo (1989) researched about the behavior of the police officer, and found that experience from working is the main factor to success in this career. The more people have experiences, the more people can receive trust and reliability from co-workers. Moreover, this can be the major treasure to solve different kind of problems within the society and facing the conflict with the population. This is related with Bittner (1970) opinion that the experience of working can create the bigger picture of seeing the situation and be able to solve the dilemma in the society. Furthermore, it can create brave and several ways to handle the problem for the worker to facing with the culprit. Police officers who have long experience of working tend to be specializing in encounter timing with the culprits.

This can be cleared that the experienced from working can affect the way to encounter of the police officers.

From the researched and attitude of specialists from above, it can be adapted with our research to see that the experience of working have positive effect with the obeying the policy of traffic polices. This research has length of service instead of the experience by classify in police time service and time of taking the police position. Therefore, the hypotheses from the research are:

Hypothesis 1.1 Length of police service has positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 1.2 Length of traffic police service has positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

## 2) Policy Perception and Understanding

The supporting of policy implementation of street-level bureaucrats cannot be happen if they lack of perception and understanding of the objective and target of the policy that they are responsible for using it to the society. Moreover, it can be the motivation for worker to create the agreement with the policy (Van Meter and Van Horn, 1975). Therefore, the perception and understanding factor have a positive relationship with the action and intention to use the policy in their own roles.

Hypothesis 2 Perception and understanding of the policy has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

## 3) Role Conflict

During the working day, police officers have to face with the conflict and problem all the time (Lipsky, 1980). It can be the conflict with the target group who disappoints with the services because it contrast or cannot serve their needs. From the previous situation, it creates the impact to the staff to meet with the difficulty that can lead to failure in performance (Van Meter and Van Horn, 1975; Edward III, 1980).

The performance of police worker and especially, the traffic police has to take care of the traffic on the road and the inappropriate drivers, as well as provide the facility to the driver all the time. This can be seen that the police has 2 roles which is contradict with each other, that is, the police has to use the policy from law officer to punish the culprit, but the police also need to provide the facility to the population in order to create and maintain peace in the society. Therefore, roles of police officer are contradiction all the time.

Role is a format of behavior of people who relates to that position in the organization. It is defined by other's hope toward you who have a relationship with your position (Katz and Kahn, 1978). This can be seen that whenever this kind of situation happens and it is not match with other's expectation, it will create the conflict in that person's position.

From the researchers' perspective, role conflict has a negative relationship with the job attitudes and behaviors (Jackson and Schuler, 1985; Netemeyer, Johnston and Burton, 1990; Schaubroeck, Judge and Taylor, 1998; Tuber and Collins, 2000). Moreover, the policy implementation, Tummer and their faculty found that the conflict in the career has a negative effect on following the rules. This means that the more staff, who has responsible to follow the policy, create conflict, the more he cannot follow the policy. Tummer and their faculty classify the conflict into 3 types which are 1) policy-professional role conflict, 2) policy-client role conflict and 3) organizational-professional role conflict. The details of these roles conflict are as follow:

(1) Policy-professional role conflict is the conflict between policy and people who have to follow the policy. Sometimes, the way to act toward the policy is reflect the disagreement attitude of follower. (Hill and Hupe, 2009)

(2) Policy-client role conflict is the conflict between policy and people who receive the service. The receiver disagrees to receive the service. The expected policy is in the different direction with service receivers such as in order to reach the goal of arresting offenders, the police officer need to be aggressively arrest all of culprits without kindness, so this can create dissatisfaction for some of receivers. Therefore, this can create the impact for.

(3) Organizational-professional role conflict is the contradiction between roles of policy and followers. The policy is not match with follower's attitude and behavior. Hence, when using the concept of police policy, it will conflict the way to work in police career. This can be believed that the conflict in the role professional of traffic police has negative relationship with the way to use the policy of workers. This can lead to the third hypothesis.

Hypothesis 3 The role conflict of police officer has negative relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

#### 2.6.2.2 Organizational-Level Factors

In order to achieve the goal or objective of the policy, the main factor is the organization management that dramatically affects the behavior of workers. However, the communication, leadership, coordination, supervision, and supportive in the organization are also important for achieving the goal and objective (Van Meter and Van Horn, 1975; Edward III, 1980; Greenwood et al., 1975; Berman and McLaughlin, 1977; Voradej Chandarasorn, 1984, 2000; Arkom Jaikaew, 1990; Klha Thong-kaow, 1991)

##### 1) Communication

Communication is very important for the way to use policy of street level bureaucrats because the worker needs to know what he has to do for the job, also need to know the policy decision and know what he has to act toward the job. Therefore, the commander has to communicate clearly to the worker (Scheirer, 1981). Unclear communication can be happened if a belief of commander is not match with the policy or the commander did not practice enough, so he does not understand the policy. This relates with the Moroney (1981) opinion that if the concept of values contained in a policy cannot be shown obviously toward workers, they will use their sense to use the policy, without right objective of policy, and the intent of a policy will go wrong.

Ballow (1962) and his faculty have defined the communication in the organization as the exchange of words, letters, symbols, or news for creating the understanding within the organization. The communication means spreading, meaning of policy and command to the worker in the organization. Also, it opens for the opinion, suggestion, and feelings from others as a feedback. By defined the meaning of communication, it can separate the communication in the organization into 3 characteristics which are sender, receiver, and message. When it use in the policy organization, the commander has a significant role to communicate the target and objective of the policy (Van Meter and Van Horn, 1975) for the successful of using the policy. The concept of communication can contribute to the next hypothesis.

Hypothesis 4 The communication within the organization has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

## 2) Leadership

The movability of policy to use in the real stage, the leader or commander have the important role to achieve the goal by controlling and motivating the worker, especially the street-level bureaucrats (Berman and McLaughlin, 1977; Voradej Chandarasorn, 1984, 2000) by Lewin, Lippitt and White (1939). The researcher had found that characteristic of different leadership in the organization. It can classify into 3 characters.

(1) Autocratic is the behavior of leader who usually decide and manage things on himself, and does not have a clear direction and objective because it tends to depend on his mood and emotion. Sometime it can create the rival. This type of leadership can be advantage only on some situations. The result of having this type of leadership will make workers lacking of confident and creativity.

(2) Democratic is type of leadership who depends largely on member opinions or tries to accept other's opinion. He will let members to create and manage work on them. He acts like an advisor who only suggest for members. This type of leadership will create two ways communication in order to increase the ability and satisfaction of workers. Also, it works as a group where the opinions of each other listen. However, this type of leadership management can waste the time to decide the factors and not create the positive effect of the organization.

(3) Laissez-faire is the type of leadership who let the worker freely work the job on their owns and determine the problem by themselves. It does not have any criteria, objective, rules, and regulation. The leader will provide only equipment and answer for the member who curious about the problems. It can create dissatisfaction for the member because it may create the ineffective of outcomes due to unskilled members. This type of leadership management requires high potential of workers in order to create the efficiency and creativity outcomes.

In the different characteristics of leadership can create the different atmospheres in the organization. Voradej Chantarasorn (2005) founds that the leader can create the policy in term of democratic that create the motivation and

creativity of members. The leader will suggest and listen to member's opinions. Moreover, it can motivate the agreement within the organization.

From the concept of leadership from above, it can be adapted into this research. The leadership in police organization has a positive relationship with the corroborative to use the policy in term of providing the security on the road of traffic policy which can lead to the fifth hypothesis.

Hypothesis 5 The democratic leadership has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

### 3) Organizational Support

The supportive from the manager within the organization for the officer has an important role to affect the policy application into the effective ways (Van Meter and Van Horn, 1975; Greenwood et al., 1975; Berman and McLaughlin, 1977). When street-level bureaucrats acknowledge the subsidiary from their managers or leader in the organization, they will feel impress that they are exist in the organization. Moreover, it can create the motivation and close relationship with the organization which leads to be the loyalty with the institute. (Rhodes and Eisenberger, 2002)

From the leaders supportive, it is an organizational exchange theory which develops from social exchange theory that people will exchange with each other. When people receive assistance from someone else, that person will exchange a good thing in return, this can be called a norm of reciprocity. For the organization exchange theory, it will try to achieve the relationship between employer and employees. The more employers can see through the value of employees, the more employer will receive something in return from the employees. According to Rhodes and Eisenberger (2002), there are 3 ways of organization supportive in order to reach the objectives which are as follow:

(1) Fair treatment is the natural way to receive the helps in term of resource utilization and appropriate information for the organization.

(2) Supervisor support is the support from the leader either inside or outside the organization.

(3) Organizational rewards and job conditions is the incentive for employees in term of motivation, freedoms, and stability for working in the organization.

Therefore, the concept of organization supportive has been considered to the traffic police officer. This can be seen that the support from the organization has a positive relationship with the security on the traffic by traffic police. Also, it leads to the sixth hypothesis.

Hypothesis 6 The organizational support has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

#### 4) Supervision

For controlling the behavior and freedom of staffs, it need supervisor to achieve the objective of policy (Lipsky, 1980). This is matched with the research of Brehm and Gate (1997) Brewer (2005) Riccucci (2005) who assure that supervisor has a large effect to the behavior and action of the police officer. The street supervisor can be the influencer for police officer behaviors and decidable such as span of control and presence at the scene of the supervisor. From this research, supervisor will use the span of control to control the behavior of police officers.

When use the previous theory to analyze police officers behavior, the span of control has a relationship with the utilization of policy of the police officer to secure traffic on the road. This leads to the seventh hypothesis which is

Hypothesis 7 The span of control has a negative relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

#### 5) Department Size

Department size can be determined by numerous of all staff in the organization (Kimberly, 1976). Especially for the police organization, the size of department has a relationship with the level of bureaucracy (Brooks, 2010). The larger size of department can receive higher impact from numerous of officer's point of views (Blau, 1970; Langworthy, 1986).

Mastrofski, Ritti, and Hoffmaster (1987) assure the above research that the rate of culprits, who is drunk and drive, relates to the size and level

of police policy. They also found that the larger size of department has lower tendency to arrest culprits. This also relates with Crank (1990) opinion who have researched about the relationship between department size and arrestment of culprits. The research shows that the number of people who will be culprits will be decrease if the number of police officers increased. From several researches of specialists, it can be seen that it create a negative relationship between department size and using the policy to secure the safety on the road. Therefore, it leads to the following hypothesis.

Hypothesis 8 The department size has a negative relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

#### 2.6.2.3 Community-Level Factors

The study of community-level factors that affects and influences the behavior and decidable of police officer which is under Theoretical Criminology of ecology school. Most of people believe that unethical behaviors of people related to the different environment such as people who live in the urbanization, industrialization, social disorganization tend to behave differently. The rapidly expansion of urbanize and industrial can create chaos and normless in the society. Therefore, police officers will behave and use policy differently depends on the foundation of culprits (Grosman; 1975). For example, in the criminal areas, the policeman tend to have higher responsible to secure population. As a result, inspector patrol officers should use vehicle for the security and use the law without kindness. However, if any areas that are less social distance and the officers receive a good support from the population, police officers will require a greater service for the people in that areas. Mcdevitt (2008) had researched about the community-level factors and organizational-level factors.

The level of racial disparity in traffic enforcement in the Massachusetts state shows that the attribute of society can relate to the behavior of officer to arrest people. This means the police officer should act differently depended on the racial disparity of people in the area.

Parker, MacDonald, Alpert, Smith and Piquero (2004) said that in the highly disorganized neighborhood tends to experience the problem in term of infrastructure which is the main barrier to solve the problems by itself. Therefore, it



requires the government power to resolve, and influence police officers to use applicable law decisively. In addition, people who live in this kind of area tend to do not trust and do not corroborative with police officers. This affects police's behavior to be more intensive to use the law with them. Factors that use to determine the level of disorganized neighborhood are incomes, racism, rate of criminals and murders, and rental type of living.

The researcher tried to find that the relationship between the disorganized neighborhood and behavior of police officers. Terrill and Reisig (2003) found that type of society can impact neighborhood context which affects police use of force in Annapolis County, Indiana St. Petersburg, Florida.

Roles of the police officers mean the aggressive behavior to use for arresting the culprits within the dangerous areas where often has lower incomes and higher criminal's rates than other areas.

Ingram (2007) researched about neighborhood characteristics which be able to affect traffic citation practice of police in the western part of The USA. The result shows that

The level of disorganized neighborhood, high criminal's rates in the neighborhood and racism within the area are important with the way to use policy of police officers and traffic citation practices of police. This means that lower economic status, rental kind of living, high criminal rates, and high rate racism tend to create higher traffic citation practice of police.

Sun, Payne and Wu (2008) have researches about the relationship of neighborhood characteristics, police's attribution factors, and police's behavioral factors in Annapolis County, Indiana St. Petersburg, Florida. As a result, disorganized of neighborhood is related with the police's behavior which means polices will act aggressively toward lower incomes areas where have higher criminal's rates.

From the previous researches, it can apply for this researches that the disorganized society and impact the behavior of police officers and traffic polices in order to use policy through culprits. Therefore, the specialist believes that criminal's rate and crowded population in the area are factors of disorganized society.

These factors can also relate to the cooperation of traffic police in according with law enforcement on road safety policy implementation. Hence, it leads to the ninth hypothesis.

Hypothesis 9.1 The homicide rate within the area has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 9.2 The population density rate within the area has positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

This can be concluding term of relationship in the table 2.4 and 2.5 below.

**Table 2.4** Relationship between Dependent and Independent Variables

<b>Independent Variable</b>	<b>Dependent Variable</b>	<b>Supporting Theory</b>	<b>Researcher</b>
Work Experience	The Cooperation of Policy Implementation	Theory of Policy Implementation	Bayley and Garofalo (1989)
Policy Perception and Understanding	The Cooperation of Policy Implementation	Theory of Policy Implementation	Van Meter and Van Horn (1975)
Role Conflict	The Cooperation of Policy Implementation	Role Conflict theory	Van Meter and Van Horn (1975) Edward III (1980) Lipsky (1980) Katz and Kahn (1978)
Communication	The Cooperation of Policy Implementation	Theory of Policy Implementation	Van Meter and Van Horn (1975)

**Table 2.4** (Continued)

<b>Independent Variable</b>	<b>Dependent Variable</b>	<b>Supporting Theory</b>	<b>Researcher</b>
Leadership	The Cooperation of Policy Implementation	Theory of Policy Implementation	Berman and Mclaughlin (1977) Voradej Chandarasorn (1984, 2000) Lewin et al. (1939)
Organizational Support	The Cooperation of Policy Implementation	Theory of Policy Implementation, Organizational Support Theory	Van Meter and Van Horn (1975) Greenwood et al. (1975) Berman and Mclaughlin (1977) Rhodes and Eisenberger (2002)
Supervision	The Cooperation of Policy Implementation	Theory of Policy Implementation	Lipsky (1980)
Department Size	The Cooperation of Policy Implementation	Organization Theory	Brooks (2010)
Social Disorganization	The Cooperation of Policy Implementation	Social Disorganization Theory	Parker et al. (2004) Grosman (1975)

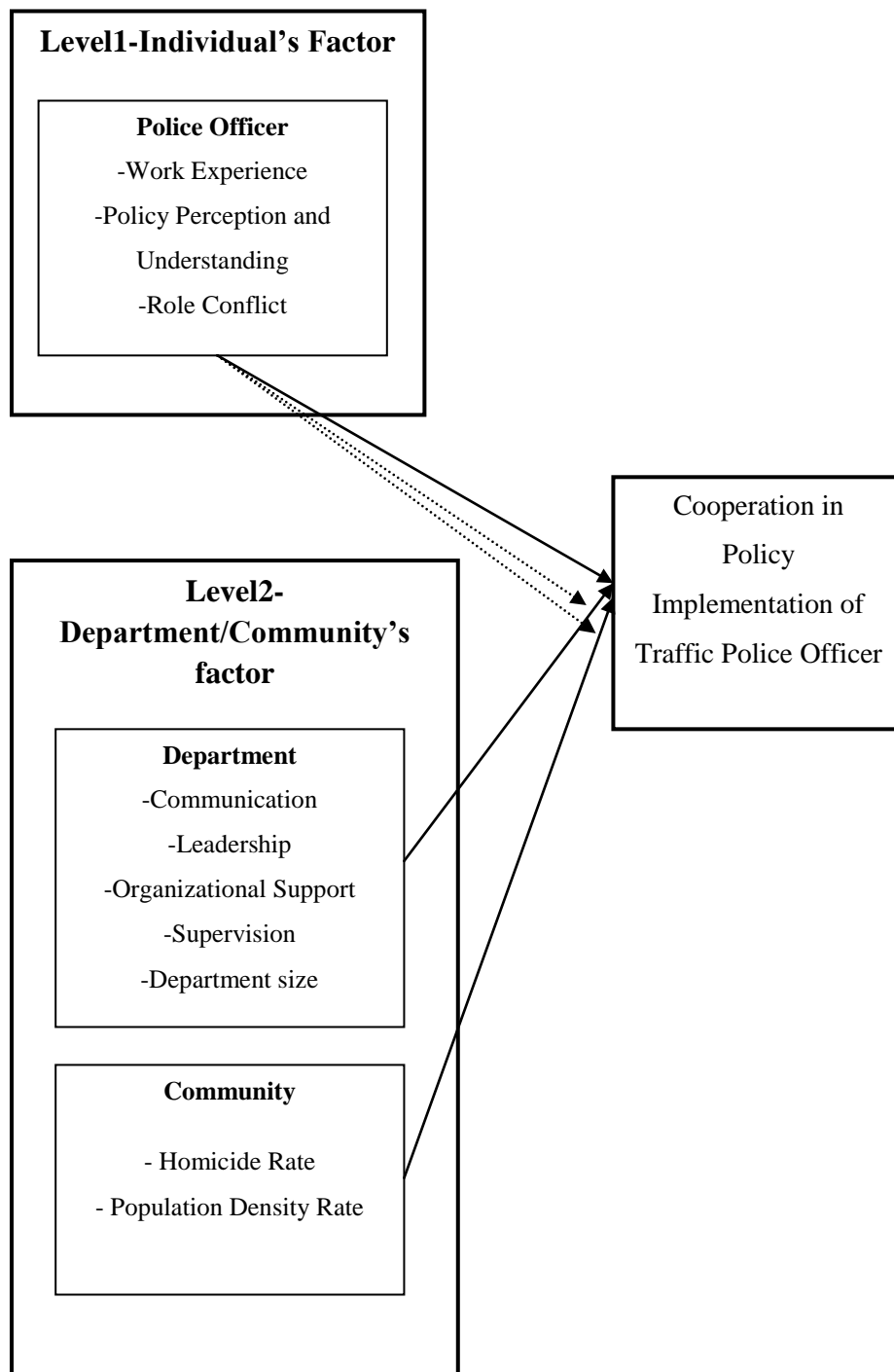
**Table 2.5** Factors Affecting to the Cooperation of Traffic Police in According with Law Enforcement on Road Safety Policy Implementation

<b>Hypothesis</b>	<b>Unit of Analysis</b>	<b>Variables</b>
H1.1	individual-level	Length of Police Service
H1.2	individual-level	Length of Traffic Police Service
H2	individual-level	Policy Perception and Understanding
H3	individual-level	Role Conflict
H4	organization-level	Communication
H5	organization-level	Democratic Leadership
H6	organization-level	Organizational Support
H7	organization-level	Span of Control
H8	organization-level	Department Size
H9.1	community-level	Homicide Rate
H9.2	community-level	Population Density Rate

## 2.7 Conceptual Framework

From literature review and previous works, it has found that there are numerous factors influencing on policy implementation particularly cooperation among operational level or practitioners. For instance, one of such those numerous factors stated included the variables of individual level, organization level, and community level. Unfortunately, from previous researches, most scholars solely included one particular level which was one of weakness towards the study of cooperation on policy implementation. Thus, this study is to fill the gap arisen from this field. Researcher include those 3 factors(individual level, organization level,

and community level) into this study which they are divided into 2 levels- 1) individual level and 2) organization and community level. It is to study a direct relationship among the individual level factors (work experience, policy perception and understanding, role conflict), organization level factors (communication, democratic leadership, organizational support, supervision, department size), community level factors (homicide rate, population density rate) which have an impact on cooperation of traffic police officers working at Metropolitan Police Station in terms of policy implementation. Moreover, an indirect impact of individual level factors (work experience, policy perception and understanding, role conflict) on cooperation of road safety which also be influenced by the organization level factors (communication, democratic leadership, organizational support, supervision, department size) and community level factors (homicide rate, population density rate) is included into this work as well. These can be explained in the figure 2.12 below.



**Figure 2.12** Conceptual Framework

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

This research is a study of the factors affecting traffic police officer's cooperation in enforcing law against those not wearing helmets as well as aims to study the causal relationship and result of these factors. In order to achieve these research objectives, the research methodology will consist of research design, population and sample, research tools, data collection and technical analysis. The details of these research methodology are as follow:

#### **3.1 Research Design**

The researcher choose non experimental designs which are the study of the phenomenon as they occur naturally and have individual level as unit of analysis by collect data from the police officer in the police stations that are research samples. The data collecting process will be conducted in form of cross-sectional studies which is to collect data only once at a given point in time by using the questionnaires as the tools to analyze data with statistical methods and determine the relationship of the factors studied.

#### **3.2 Population and Sample**

This research is conducted to study the factors affecting the level of cooperation in enforcing law against those not wearing helmets of the traffic police officer affiliated with Metropolitan Police Bureau, who are in charge in Bangkok area. According to the regulations of Royal Thai Police regarding the authority delegation of Royal Thai Police's administrative agencies (B.E. 2552), Metropolitan Police Bureau is divided into 14 divisions which are 1) General Staff Division 2) Traffic

Police Division 3) Metropolitan Police Division 1-9 4) Investigation Division 5) Patrol and Special Operation Division and 6) Protection and Crowd Control Division. In the part that is police station, Metropolitan Police Division 1-9 are 9 commanding centers that are in charge to enforcing the traffic law. The details of Metropolitan Police Division 1-9 are as follow:

1) Metropolitan Police Bureau 1 consist of 9 metropolitans police stations which are Dusit Police Station, Phayathai Police Station, Makkasan Police Station, Huai Khwang Police Station, Din Daeng Police Station, Nang Loeng Police Station, Samsen Police Station, Chanasongkram Police Station and Bangpho Police Station.

2) Metropolitan Police Bureau 2 consist of 11 metropolitan police stations which are Bangsue Police Station, Sutthisan Police Station, Phaholyothin Police Station, Taopoon Police Station, Prachachuen Police Station, Kokram Police Station, Bangkhen Police Station, Kokram Police Station, Khannayao Police Station, Bangkhen Police Station, Saimai Police Station, Tung Song Hong Police Station and Don Muang Police Station.

3) Metropolitan Police Bureau 3 consist of 11 metropolitan police stations which are Minburi Police Station, Nimitmai Police Station, Lumhin Police Station, Lumpakchee Police Station, Suwinthawong Police Station, Nong Chok Police Station, Phachasumran Police Station, Ladkrabang Police Station, Romklat Police Station, Chalongkrung Police Station and Chorakaenoi Police Station.

4) Metropolitan Police Bureau 4 consist of 8 metropolitan police stations which are Huamark Police Station, Ladprao Police Station, Wang Thong Lang Police Station, Chokchai Police Station, Bunghum Police Station, Bangchan Police Station, Prawet Police Station and Udomsuk Police Station.

5) Metropolitan Police Bureau 5 consist of 9 metropolitan police stations which are Wat Phraya Krai Police Station, Bang Phong Phang Police Station, Tungmahamek Police Station, Lumpini Police Station, Thonglor Police Station, Khlong Tan Police Station, Phra Khanong Police Station, Bangna Police Station and Tha Ruea Police Station.

6) Metropolitan Police Bureau 6 consist of 8 metropolitan police stations which are Phra Ratchawang Police Station, Chakrawat Police Station,



Samranrat Police Station, Plubplachai1 Police Station, Plubplachai2 Police Station, Bangrak Police Station, Pathumwan Police Station and Yannawa Police Station.

7) Metropolitan Police Bureau 7 consist of 11 metropolitan police stations which are Bangplad Police Station, and Band Yi Khan Police Station, Bang Khun Non Police Station, Bangkoknoi Police Station, Bangkokyai Police Station, Bangsaothong Police Station, Tha Phra Police Station, Sala Daeng Police Station and Bowon Mongkol Police Station.

8) Metropolitan Police Bureau 8 consist of 11 metropolitan police stations which are Bangyeerua Police Station, Talad Phlu Police Station, Puppharam Police Station, Buk Kalo Police Station, Samre Police Station, Somdet Chao Phraya Police Station, Ratburana Police Station, Bangmod Police Station, , Pak Khlongsan Police Station and Bangkholaem Police Station.

9) Metropolitan Police Bureau 9 consist of 10 metropolitan police stations which are Tha Kham Police Station, Samae Dam Police Station, Thian Thale Police Station, Bang Khun Thian Police Station, Bang Bon Police Station, Phasi Charoen Police Station, Lak Song Police Station, Phet Kasem Police Station and Nong Khaem Police Station.

Total amount of the police stations under Metropolitan Police Division 1-9 is 88 stations which cover the areas of 50 districts in Bangkok. The areas' details are as follow:

(1) Phra Nakhon District has Chanasongkram Police Station, Nang Loeng Police Station, Phra Ratchawang Police Station and Samranrat Police Station.

(2) Dusit District has Dusit Police Station, Samsen Police Station and Nang Loeng Police Station.

(3) Phaya Thai District has Phayathai Police Station, Dindang Police Station and Bangsue Police Station.

(4) Ratchathewi District has Phayathai Police Station, Makkasan Police Station and Dindang Police Station.

(5) Huai Khwang District has Makkasan Police Station, Huaykwang Police Station, Wang Thong Lang Police Station and Sutthisan Police Station.

(6) Dindaeng District has Dindang Police Station and Sutthisan Police Station.

(7) Pomprap Satruphai District has Nang Loeng Police Station, Samranrat Police Station, and Plubplachai1 Police Station.

(8) Bangsue District has Bangpho Police Station, Prachachuen Police Station and Taopoon Police Station.

(9) Chatuchak District has Bangsue Police Station, Phaholyothin Police Station, Bangkhen Police Station, Tung Song Hong Police Station, Prachachuen Police Station and Sutthisan Police Station.

(10) Lat Phrao District has Kokram Police Station.

(11) Bangkhen District has Bangkhen Police Station and Khannayao Police Station.

(12) Donmueang District has Donmueang Police Station.

(13) Bueng Kum District has Kokram Police Station, Ladprao Police Station and Bunghum Police Station.

(14) Khannayao District has Kokram Police Station and Khannayao Police Station.

(15) Sai Mai District has Bangkhen Police Station, Sai Mai Police Station and Khannayao Police Station.

(16) Laksi District has Tung Song Hong Police Station.

(17) Ladkrabang District has Romklao Police Station, Chalongkrung Police Station and Chorakaenoi Police Station.

(18) Khlong Sam Wa District has Minburi Police Station, Nimitmai Police Station, Bangchan Police Station. and Khannayao Police Station.

(19) Nong Chok District has Nong Chok Police Station, Suwinthawong Police Station, Phachasumran Police Station, Lumhin Police Station, and Minburi Police Station.

(20) Minburi District has Minburi Police Station, Romklao Police Station, Chalongkrung Police Station, Lumpakchee Police Station and Nimitmai Police Station.

(21) Bangkapi District has Huamark Police Station, Latphrao Police Station, Chokchai Police Station and Prawet Police Station.

(22) Suan Luang District has Huamark Police Station and Prawet Police Station.

(23) Wang Thonglang District has Wang Thong Lang Police Station, Latphrao Police Station and Chokchai Police Station.

(24) Saphansoong District has Bangchan Police Station and Prawet Police Station.

(25) Prawet District has Prawet Police Station, Udomsuk Police Station and Bangna Police Station.

(26) Sathorn District has Tungmahamek Police Station, Wat Phraya Krai Police Station and Yannawa Police Station.

(27) Bangkholaem District has Wat Phraya Krai Police Station and Yannawa Police Station.

(28) Yannawa District has Bang Phong Phang Police Station, Tungmahamek Police Station.

(29) Khlongtoei District Office has Tungmahamek Police Station, Lumpini Police Station, Thonglor Police Station, Khlong Tan Police Station, Phrakhanong Police Station and Tha Ruea Police Station.

(30) Vadhana District has Lumpini Police Station, Thonglor Police Station, Khlong Tan Police Station and Phrakhanong Police Station.

(31) Bangrak District has Bangrak Police Station, Yannawa Police Station and Tungmahamek Police Station.

(32) Pathumwan District has Lumpini Police Station and Pathumwan Police Station.

(33) Phrakhanong District has Phrakhanong Police Station and Bang Na Police Station.

(34) Bang Na District has Bang Na Police Station.

(35) Samphanthawong District has Chakrawat Police Station and Plubplachai2 Police Station.

(36) Bangkoknoi District has Bangkoknoi Police Station, Bangkokyai Police Station and Bang Khun and Non Police Station.

(37) Bangkokyai District has Bangkokyai Police Station and Tha Phra Police Station.

(38) Bangphlat District has Bangplad Police Station, Bowon Mongkol Police Station and Band Yi Khan Police Station

(39) Taling Chan District has Taling Chan Police Station and Bangsaothong Police Station.

(40) Thawi Wattana District has Thammasala Police Station and Sala Daeng Police Station.

(41) Bang Khae District has Sala Daeng Police Station, Phet Kasem Police Station, Lak Song Police Station and Bangsaothong Police Station.

(42) Thonburi District has Bangyeerua Police Station, Puppharam Police Station, Talad Phlu Police Station, Buk Kalo Police Station and Samre Police Station.

(43) Khlongsan District has Somdet Chao Phraya Police Station.

(44) Rat Burana District has Rat Burana Police Station.

(45) Chom Thong District has Bangmod Police Station and Bang Khun Thian Police Station.

(46) Bang Khun Thain District has Thian Thale Police Station and Samae Dam Police Station.

(47) Bangbon District has Bang Khun Thian Police Station, Bangbon Police Station and Samae Dam Police Station.

(48) Phasicharoen District has Phasi Charoen Police Station and Bangsaothong Police Station.

(49) Nongkhaem District has Nong Khaem Police Station and Nong Khang Phlu Police Station.

(50) Thungkhru District has Thungkhru Police Station.

According to the data provided above, the number of police stations in each district are different based on the size of the district, amount of population, amount of traffic related crime as well as the geographical location such as the zoning of roads, canals or river. In addition, Royal Thai Police divides the level of police station into 2 level regarding the amount of work of each police station. The level of metropolitan police stations will be according to table 3.1

**Table 3.1** Metropolitan Police Stations Classify Into Level

Metropolitan Police Stations	Amt.
<b>Level 1</b>	61
Dusit Police Station, Phayathai Police Station, Makkasan Police Station, Huaykwang Police Station, Dindang Police Station, Nang Loeng Police Station, Samsen Police Station, Chanasongkram Police Station, Bangsue Police Station, Sutthisan Police Station, Phaholyothin Police Station, Taopoon Police Station, Prachachuen Police Station, Kokram Police Station, Bangkhen Police Station, Saimai Police Station, Tung Song Hong Police Station, Don Muang Police Station, Minburi Police Station, Huamark Police Station, Ladprao Police Station, Prawet Police Station, Chokchai Police Station, Wang Thong Lang Police Station, Bangchan Police Station, Bunghum Police Station, Tha Ruea Police Station, Lumpini Police Station, Tungmahamek Police Station, Bang Phong Phang Police Station, Wat Phraya Krai Police Station, Phra Khanong Police Station, Bangna Police Station, Khlong Tan Police Station, Thonglor Police Station, Samranrat Police Station, Phra Ratchawang Police Station, Chakrawat Police Station, Plubplachai2 Police Station, Pathumwan Police Station, Bangrak Police Station, Yannawa Police Station, Bangkoknoi Police Station, Bangplad Police Station, Bang Yi Khan Police Station, Taling Chan Police Station, Thammasala Police Station, Puppharam Police Station, Samre Police Station, Buk Kalo Police Station, Ratburana Police Station, Thung Khru Police Station, Bangyeerua Police Station, Bangmod Police Station, Bang Khun Thian Police Station, Thakham Police Station, Phasi Charoen Police Station, Lak Song Police Station, Nong Khaem Police Station, Phet Kasem Police Station	

**Table 3.1** (Continued)

<b>Metropolitan Police Stations</b>	<b>Amt.</b>
<b>Level 2</b>	<b>27</b>
Bangpho Police Station, Khannayao Police Station, Nongjok Police Station, Lumpakchee Police Station, Lumhin Police Station, Chorakhe Noi Police Station, Ladkrabang Police Station, Nimitmai Police Station, Phachasumran Police Station, Chalongkrung Police Station, Romklao Police Station, Suwinthawong Police Station, Udomsuk Police Station, Tha Phra Police Station, Bowon Mongkol Police Station, Bangkokyai Police Station, Bangsaothong Police Station, Bang Khun Non Police Station, Sala Daeng Police Station, Talad Phlu Police Station, Somdet Chao Phraya Police Station, Pak Khlongsan Police Station, Bang Kho Laem Police Station, Bang Bon Police Station, Nong Khang Phlu Police Station, Samae Dam Police Station, Thian Thale Police Station	88
<b>Total</b>	

**Source:** Royal Thai Police, 2014.

This research is stratified random sampling that classify by the level of metropolitan police stations at level 1 and level 2 which consist of 61 and 27 stations respectively. In term of sample, the researcher use the table of Krejcie and Morgan (1970) at 95% confidence level and 5% error allowance level. As result in, 52 and 25 stations respectively (77 in total). In term of population, this research focus on the traffic police officer at the street-level bureaucrat who responsible for implementing the road safety policy directly to the people which are 2,337 non-commissioned officers and squad leaders who in charge in traffic-related duties.

The processes of sampling the police officer in order to get the representative of population and use to test the relationship framework of hypothesis is as follow:

1) The size of sample by Yamane's formula (1973) at 95% confidence level and 5% error allowance level

$$n = \frac{N}{1 + Ne^2}$$

Assuming     n is size of sample  
                   N is size of all population studied  
                   e is deviation of random (at 0.05)

$$n = \frac{2,337}{1 + (2,337) \times (0.05^2)}$$

$$\approx 342 \text{ traffic police officers}$$

Therefore, the size of sample is 342 traffic police officers

2) Setting the samples of metropolitans police stations at 77 stations, at level 1 (52 stations) and level 2 (25 stations) from the simple random sampling of 9 metropolitan police bureaus to make it covers the whole area of Bangkok, then set the sample size of 77 metropolitan police stations as shown in table 3.2.

**Table 3.2** Sample Size

Metropolitan Police Stations	Number of Police Officers	Sample size
Phayathai Police Station	50	7
Makkasan Metropolitan Police Station	34	5
Huai Khwang Metropolitan Police Station	34	5
Din Daeng Metropolitan Police Station	20	3

**Table 3.2** (Continued)

<b>Metropolitan Police Stations</b>	<b>Number of Police Officers</b>	<b>Sample size</b>
Nang Loeng Metropolitan Police Station	35	5
Chanasongkram Metropolitan Police Station	35	5
Prachachuen Metropolitan Police Station	34	5
Bangsue Metropolitan Police Station	46	7
Sutthisan Metropolitan Police Station	37	5
Phahon Yothin Metropolitan Police Station	37	5
Bangkhen Metropolitan Police Station	53	8
Don Mueang Metropolitan Police Station	52	7
Thungsonghong Metropolitan Police Station	45	6
Minburi Metropolitan Police Station	45	6
Huamark Metropolitan Police Station	48	7
Latphrao Metropolitan Police Station	41	6
Prawet Metropolitan Police Station	37	5
Chokchai Metropolitan Police Station	33	5
Wang Thong Lang Metropolitan Police Station	51	7
Tha Ruea Metropolitan Police Station	22	3
Lumpini Police Station	58	8
Toong-Mahamek Police Station	49	7
Bang Phongphang Police Station	48	7
Wat Phrayakrai Police Station	31	5
Phra-Khanong Police Station	34	5



**Table 3.2** (Continued)

<b>Metropolitan Police Stations</b>	<b>Number of Police Officers</b>	<b>Sample size</b>
Bangna Police Station	43	6
Klongton Police Station	52	7
Thonglor Police Station	54	8
Samranrat Police Station	27	4
Phrarajchavang Police Station	51	7
Chakrawat Police Station	36	5
Phapphachai1 Police Station	26	4
Phapphachai2 Police Station	27	4
Pathumwan Police Station	61	9
Bangrak Police Station	42	6
Yannawa Police Station	44	6
Bangkok-Noy Police Station	24	4
Bangplad Police Station	22	3
Bang-Yi-Kun Police Station	34	5
Talingchan Police Station	35	5
Dhamma-Sala Police Station	24	4
Bhuppharam Police Station	21	3
Samre Police Station	15	2
Bukkalo Police Station	43	6
Ratburana Police Station	35	5
Bangmod Police Station	31	5
Bang khuntien Police Station	35	5
Tah-Kharm Police Station	29	4
Phasi Chareon Police Station	36	5
Lhuk-Song Police Station	24	4
Nong Khaem Police Station	6	2

**Table 3.2** (Continued)

<b>Metropolitan Police Stations</b>	<b>Number of Police Officers</b>	<b>Sample size</b>
Phetkasem Police Station	20	3
Khunna Yao Police Station	33	5
Nhong-jok Police Station	10	2
Phukchee Police Station	15	2
Chorakhe Noi Police Station	19	3
Lat Krabung Police Station	25	4
Nimit-Mhai Police Station	30	4
Prachasumran Police Station	9	2
Chalhong-krung Police Station	22	3
Rom-Klao Police Station	14	2
Suwinthawong Police Station	8	2
Udomsuk Police Station	19	3
Tha-Phra Police Station	17	2
Baworn-Mongkol Police Station	7	2
Bangkok-Yhai Police Station	22	3
Bang Saothong Police Station	22	3
Bang Khuntien Police Station	17	2
Saladang Police Station	18	3
Talard-Plu Police Station	25	4
Somdej-Jaopraya Police Station	22	3
Klong-Sarn Police Station	8	2
Bang-Klolharm Police Station	17	2
Bangbon Police Station	10	2
Nhong-klangplu Police Station	11	2
Samae-Dum Police Station	18	3
Tien-Talay Police Station	13	2
Total	2,337	342

### **3.3 Variables, Operational Definition and Measurements**

#### **3.3.1 Dependent Variable**

The dependent variable in this research is based on the cooperation of traffic police in according with law enforcement on road safety policy implementation. The cooperation can be considered in 2 criteria which are intention and compliance of officers (Sorg, 1983). Both criteria are put into the question 27-30 of the survey.

#### **3.3.2 Independent Variable**

There are total of 9 independent variables in this research collected from traffic police officer's opinion from survey and the statistic of police stations and community in their areas that can be further divided into 3 levels which are

##### **3.3.2.1 Individual Level**

1) The working experience of traffic police officer which is calculated from the working duration as a police. The survey classifies the working duration into 2 groups which are as length of police service and as length of traffic police service.

2) Perception and understanding toward policy is the level of traffic police officer's awareness and comprehension toward goal and objective of policy in order to be able to implement the policy with targeted group effectively (question 1-4 in the survey).

3) The role conflict means the difficult circumstance where the policy's objective mismatch or unconnected with individual's value impacting the policy implementation. The role conflict can be divided into 3 dimensions which are 1) the policy- professional role conflict 2) the policy-client role conflict and 3) organizational-professional role conflict (Tummer, Vermeeren, Steijn and Bekkers, 2012) (asked in question 5-10 in the survey)

##### **3.3.2.2 Organizational Level**

1) Communication means spreading, transmitting and communication commander's policy to officers in order to inform the proper behavior, advices, and expected behavior that lead to the achievable policy implementation (asked in question 11-14 of survey)

2) Democratic leadership is the leadership attribute that allows the officer empowerment to make decision and find own working method. Leader will emphasize on giving suggestion, being open-minded and valuing teamwork (asked in question 15-20 of the survey)

3) Organizational support represents the executives give support to officers to implement the policy, The support can be categorized into 3 aspects which are 1) fair treatment in allocating resources to officers 2) supervisor support in giving value to work and effort of officers and 3) organizational reward and job condition (Rhodes and Eisenberger, 2002) which are asked in question 21-16 of the survey

4) Supervision means managing and controlling subordinates to work effectively and accordingly to the policy. The researcher set a span of control to be the representative variable through the number of traffic police officers that directly report to a single supervisor.

5) Department size represents the total number of traffic police officers in police station which is derived from data collection from police station

#### 3.3.2.3 Community Level

Unorganized society variable means social institution is lack of the capability in controlling members to follow societal order. Researcher use homicide rate of 100,000 people during year 2012-2015 and population density rate of each police station as representative based on the crime report statistic of Royal Thai Police.

### 3.4 Research Tools

Questionnaire is created based on theory, framework, and practical idea for non-commissioned officer and squad leader that are responsible for traffic serving. The questionnaire is divided into 7 parts which are

Part 1 personal status

Part 2 the perception and understanding toward policy

Part 3 opinion toward the role conflict

Part 4 opinion toward communication

Part 5 opinion toward leadership

Part 6 opinion toward organizational support

Part 7 opinion toward the cooperation in according with law enforcement on road safety policy implementation

### **3.4.1 Invention of Research Tools**

Researchers have learnt the theory, framework and related principle to create research tool which is questionnaire which learner can review along with the theory and framework that related with policy implementation, know the key issue in policy implementation by officers and factors that have an influence over policy implementation. Later, all critical variables are brought to design the questionnaire along with the use of measurable indicator which interviewees must answer how much they agree or disagree. The indicator has a range between 1-10 meaning that 10 is the strongest agree while 1 is the least agree.

After finishing design the questionnaire, the quality inspection of research tools is the next step. Research tools are expected to meet validity and reliability.

### **3.4.2 Questionnaire Quality Inspection**

Questionnaire has total 7 parts which are 1) personal status, 2) the perception and understanding toward policy, 3) opinion toward the role conflict, 4) opinion toward communication, 5) opinion toward leadership, 6) opinion toward organizational support, and 7) opinion toward the cooperation in implementing road safety policy to person who not wearing helmet. Focusing on question part 2-7, the questions are more tend to need a specification of required value, so reliability will be utilized to find the questionnaire quality which will be discussed below.

1) Design questionnaire of each operational specific term based on literatures and other researches. Then, let the qualified and board examine the language and suitability of the research content as to be a guarantee of content validity to ensure that the questionnaire covers all the content and objective of the research (Pornpen Petchsuksiri, 1997)

2) Try out the questionnaire with another 30 traffic police officers that is not in the sample unit to find Cronbach's alpha coefficient in order to ensure

reliability of questionnaire. The range of acceptable reliability coefficient is above .50 (Sujitra Boonyarattapat, 2003). The result of finding Cronbach's alpha coefficient shown in table 3.3

**Table 3.3** Cronbach's Alpha Coefficient

<b>Factors</b>	<b>No. of Questions</b>	<b>Cronbach's Alpha Coefficient</b>
Policy Perception and Understanding	4	.809
Role Conflict	6	.808
Communication	4	.809
Leadership	6	.804
Organizational Support	6	.802
The cooperation in according with law enforcement on road safety policy implementation	4	.812

According to table 3.3, all of the Cronbach's alpha coefficient are in between .808-.812 range (all above .5) indicating that the questionnaire is acceptable (Sujitra Boonyarattapat, 1997).

### **3.5 Data Collection**

Researcher will start collecting the data from sample group which is Metropolitan Police Bureau's traffic police in 2015 academic year.

### **3.6 Analysis Techniques**

#### **3.6.1 Questionnaire Analysis**

Researcher use computer program to analyses the information to find the statistic of:

1) Analyze variables in individual level, organizational level, community level and the level of officer's cooperation in implementing safety by using descriptive statistic, mean and standard deviation through SPSS program for windows version 19

2) Study the relation among all variable; individual level, organizational level, community level and the level of officer's cooperation in implementing safety, through Simple Correlation Analysis by SPSS program for windows version 19

3) Analyze the weight of the significance of independent variable in traffic police officers in police station and community that have an influence on cooperation to implement policy by analysis multi-level factors which separated into 2 levels which are traffic police officer level (Micro level or Within-class analysis) and police station and community level (Macro level or Between-classroom analysis) through HLM (Hierarchical Linear Model) program.

(1) Traffic police officer level (Micro level or Within-class analysis) 1) Null model 2) Simple model

(2) Police Station and Community (Macro level or Between-classroom analysis)

The equations for both levels are illustrated below

Level 1: Traffic Police Officer

$$\text{COLLAB} = \beta_{0j} + \beta_{2j} \cdot \text{LSP}_{ij} + \beta_{3j} \cdot \text{LSTP}_{ij} + \beta_{4j} \cdot \text{UNDERS}_{ij} + \beta_{5j} \cdot \text{ROLE}_{ij} + r_{ij}$$

Level 2: Police Stations and Community

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \cdot \text{COMM}_j + \gamma_{02} \cdot \text{LEAD}_j + \gamma_{03} \cdot \text{SUPP}_j + \gamma_{04} \cdot \text{SPAN}_j + \gamma_{05} \cdot \text{SIZE}_j + \gamma_{06} \cdot \text{HOMICI}_j + \gamma_{07} \cdot \text{DENS}_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

When  $\beta_{0j}$  indicates intercept

$\beta_{ij}$  indicates The forecast variable coefficients

$r_{ij}$  indicates random result of level 1

$i = 1, \dots, n_j$  indicates officers within police station

$j = 1, \dots, n_j$  indicates police station

## **CHAPTER 4**

### **FINDINGS**

An analysis result on the studies of the factors that affect the cooperation of traffic police in according with law enforcement on road safety policy implementation, is presented in 4 sections in order to respond to the objectives of the analysis as follows:

Section 1 Analysis result on the personal status of the target group.

Section 2 Analysis result on the basic statistics of independent variables on individual level (police officers), organizational level (police station), community level, and variables which are average, standard deviations, minimum, and maximum.

Section 3 Analysis result on a simple correlation coefficient of independent variables on individual level (police officers), organizational level (police station), community level, and dependent variables.

Section 4 Analysis result on level of significance of independent variables on individual level (police officers), organizational level (police station), and community level that influences on the cooperation in implementing the policy by using a multilevel analysis. First level is on the police officers, and second level on police station and community.

For convenience in analyzing the data, symbols and abbreviations have been defined.

X	represents	average
S	represents	standard deviation
COLLAB	represents	collaboration in implementing the policy for law enforcement by the police officers
LSP	represents	length of police services
LSTP	represents	length of traffic police services
UNDERS	represents	perception and understandings towards the policy



ROLE	represents	role conflict
COMM	represents	internal communication within the unit
LEAD	represents	leadership
SUPP	represents	organizational support
SPAN	represents	span of control
SIZE	represents	department size
HOMICI	represents	homicide rate
DENS	represents	population density rate
$\chi$	represents	Chi-square
**	represents	level of significance .01
*	represents	level of significance .05

#### 4.1 Analysis Result on the Personal Status of the Target Group

Analyzing personal status of the target group is to qualify the status of respondents using descriptive statistics which are percentage, average (  $\bar{X}$  ), and standard deviation (S.D.). All are shown in table 4.1

**Table 4.1** Analysis Result on the Personal Status of the Target Group (342 persons)

Status	Number	Percentage
income/month		
not more than 15,000 Baht	44	12.9
15,001-25,000 Baht	122	35.7
25,001-35,000 Baht	166	48.5
35,001 Baht and above	10	2.9
status	X	S
age (year)	44.16	10.90
length of police service (year)	21.91	11.81
length of traffic police service (year)	13.47	9.90

According to table 4.1, majority of the chosen traffic police officers have income/year in between 25,001-35,000 Baht (48.5%), with average age of 44 years old, working in governmental police services for 22 years, and working in traffic police position for 13 years.

#### 4.2 Analysis Result on the Basic Statistics of Independent Variables

Analyzing on average, standard deviation, minimum, and maximum of independent variable can be calculated in three levels as follows: 1) on police officers level which are length of police service, length of traffic police service, perception and understandings towards the policy, role conflict in a career. 2) on police station level which are internal communication within the unit, democratic leadership, the organizational support, span of control, and department size. 3) on community level which are rate of homicide rate, population density rate in the area, and dependent variable of cooperation of implementing the policy of police officers. Details are shown in table 4.2

**Table 4.2** Average, Standard Deviation, Minimum, Maximum ( 342 Persons for Police Officers Level, and 77 Persons for Police Station Level and Community level)

Variables	X	S	Min	Max
<b>Police Officers Level</b>				
Length of police service	21.91	11.82	1	41
Length of traffic police service	13.47	9.90	1	39
Policy perception and understandings	34.58	5.89	13	40
Role conflict	30.64	11.60	12	59
<b>Police Station Level</b>	34.10	1.87	30	37.78
Communication	53.60	2.18	50	57.86
Democratic leadership	53.0	2.53	49.50	57.50

**Table 4.2** (Continued)

<b>Variables</b>	<b>X</b>	<b>S</b>	<b>Min</b>	<b>Max</b>
Organizational support	.26	1.19	.05	10.00
Span of control	35.95	13.34	6	61
Department size				
<b>Community Level</b>	3.32	2.30	.58	10.87
Homicide rate	12436.03	9994.87	297	55617
Population density rate				
	26.18	3.51	16	32
<b>Dependent Variable</b>				
Cooperation in implementing the policy				

According to table 4.2, when considering the independent variable on police officers level, it shows that length of police service, length of traffic police service, and role conflict are in the moderate level with an average of 21.21, 13.47, and 30.64 respectively. For policy perception and understandings is the high level with an average of 34.58

When considering independent variable on police station level, it is found out that internal communication within the unit, democratic leadership, the organizational support, and department size are in the moderate level with an average of 34.10, 53.60, 53.08, and 35.95 respectively. For span of control is in a low level with an average of 0.26

For independent variable on community level, the level of homicide rate and population density rate in the area is moderate, with average of 3.32 and 12436.03 respectively.

Considering dependent variable, which is cooperation in implementing the policy, an average is 26.18 which can be evaluated that police officers have a moderate to slightly high level of cooperation.

### 4.3 Analysis Result on a Simple Correlation Coefficient of Independent Variables and Dependent Variables

A relationship between independent variables of police officers level which are length of police service, length of traffic police service, perception and understandings towards the policy, and role conflict; on police station level which are internal communication within the unit, democratic leadership, organizational support, span of control, and department size; on community level which are homicide rate and population density rate in the area, altogether with dependent variable (cooperation on implementing the policy) can be analyzed by correlation coefficient as shown in table 4.3-4.5

**Table 4.3** Correlation Coefficient of Independent Variables on Individual Level (Police Officers) and Dependent Variable

Variables	COLLAB	LSP	LSTP	UNDERS	ROLE
COLLAB	1.000				
LSP	.491**	1.000			
LSTP	.424**	.773**	1.000		
UNDERS	.779**	.347**	.277**	1.000	
ROLE	-.685**	-.284**	-.249**	-.392**	1.000

**Note:** \*\*p<.01

According to table 4.3, when comparing correlation coefficient between independent variable of police officer level and dependent variable (cooperation on implementing the policy), it has been found that length of police service (LSP), length of traffic police service (LSTP), and perception and understandings towards the policy (UNDERS) have positive relationship with dependent variable on a level of

significance of .01. But the role conflict has a negative relationship with dependent variable on a level of significance of .01.

**Table 4.4** Correlation Coefficient of Independent Variables on Organizational Level (Police Station) and Dependent Variable

Variable	COLLAB	COM	LEAD	SUPP	SPAN	SIZE
COLLA	1.000					
B	.407**	1.000				
COM	.408**	.824**	1.000			
LEAD	.376**	.741**	.812**	1.000		
SUPP	.040	-.123*	-.152*	-.103*	1.000	
SPAN	-.118*	-.008	.088	.020	-.068	1.000
SIZE						

**Note:** \* $p < .05$ , \*\* $p < .01$

According to table 4.4, when comparing correlation coefficient between independent variable of police station level and dependent variable (cooperation on implementing the policy), it is found out that internal communication within the unit (COMM), democratic leadership (LEAD), organizational support (SUPP) have a positive relationship with dependent variable on a level of significance of .01. While department size (SIZE) has a negative relationship with dependent variable on a level of significance of .05

**Table 4.5** Correlation Coefficient of Independent Variables on Community Level and Dependent Variable

Variable	COLLAB	HOMICI	DENS
COLLAB	1.000		
HOMICI	.173*	1.000	
DENS	-.066	.017**	1.000

**Note:** \* $p < .05$ , \*\* $p < .01$

According to table 4.5, when comparing correlation coefficient between independent variable of community level and dependent variable (cooperation on implementing the policy), it is found that there is only homicides rate (HOMICI) that has positive relationship with dependent variable on a level of significance of .05.

#### **4.4 Analysis Result on Level of Significance of Independent Variables that Affects Dependent Variables**

By analyzing the level of significance of independent variables on individual level (police officers), organizational level (police station), and on community level, it provides cooperation in implementing the policy to make a law enforcement on those who ride with no helmet. This is a multilevel analysis which is police officer level and police station and community level, where the analysis result is shown step by step in table 4.6

**Table 4.6** Analysis Result on Level of Significance of Independent Variables that Affects Dependent Variable

Variable	Model					
	1	2	3	4	5	6
<b>Fixed effects</b>						
Intercept	26.28** (.26)	18.31** (.66)	-8.45 (4.47)	10.5** (3.05)	17.20** (.64)	9.77** (2.80)
<b>Individual level (police officer)</b>						
Length of police service		.04** (.01)		.06** (.01)	.06** (.01)	.04** (.01)
Length of traffic police service		.03* (.01)		-	-	.03 (.01)
Policy perception and understanding		.32** (.02)	.23 (.16)	.31** (.02)	.32** (.02)	.31** (.02)
Role conflict		-.12** (.01)	.40* (.14)	-.12** (.01)	-.12** (.01)	-.12** (.01)
<b>Police station level</b>						
Communication			.11 (.15)	.18* (.08)		-
Democratic leadership			.31 (4.72)	.04 (.08)		.15* (.05)
Organizational support			-.04 (.02)	-.01 (.06)		-
Span of control				-1.64 (2.50)		-
Department size				-.02 (.01)		-
<b>Community level</b>						
Homicide rate			.18* (.07)		.09* (.05)	.08* (.04)
Population density rate			-.00 (.00)		-.00 (.00)	
<b>Random effects</b>						
$\chi^2$	2.93 182.77**	2.12 112.70*	9.15 83.45	2.18 88.25	2.20 101.77*	2.11 96.86*

**Note:** \*p<.05, \*\*p<.01 Standard Errors are in the Parenthesis

From the 4.6 table, model 1 is the analysis of null model for testing significance of an average cooperation on policy implantation of law enforcement practicing by traffic police. Besides, this model is to test a significant level of variance in policy implementation cooperation regarding law enforcement by traffic police among police station. The equation is described below:

Level 1 Individual traffic polices

$$\text{COLLAB}_{ij} = \beta_{0j} + r_{ij}$$

Level 2 Police office and neighborhood

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

Findings of Null model have shown the chi-square value which it is 182.77, at significant level of 0.01. This can be implied that on each police office has different level of cooperation in terms of on policy implementation on law enforcement.

Moreover, considering variance of policy implementation cooperation on law enforcement among traffic police, it has found that variance of policy implementation cooperation among traffic police of different police station is equal to 2.93, at significant level of 0.01. It can be implied that a different level of cooperation on policy implementation regarding law enforcement is due to the individual level factors (Traffic Police). Consequently, a further analysis of a simple model would be required as shown in the second model for testing the result of the independent variable of traffic police.

When analyzing the simple model for testing the independent variable of police officers, it is to prove that whether various variable factors such as the length of police, the length of traffic police, policy perception and understanding, and role conflict affecting the cooperation of policy implementation regarding law enforcement practicing by forcing implementation policy. Besides, it is to test that whether an independent variable of traffic police is caused to police station variance.

The sample model can be calculated by using this equation.

Model 2

Level 1 Individual traffic polices

$$\text{COLLAB}_{ij} = \beta_{0j} + \beta_{2j} * \text{LSP}_{ij} + \beta_{3j} * \text{LSTP}_{ij} + \beta_{4j} * \text{UNDERS}_{ij} + \beta_{5j} * \text{ROLE}_{ij} + r_{ij}$$



### Level 2 Police office and neighborhood

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

An analysis result of the simple model has shown that the chi-square value is equal to 112.70, at significant level of .05., whereas the regression coefficients of the independent variables of police officers referred to the length of police, policy perception and understanding, and role conflict are .04, .32, -.12 respectively, for the length of traffic police are .03, at significant level of .05.

To this, it has shown that a police officer of each police station has different levels on cooperation of policy implementation regarding law enforcement. This is caused by differences in the length of police, the length of traffic police, policy perception and understanding, and role conflict.

Regarding to variance of cooperation on policy implementation regarding law enforcement exercising by traffic police, it has found that these cooperation variance of traffic police across police station is equal to 2.12, at significant level of .05 which is reduced from model 1.

Therefore, for the analysis of the police station and community level factors, it is required to impose an intercept of traffic police analysis or an average of policy implementation cooperation as well as regression coefficients of the independent variables at the individual level factors (the length of police, the length of traffic police, policy perception and understanding, and role conflict) into this consideration. It is because they have an impact on policy implementation cooperation. Besides, in order to test whether an independent variable of police stations and community affect each other, a researcher has to conduct model 3 which is to test the relationship between police station and community level variables (communication, democratic leadership, organizational support, span of control, department size, homicide rate, and the population density rate).

Model 3 has shown in the equation below.

Model 3

Level 1 the individual traffic police

$$\text{COLLAB}_{ij} = \beta_{0j} + r_{ij}$$

Level 2 the police office and neighborhood

$$\begin{aligned} \beta_{0j} = & \gamma_{00} + \gamma_{01} * \text{COMM}_j + \gamma_{02} * \text{LEAD}_j + \gamma_{03} * \text{SUPP}_j + \gamma_{04} * \text{SPAN}_j \\ & + \gamma_{00} * \text{SIZE}_j + \gamma_{06} * \text{HOMICI}_j + \gamma_{07} * \text{DENS}_j + u_{0j} \end{aligned}$$

As the result from model 3, the chi-square value is 83.45 which as does not met any statistical significant. Moreover, there are solely 2 variables of police station and community level variables (democratic leadership and homicide rate) which are significant (at a significant level of .05) and have regression coefficients value of .40 and .18 respectively.

The following analysis will be for the police station and community level factors. It is an analysis based upon the research hypothesis which is to analyze all together between both independent variables of police station (communication, democratic leadership, organizational support, span of control, department size) and community level factors (homicide rate and population density rate). This can be seen in the model 4 and model 5 at the following.

Model 4

Level 1 the individual traffic police

$$\begin{aligned} \text{COLLAB}_{ij} = & \beta_{0j} + \beta_{1j} * \text{LSP}_{ij} + \beta_{2j} * \text{LSTP}_{ij} + \\ & \beta_{3j} * \text{UNDERS}_{ij} + \beta_{4j} * \text{ROLE}_{ij} + r_{ij} \end{aligned}$$

Level 2 the police office and neighborhood

$$\begin{aligned} \beta_{0j} = & \gamma_{00} + \gamma_{01} * \text{COMM}_j + \gamma_{02} * \text{LEAD}_j + \gamma_{03} * \text{SUPP}_j + \gamma_{04} * \text{SPAN}_j \\ & + \gamma_{00} * \text{SIZE}_j + u_{0j} \end{aligned}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

Model 5

Level 1 Traffic polices

$$\begin{aligned} \text{COLLAB}_{ij} = & \beta_{0j} + \beta_{1j} * \text{LSP}_{ij} + \beta_{2j} * \text{LSTP}_{ij} + \\ & \beta_{3j} * \text{UNDERS}_{ij} + \beta_{4j} * \text{ROLE}_{ij} + r_{ij} \end{aligned}$$

## Level 2 Society

$$\beta_{0j} = \gamma_{00} + \gamma_{01} * \text{HOMICID}_j + \gamma_{02} * \text{DENS}_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

From the result of model 4, the value of chi-square is equal to 88.25 which is does not met any statistical significant, and there is only one independent variable which is the communication that has statistical significant level of .05 and .18 for regression coefficients. This can be seen that the policy implementation of the officers is different because of the differences of communication within organization. For other independent variables of the level of police station, they do not have any impact on cooperation of policy implementation regarding law enforcement practicing by traffic police. For the independent variable of individual level factors (length of police, policy perception and understanding, and role conflict), it has shown the value of those variables is .06, .31, -.12 respectively, at significant level of .01.

From the analysis of model 5, the chi-square value is 101.77 that has shown significant level at .05 whereas there is only one independent variable of community level factor (homicide rate) which has shown the statistical significant level at .05 and regression coefficients at .09. This can be seen that traffic police officers at each station has different way to implement policy because of homicide rate. On the other hand, another independent variable of community level factors (population density rate) has shown there is no impact on cooperation of policy implementation regarding law enforcement practicing by traffic police. Regarding the values of independent variable at individual level factors (length of police, policy perception and understanding, and role conflict), they are .06, .32, -.12 respectively, at significant level of .01.

## For model 6

It is conducted by excluding the independent variables with on statistical significant of both police station and community level factors which has imposed in model 3-5. Thus, the independent variable of both police station (democratic leadership) and community level factors (homicide rate) is included into this analysis together with the variable of individual level factors (the length of police, the length

of traffic police, policy perception and understanding, and role conflict). It is shown in the equation below.

Level 1 traffic police officers

$$\text{COLLAB}_{ij} = \beta_{0j} + \beta_{2j} * \text{LSP}_{ij} + \beta_{3j} * \text{LSTP}_{ij} + \beta_{4j} * \text{UNDERS}_{ij} + \beta_{5j} * \text{ROLE}_{ij} + r_{ij}$$

Level 2 the police office and neighborhood

$$\beta_{0j} = \gamma_{00} + \gamma_{01} * \text{LEAD}_j + \gamma_{02} * \text{HOMICI}_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

The result of model 6, the chi-square value is 96.86 which have the statistical significant level at .05 and the independent variable of police station (democratic leadership) and community level factors (homicide rates) has shown the statistical significant level at .05 while the regression coefficients is .15 and .08 respectively. This can be seen that traffic police officers at each station has a different behavior for implementing the policy because of the effect from the independent variable at police station (democratic leadership) and community level factors (homicide rate). On the other hand, the independent variables of individual level factors (the length of police, policy perception and understanding, and role conflict) are shown values of .04, .31, -.12 respectively, at significant level of .01. Regarding variance component of the intercept, it has shown that variance value are 2.11, at significant level of .05. Compared those 6 model, it has found that the latest model (model 6) has less variance value which means that it represents the best model, Thus, a researcher takes consideration of model 6 to test this research hypothesis as illustrated below:

Individual Level Factors (Traffic Police)

Hypothesis 1.1 The length of police service has positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 1.2 The length of traffic police service has positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 2 Perception and understanding of the policy has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 3 The role conflict of police officer has negative relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

This can be seen that there are 2 variables which are 1) the length of police service and 2) policy perception and understanding of traffic police that has a positive relationship, and another variable is role conflict which has a negative relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation. For the length of traffic police service, it does not have any relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation. To conclude, the result of this research is complement with the hypothesis 1.1, 2, 3, but not 1.2

Organization and Community Level Factors (police station and neighborhood)

Hypothesis 4 The communication within the organization has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 5 The democratic leadership has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 6 The organizational support has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 7 The span of control has a negative relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 8 The department size has a negative relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 9.1 The homicide rate within the area has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Hypothesis 9.2 The population density rate within the area has positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

As the result, there are only 2 variables which are democratic leadership and homicide rate in the neighborhood has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation. To conclude, the result of this research is complement with the hypothesis 5 and 9.1, but does not complement with hypothesis 4, 6, 7, 8 and 9.2

## **CHAPTER 5**

### **CONCLUSIONS, RESEARCH IMPLICATIONS, AND RECOMMENDATIONS**

This work is a study of the Factors Involved with the Cooperation of Traffic Police in According with Law Enforcement on Road Safety Policy Implementation : A Case Study of Non-Helmet use among Motorcyclists. There are 2 objectives: 1) to study the causal relationship between individual level factors of traffic police officers for both police station and community level and cooperation on road safety policy implementation of law enforcement as it relates to motorcyclists with no helmet; and 2) to analyze influential factors of individual level factors of traffic police officers for both police station and community level towards cooperation of traffic police in according with law enforcement on road safety policy implementation.

To this study, dependent variable refers to the cooperation of traffic police in according with law enforcement on road safety policy implementation while there are 11 independent variables that have a measurable effect on the dependent variable. Eleven independent variables are divided into 3 levels. The first level refers to individual level factors which there are 4 variables referred to as 1) length of police service; 2) length of traffic police service; 3) perception and understanding into a road safety policy; and 4) role conflict. The second level refers to organizational level factors which there are 5 variables referred to as 1) communication; 2) democratic leadership; 3) organizational support; 4) span of control; and 5) department size. The last level refers to community level factors which there are 2 variables referred to as 1) homicide rate; and 2) population density rate.

This work is a non-experimental design which is a one-shot survey design that bases upon an existing observation and a unit of analysis refers to an individual level. A target of population in this work is the traffic police officers of the Metropolitan Police Bureau which there are up to 88 metropolitan police stations and a total numbers of traffic police of 2,563. Classified by metropolitan police station, the first

metropolitan police station is composed of 61 police stations whereas the second metropolitan police station division is composed of 27 police stations. This work applies a sample size determination using the Krejcie and Morgan table (1970) at a 95 % confidence level (in only 5% of sample margin error). Thus, the same size falls down to 52 and 25 police stations, chronologically. To this end, the total sample size is 77 police stations with a total of 2,337 traffic officers. After that, a researcher determined the sample size of traffic police relied on published tables, called Yamane (1973), which provide the sample size for a given set of criteria. Furthermore, suppose this study aims for a 95% confidence level and  $\pm 5\%$  precision, as a result, the sample size is 342 traffic officers which is proportionally deducted from those metropolitan police divisions (1-9 division).

A methodology of this work employs a conducted survey which divided into 7 parts as shown below:

- 1) Part 1: Personal status
- 2) Part 2: Opinions towards a perception and understanding into road safety policy
- 3) Part 3: Opinions towards a role conflict
- 4) Part 4: Opinion towards an internal communication within an organization
- 5) Part 5: Opinions towards leadership
- 6) Part 6: Opinions towards organizational support
- 7) Part 7: Opinions towards a cooperation on road safety policy in terms of law enforcement for non-helmet use

This survey is determined by a researcher to solely ask traffic police. Prior to this, the survey had been tested for a content validity verified by obtaining the Index of Item-Objective Congruence (IOC) value for each questionnaire item. Later, a researcher tried out a questionnaire testing a random sample of 30 non-traffic police respondents with the aim to measure and estimate value of reliability coefficient (using Cronbach's Alpha Coefficient). A researcher analyzes data variables using statistical software as follows:

- 1) an analysis of personal data (Traffic Police Officers) among organizational level (police station), community level, and cooperation level on road



safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police) by calculated Mean and Standard Deviation (Computed by SPSS for windows version 19)

2) an analysis of causal relation of personal data (Traffic Officers), organizational level (police station), and community level towards a success of policy implementation computed by SPSS for windows version 19, and

3) an analysis of weight variable values which measures a significant level of independent variables (Traffic Police, Police Station, and Community) towards cooperation on policy implementation computed by HLM (Hierarchical Linear Model) for windows (for 2 levels: the former is Traffic Police while the latter is a Police Station)

## **5.1 Summary and Research Discussion**

Summary and research discussion of this work (to meet the objectives) are shown below:

1) To analyze a causal relation of individual level factors (length of police service, length of traffic police service, perception and understanding into a road safety policy, and role conflict), organization level factors (communication, democratic leadership, organizational support, span of control, and the department size), and community level factors (homicide rate, population density rate) with the cooperation of traffic police in according with law enforcement on road safety policy implementation.

The finding has shown that individual level factors referred to length of police service, length of traffic police service, and perception and understanding into a road safety policy has a positive relationship with the cooperation of traffic police in according with law enforcement on road safety policy implementation. On the other hand, there is a negative relationship between a role conflict and the cooperation of traffic police in according with law enforcement on road safety policy implementation. Notwithstanding, considering at organization level factors (Police Station), it has been found that communication, democratic leadership, and organizational support have a positive relationship with the cooperation of traffic

police in according with law enforcement on road safety policy implementation. In turn, the department size has a negative relationship with cooperation on road safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police). Regarding to community level factors, it has been found there is solely a positive relationship between a homicide rate and cooperation on road safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police).

2) To analyze an influence of each factor (Individual, Organization, and Community) towards cooperation on road safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police)

The finding has shown that of each 3 key factors (Individual Level, Organization Level, and Community Level) has an impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. To this, it is meant, at a factors of traffic police officer, both the length of police service and policy perception and understanding into a road safety policy have an positive impact (in turn, solely a role conflict has a negative impact) on the cooperation of traffic police in according with law enforcement on road safety policy implementation. Regarding to this, it is implied each traffic police officer of any metropolitan police station has different in a level of cooperation on road safety policy in terms of law enforcement for non-helmet use. To this, it is explicitly stated at any traffic police officer with more the length of police service, well and clear perception and understanding into a road safety policy, a low role conflict, working with the democratic leader, as well as working at communities with a high rate of homicide has a larger cooperation on road safety policy in terms of law enforcement for non-helmet use than any of traffic polices who spend less times working for a police officer, has a high role conflict, work with non-democratic leader, and work at communities with a low rate of homicide.

This finding is relevant to a work by Lipsky (1980) mentioned that any street-level bureaucrats are key factor for driving policy success. It is because those are closely working with people. Besides, times working in position allows officials to gain more direct experience, in turn, grooming them to have better and well perception and understanding of policy implementation.

## 5.2 Contribution to Theory

This work is to study influential factors of each level which refers to an individual, organization, and community level that has an impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. A researcher has divided recommendations/ suggestions based upon this research hypothesis into 3 facets as described below:

1) At an Individual-Level Factors that have an impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation

The finding has shown the length of police service has a positive impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. To this, it is able to summarize the larger the work experience as a police officer, the more the effective and appropriated decision has made when exercising discretion on duty (law enforcement). Relevant to the work by Bayley and Garofalo (1989), they found working experience is a skill to cope with problem solution. It also made officials more confident and smart decision in law enforcement. Similar to the work of Fickenaue (1975), it emphasized a crucial requirement of being a professional came from experience since a freedom of decision or discretion to exercise the core police authority, or enforcement of the law, would be better off to be explained by circumstances. It was related to an approach of street-level bureaucrats in the sense that someone who is responsible for driving a policy to practices supposed to have a close relationship with people. This individual varied the extents to which they enforced the rules and laws assigned to them (Lipsky, 1980).

Regarding to the previous finding, it was shown policy perception and understanding have a positive impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. It further explained policy perception and understanding were one of key factors to urge traffic officers for law enforcement. Due to perception and understanding toward road safety policy, traffic polices recognized its importance of their roles and responsibilities as a main driver for a success of policy implementation which led to a decrease in fatalities from traffic accidents. Relevant to the work by Van Meter and Van Horn (1975), it stated

that the higher policy perception and understanding, the more the cooperation of policy implementation. It is related to Moroney work (1981) in terms of values contained in a policy. It implied that if a policy maker is unable to clearly cascade policy perception and understanding to policy implementators, it is more likely that those implementators may exercise values based upon their own values and erroneously interpret the intent of a policy.

Regarding to a role conflict as referred to Individual-Level Factors, it has indicated a negative impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. Simply claimed, any of a traffic police with role conflict is more likely to have less cooperation on road safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police). Due to 2 main roles of traffic polices (law enforcer and citizens server), there is a role of conflict in itself. In turn, it largely caused traffic officers problematic in law enforcement (for some cases). Particularly, during the major holiday periods such New Year and Songkran (Thai New Year), the Thai Government or the Royal Thai Police heavily put efforts on the enforcement of traffic rules and regulations in order to reduce the numbers of road accidents among motorcyclists who do not wear helmets. Thus, it directly caused traffic officers working harder all day long without spending times with families in order to increase the numbers of arrested motorcyclists who wears no helmets. At last, it brought about a role of conflict on duty which related to a study of Tummer et al. (2012) and Lipsky's work (1993). They both mentioned that a role conflict has a negative impact on a policy implementation in the sense that the higher the role conflict, the smaller the policy implementation.

2) Organization-Level Factors that have an impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation.

The findings were shown that democratic leadership has a positive impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. It was concluded traffic inspectors with democratic leadership style has a larger impact on pushing the cooperation of traffic police in according with law enforcement on road safety policy implementation from their

followers than that of traffic inspectors who has no democratic leadership characteristic. Due to a close relationship between police inspector (as a first-line supervisor) and traffic police at an operational level, any traffic police (at operational level) is easily inspired by their inspectors regarding of those inspectors will urge and support their followers to determine, design, and exchange knowledge and experience together. In turn, this led a traffic police (at an operational level) perceived themselves as an invaluable asset of the workplace, then they are willing to work as hard as they can. It is relevant to the study of Voradej Chantarasorn (2005), it was claimed that democratic leaderships which involve characteristics of distribution of responsibility, empowering group members, and assisting group decision-making process are crucial factors for creating an organizational engagement, work satisfaction, and organization effectiveness (Lussier and Achua, 2004).

3) Community-Level Factors that have an impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation.

Findings were shown that a homicide rate has a positive impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. Claimed that traffic polices who worked in the community with a high rate of homicide were more likely to collaborate in according with cooperation of road safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police) larger than any of those traffic polices who worked in the community with a low rate of homicide. It might be because of the community with a low rate of homicide representing a disorder and unrested society, then police officers must be increased more use of strict enforcement so that to bring about a fair and fine society. Similar to law enforcement for non-helmet use in a community with high rate of homicide, traffic polices must be strictly enforced any of motorcyclists who wear no helmets and vice versa. For those communities with a low rate of homicide, traffic polices rather prefer to be as a service provider than suppressor which is relevant to the work by Sun, Payne and Wu (2008). In addition to this, a study of Parker et al. (2004) was claimed that communities with highly disorganized neighborhood were created a large problem within their communities in terms of overcoming the problems. Thus, a police heavily required for law enforcement in order to bring about a social-wellbeing society at last.

### 5.3 Contribution to Practice

This study was found that Individual-Level Factors (referred to as Traffic Police Officers) such as the length of police service, perception and understanding of policy, and role conflict, Organization-Level Factors such as democratic leaderships, and Community-Level Factors such as a homicide rate have an impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. To this, it implied that those 3 Level Factors influence the cooperation of traffic police in according with law enforcement on road safety policy implementation. As a result, a researcher would personally propose that, in order to achieve a success of policy implementation, it is necessary to pay more attention to those 3 Level Factors as more specified below:

- 1) The study has found that the length of police service has a positive impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. This implies that times working for a police officer represents one of a vital factors promoting to cooperation of road safety policy. As a result, executives should offer, develop, and conduct a training program related to law enforcement for non-helmet use, particularly any of that traffic polices who has fewer experiences and times working for a police officer. The training course may invite traffic politics with high experience and knowledge on law enforcement to be as a trainer. Besides, executives should have planned to publish a manual or guideline of road safety policy so that any of traffic polices are able to have more confident while they are on duty, and in turn making all traffic polices practiced the same standard.

- 2) The study has shown that policy perception and understanding positively influence the cooperation of traffic police in according with law enforcement on road safety policy implementation. The higher the policy perception and understanding, the larger the cooperation of road safety policy which is enforced by the Thai Traffic Police. As a result, executives should pay more attention to instill and cultivate a culture of road policy comprehension and understanding for traffic officers (particularly at an operational level) by cascading the road policy to front-line services. To this, it will make traffic officers more recognized the importance of effectively implementing road safety policy.

3) This work is shown that a traffic police role conflict has a negative impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. The more the traffic police role of conflict, the less the cooperation of road safety policy in accordance with law enforcement. Thus, executives at each level are to force or urge the traffic police officers for better understanding the benefits that will be gained from practicing an effective road policy which, in turn, a society and citizens well-being would be.

4) This study is shown that democratic leaderships have a positive impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. Traffic officers who utilize a democratic leadership style tend to better foster cooperation on road safety policy with their peers than anyone who does not utilize a democratic leadership style. As a result, executives should promote a democratic leadership style to all traffic polices of each level.

5) This work is shown that a homicide rate has a positive impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. To this, it implied that traffic officers who work in a community with high homicide rates tend to strongly support cooperation of road safety policy in terms of law enforcement for non-helmet use larger than traffic officers who work in a community with fewer homicide rates. However, this might cause some unwanted effects which come from traffic polices' perception towards a community with high homicide rates such as judging citizens whom have a tendency to do wrong, thus traffic officers must severely exercise of some form of control and enforcement over citizens. In turn, citizens have less trust and confident in traffic polices. Thus, executives should change an attitude of traffic officers by heavily relying on integrity, fairness and justice to the citizens.

#### **5.4 Recommendations for A Further Research**

A researcher proposed feasible recommendations for a further study as shown below: Recommend to enlarge sample sizes covering targets from all parts of the country (Central, North, East, West, and South) so that to compare findings from each part whether Individual-Level Factors (of traffic police officers), Organization-Level

Factors (Police Station), and Community-Level Factors have an impact on the cooperation of traffic police in according with law enforcement on road safety policy implementation. Recommend to cover a law enforcement of an entire police system such as crime suppression and special task, etc. and study whether there have the same characters as traffic polices. Recommend to include other independent variables of those 3 levels (Individual, Organization, and Community Level Factors) that may have a direct or indirect impact on cooperation of road safety policy in terms of law enforcement for non-helmet use (enforced by the Thai Traffic Police). It will definitely raise up more findings which would benefit a success of law enforcement.



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## **APPENDICES**

### Research Questionnaire

**Title: “Factors Involved with the Cooperation of Traffic Police in According with Law Enforcement on Road Safety Policy Implementation : A Case Study of Non-Helmet use among Motorcyclists”**

**Description** This questionnaire is designed to gather data for a study of “Factors Involved with the Cooperation of Traffic Police in According with Law Enforcement on Road Safety Policy Implementation: A Case Study of Non-Helmet use among Motorcyclists”. The data in this questionnaire is confidential and solely for an academic purpose.

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#### Part 1 Personal Information (of Traffic Police)

**Note:** Please fill in the data or mark **✗** (the actual data)

1. Age.....years
2. Metropolitan Police Stations.....Division.....
3. Times Working for a Police Officer .....years  
Times Working in a Position of a Traffic Police .....years
4. Education
  - ☐ Secondary School/Vocation      ☐ Vocational Certificate/Diploma
  - ☐ Bachelor Degree                      ☐ Postgraduate Degree
5. Income/Monthly (Only Salary)
  - ☐ not exceed 15,000 baht
  - ☐ between 15,001 baht and not exceed 25,000 baht
  - ☐ between 25,001 baht and not exceed 35,000 baht
  - ☐ more than 35,001 baht and up
6. Number of Traffic Police Involved the Same Task.....persons

## Part 2 Opinions Towards an Perception and Understanding into Road Safety Policy

**Description:** Please mark **X** into the degree that most matches to your agreeable level

**Questions** Which degrees do you most agree with these statements?

[illegible]

**Questions** Which degrees do you most agree with these statements?

[illegible]

[illegible]

## Part 4 Opinion Towards an Internal Communication within Organization

**Description:** Please mark ✕ into the degree that most matches to your agreeable level

**Questions** Which degrees do you most agree with these statements?

[illegible]



[illegible]

## Part 5 Opinions Towards Leadership

**Description:** Please mark **✕** into the degree that most matches to your agreeable level

**Questions** Which degrees do you most agree with these statements?

[illegible]

[illegible]

## Part 6 Opinions Towards Organizational Support

**Description:** Please mark **✕** into the degree that most matches to your agreeable level

**Questions** Which degrees do you most agree with these statements?

[illegible]

Statements	Degree of Your Opinions (Less Agree → Most Agree)									
	1	2	3	4	5	6	7	8	9	10
24. Executives (from Inspector Level and up) are always beside on their workers when the problem occurred and guide them with recommendation and solutions.										
25. Executives (from Inspector Level and up) reward their worker fairly, equitably and consistently in accordance with their value to the performance.										
26. Executives (from Inspector Level and up) create a great work environment and atmosphere in the workplace so that their workers are able work happily.										

### **Part 7 Opinions Towards Cooperation On Road Safety Policy In Terms Of Law Enforcement For Non-Helmet Use**

**Description:** Please scale down scores that most fit to your opinions  
(from most agreeable score of 10 to least agreeable score of 0)

Statements	Score
27. You think guideline or principle of law enforcement on road safety policy (for non-helmet use) is not necessary to be in according with a process of policy formulation.	
28. Making road safety policy more effective and efficient, you think it is not required that motorcyclists with non-helmet use would be arrested, in turn increasing and repeated of traffic polices' presence matters.	

29. To comply with the law enforcement of road safety policy, you feel in an uncomforted zone and would rather prefer to rotate to another task. And it would be better off to let someone being in charge of.	
30. No matter what how hard working you are, it will not cause to a decrease of road fatality. Instead, a participation from all stakeholders in terms of a consciousness on road safety is a key for success in a reduction of road traffic death.	

## **BIOGRAPHY**

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Police Cadet Academy  
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