Assessment of Traffic Management Ordinances In Relation to Tourism Industry

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Abstract: **As part of our daily lives is to traverse on the roads, traffic management is very important to look into more so considering the tourism industry. This study on the traffic management policies in relation to tourism had been conducted in the City of Calapan being the gateway of the Oriental Mindoro completing the passage for the Strong Republic Nautical Highway (SRNH), which connects major islands of Luzon to Visayas and Mindanao via land and sea travels. Descriptive method of research was utilized in this study with respondents composed of two groups, the drivers and road passers. The findings on traffic management policies as to ordinances revealed the need for the imposition of proper speed on highway, prescribe motorists exempt to speed restriction, proper use of signs, for the motorists to be aware on penalties, among others. On the violations commonly committed by drivers, 96% or 90 respondent's disregards traffic signs and traffic lights, 95% failed to give signals and 94% had illegal overtaking. To solve the problem and lessen the traffic violations considering the strategic location of Calapan City and its important role in the SRNH), 92% suggested for the retraining of traffic law enforcer, 87% revealed that there must be strict implementation of policies, and 86% responded that there must be training and seminars for all drivers. Doing so will facilitate better traffic flow in Calapan which will definitely attract more tourists to pass by the area and explore the tourist sites in Calapan and within Oriental Mindoro.**

Keywords: **traffic management, Calapan City, traffic management policies, tourism.**

1. INTRODUCTION

Traffic as defined means all the vehicles passing along a certain road or in a certain area, or the movement of airplanes, ships, and other transportation vehicles along routes. Traffic may also mean the amount of people who pass through a certain place or travel in a certain way (Merriam Webster Dictionary). Many cities around the globe like Jakarta, Istanbul, Mexico, Bangkok, Milan, etc have all had to deal with thousands of cars running through their streets each day. Traffic congestion is one of the big problems for everyone within the city which affect a lot the tourism industry.

Among the primary reasons why there is more congestion is due to increasing number of cars on the road either that of tourists or just workers passing by. The adult population is increasing, consequently more people prefer their own transport to get around with and as the number of cars increase the chance of congestion also increases. On the other hand, the study of Miera and Rossello (2012) revealed that tourism is a significant predictor of traffic congestion and hyper congestion.

In a statistics released in 2015 Jakarta ranked as having the worst traffic jams in the world, which according to Sweet (2015), is due to a lack of mass rapid transit system and the dramatic increase in cars on the roads from 16 Million in the previous years to 17.5 Million in 2014. This caused commuters and workers stranded for hours during their travel. The study reveals 5B U.S. Dollars losses of the Indonesia government due to congestion. Jakarta is followed by Istanbul, which had a reported 110 extra hours each year spent in travelling due to congestion.

The findings concurs with an essay article about the cause and effect of traffic problems in a big city which refers to the traffic congestion as being coupled with a lack of proper infrastructure. There were no expansion of infrastructure along

with an increasingly car reliant population, which means that a single street with a lane on each side before might not suffice in few years after the population has increased.

In the Philippines, it is obvious that Filipinos also experience same difficulty in dealing with traffic especially in the urban areas like Manila. In a study by Chua 2014 on The Problem of Traffic in Metro Manila, he revealed that traffic is caused by undisciplined jeepney, bus, taxi drivers that stop in the middle of the road to take in passengers. The study also found out that traffic congestion happened due to bad roads that must be fixed and water lines that need to be reconstructed. Summarily, reasons for traffic congestion may be classified into two (2) major factors: the road or infrastructure and the people.

The roads in the country are classified as National Roads which are roads interconnecting provinces and/or cities; Provincial Roads are roads/street interconnecting municipalities or cities; City Roads interconnecting barangays within a city; Municipal Roads interconnecting barangays within a municipality; and Barangay Roads, which are located within a barangay to connect sitios or places within a barangay. These roads are maintained by different agencies of the government from the national down to barangays. The Department of Public Works and Highways (DPWH) is the national agency that handles national roadways for the planning, construction and maintenance of traffic facilities particularly those categorized as National Highways and other major road arteries, the Provincial Government in provincial roads, and the City or Municipal Government in their area of jurisdiction. Aside from that, the Philippine government has its branches and agencies which are tasked to expedite the flow of traffic and to insure the safety in roads as well as the imposition of rules and regulation in traffic management. The Department of Transportation (DOT) through the Land Transportation Office (LTO) is responsible for the implementation of the Land Transportation Code of the Philippines (R.A. 4136) particularly on the issuance of drivers' licenses and registration of motor vehicles. While the Land Transportation Franchising and Regulatory Board (LTFRB) which is responsible for the approval and issuance of the franchises for public conveyances. But despite that effort by the government, both National and Local, there are still accidents that happened caused by either poor control measure which is characterized by ineffective mechanical control devices, inefficient traffic officers, and poor implementation of traffic laws, rules and regulations. Human errors, also cause or contribute to more traffic congestion like for example slow drivers, or poor driving habits, pedestrian mistakes, officers' errors, poor planning, poor legislation; and traffic accidents to which are mostly attributed to human errors.

The Calapan City, in Oriental Mindoro, being the Regional Center of the MIMAROPA Region and has its very important role in the Strong Republic Nautical Highway, is occasionally experiencing mild to heavy traffic congestion. It normally occurs in the morning and late evening and during Yuletide season. Traffic congestion commonly happens in the central commercial area because of the large volume of motorists and other road users, the accident caused by unregulated roadways, illegal parking and undisciplined motorist, pedestrian and vendors whose product is almost on the roadway. Hence, there is a need to have a traffic management system to regulate traffic from affecting entirely the lives of the commuters.

In Calapan City just like the other cities, there is traffic management aside from the traffic management being implemented by the national agencies. The City government of Calapan created an agency tasked to regulate traffic and enforce local ordinance(s) concerning flow of traffic in the City. One (1) ordinance being implemented by the local city government to regulate the traffic flow is City Ordinance No. 20 "entitled An Ordinance Enacting the New Comprehensive Traffic Management System Regulating traffic on all Street and Bridges within the City of Calapan and Providing Penalties for Violations Thereof". The Traffic Management Office (TMO) together with the Philippine National Police Traffic Management Group (PNPTMG) is assigned to manage and enforce traffic rules laws and ordinances in Calapan City, using traditional traffic engineering tools or devices to regulate or control traffic, such as traffic lights, traffic signs pavement markings, traffic islands and others that could control or direct the flow of traffic especially that many tourists are passing by the area and a big possibility of staying and exploring the tourism sites in the island of Mindoro.

2.   THEORETICAL FRAMEWORK

The study is anchored on the following works which have been used as foundation for better understanding of the traffic management system and its relation to tourism.

In the three phase's traffic theory, the three phases in traffic are consist of free flow and two congestion phases: synchronized flow and wide moving jam. The three phases offer qualitative features of traffic congestion phenomena. This theory may contribute to current study in giving basis for the researchers about the causes of traffic congestion as may be deemed necessary in giving sufficient background about the causes of traffic congestion and accident in the roadway that will be encountered by the road users and tourist and the traffic enforcers specifically in City of Calapan.

In connection with this, Behavioural Management Theory, emphasized by Mary Parker Follet, also provides a strong support to better understand the road scenarios. The theory advocates the notion that traffic enforcer should have a better understanding of the human aspect. Moreover, taking a special interest on the workers welfare and treating them as important asset in achieving the organization's goal.

The said theory, referred to as human relations movement was used to explain the employee's satisfaction and working condition in relation to their cooperation and participation in the program implemented by the traffic enforcers. As it relates to tourism, the theory can explain the reaction of the tourists towards a situation. Usually people tend to choose or prefer to go to place where they are comfortable and they can do what they want without too many hassles.

Based on the theory, the figure below had been made to illustrate the paradigm of the study using input-process-output scheme.
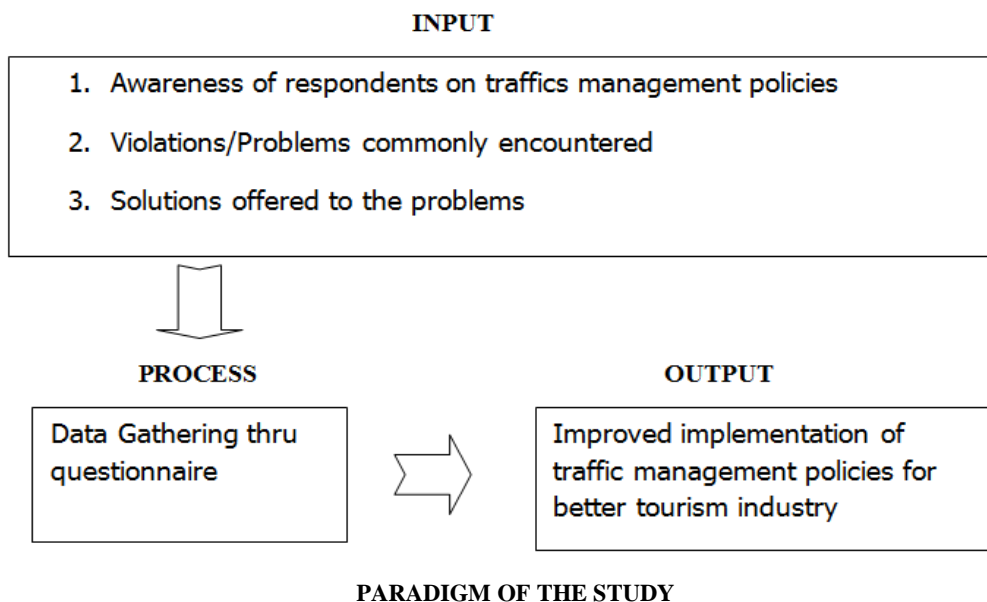
INPUT

1. Awareness of respondents on traffics management policies
2. Violations/Problems commonly encountered
3. Solutions offered to the problems

PROCESS

Data Gathering thru questionnaire

OUTPUT

Improved implementation of traffic management policies for better tourism industry

PARADIGM OF THE STUDY

Figure 1

First box – is the INPUT, which contained variable of the study. It consist of the level of awareness of respondent on traffic management policies in Calapan City, the problems encountered and the solutions offered to lessen the problem for better tourism industry.

Second box – is the PROCESS, which explained the methods or manner to gather data for analysis of results.

Third box – is the OUTPUT, which presented the result or outcome of the study.

3. RELEVANCE OF REVIEW OF RELATED LITERATURE AND STUDIES

Rodrique et al, (2009) states that congestion can be perceived as unavoidable consequences of scarce transport facility such as road space, parking area, road signals and effective traffic management. They argue that urban congestion mainly concerns two domains of circulation, passengers and freight which share the same infrastructure. Thus, traffic congestion condition on road networks occurs as a result of excessive use of road infrastructure beyond capacity, and it is characterised by slower speeds, longer trip hours and increased vehicular queuing which mostly are that of tourists. This statement corroborates on the current study on defining the reason and cause of traffic congestion particularly in Calapan City as regard to the laws and ordinances being applied or implemented by the traffic enforcer in the City.

According to Traffic Manila, (2008) the MMDA has the following traffic reducing programs: construction of flyovers and interchanges, road widening, and construction of various bays and terminals for various public utility vehicles and buses; and the color coding scheme.

This statement emphasizes that the government need many types of approaches to ease and expedite the flow of traffic to lessen the road problems and accidents which consequently can be an effective measure to improve the tourism industry in the locality. Since the City is the seat of MIMAROPA Region and serving its important role being strategically located in the gateway for the Strong Nautical Highway, Calapan City it is prone to mass volume of cars and commuters. Thus, there is indeed a need for more strategic implementation of traffic management policies.

4. METHODS OF RESEARCH

This chapter contains the research method and procedures employed to collect the needed data. It includes the research design, respondents of the study, sampling techniques, instruments used with its construction, validation, administration and retrieval and the tools utilized for the statistical treatment of data.

RESEARCH DESIGN:

This research utilized the Descriptive Method of Research. Lester (2003) has written, "Descriptive method includes present facts or current condition concerning the nature of a group of persons, a number of objects, or classes of events and may involve the procedure of induction, analysis, classification, remuneration, or measurement".

Descriptive method usually attempts to describe a condition or status of something. This research design was chosen because of its appropriateness to the problem of the study. It allowed qualitative and quantitative description of current status, traits nature and characteristics of the subject. Besides describing, "what is", it also supplies both factual and practical information that can be used to evaluate conditions.

RESPONDENTS OF THE STUDY:

The respondents of the study were composed ninety three (93) drivers and road users in the Calapan City Oriental Mindoro. Thirty percent (30%) of it are the drivers from the tricycle and multicab drivers and 70% are road users. The number of respondents are believed to have thorough knowledge and experience and observe situations about the traffic management policies applied in Calapan City Oriental Mindoro and can better give their judgements.

INSTRUMENT USED:

A self-made questionnaire composed of three (3) parts was used. First part of the questionnaire was composed of questions to determine the level of awareness of the traffic management policies as to laws and ordinances being implemented. The 2nd part dealt on the violations commonly committed by drivers. The last part was on the solutions offered to minimize the commission of traffic violations.

5. STATISTICAL TREATMENT OF DATA

The data gathered were tallied, tabulated and subjected to the following statistical treatment for the careful analysis of the results.

1. Frequency and Percentage Distribution:

This was particularly used in analysing the level of awareness of the respondents.

2. Weighted Mean:

The responses of the respondents were categorized into five and was given corresponding weight. The weights were multiplied by the number of replies in each category and were added and then divided from the sum of the product.

3. Ranking – this was used in determining the order of the perception of the respondent.

6. PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents, analyses and interprets the data gathered.

1. **On the level of awareness of respondents in Calapan City on traffic management policies.**

Table 1 As to Ordinances

Indicators	WM	I	Rank
1. Speed Restriction	3.43	ML	7
2. Exemptions to Speed Restriction	3.93	HL	3
3. Traffic Signs	4.35	HL	2
4. Penalties on Violations	3.16	ML	9
5. Pedestrian Regulation	2.51	ML	13
6. Unloading zone driving against traffic	3.65	HL	5
7. Illegal overtaking	2.42	LL	18
8. Overtaking at an unsafe place	3.03	ML	11
9. Cutting an overtaken vehicle	2.54	ML	15
10. Giving way to an overtaken vehicle	2.95	ML	12
11. Appropriate speed when being overtaken	2.30	LL	19
12. When to overtake	2.52	ML	16
13. Proper driving on a curve road	3.33	ML	8
14. Follow proper traffic signals	2.60	ML	14
15. Proper parking	4.54	VHL	1
16. Proper placement loading and unloading	3.56	HL	6
17. Passenger on top or cover of vehicle	2.45	LL	17
18. Permitting passenger to ride on running board, step board, fender or mud guard	2.29	LL	20
19. Arrogance or discourtesy	3.88	HL	4
20. Traffic signs and traffic lights	3.14	ML	10
Average Weighted Mean	**3.12**	**ML**	

The table above shows the level of awareness of respondents on traffic management policies as to Ordinances.

It can be noted from the table that the respondents are moderately aware of the ordinances regarding traffic management in the City of Calapan with overall weighted mean of 3.12. Only an item under ordinances got a mean score interpreted as very high level which is as regards to the "proper parking "with the highest mean of 4.54. On one hand six (6) items received the mean scores interpreted as high level such as with regards to "Traffic Signs", with the mean of 4.35, "Exemptions to Speed Restriction" with mean of 3.93, "Arrogance or discourtesy" with the mean of 3.88, "Unloading zone driving against traffic" got the mean of 3.65, and the "Proper placement loading and unloading" with a weighted mean of 3.56 and interpreted as highly aware.

Majority or 50% of the items to measure the awareness on the traffic ordinances obtained mean scores with the interpretation as moderately aware. This means that the respondents have limited knowledge on most of the traffic ordinances in the City of Calapan such as those regarding the "speed restriction, "proper driving on a curve road", "penalties on violations", traffic signs and traffic lights, "overtaking at unsafe portions of the road", "giving way to an overtaken vehicle", "pedestrian regulation", "following proper traffic signals", "cutting an overtaken vehicle", and "when to overtake".

Four (4) or 20% of the items were revealed to be not so known among the respondents. This is because the findings revealed that among the twenty (20) items under ordinances four (4) were interpreted as on the low level of awareness of the respondents such as those related to "illegal overtaking", the appropriate speed when being overtaken, and permitting passenger to ride on running board, step board, feeder or mud guard".

The overall findings for the awareness on traffic management ordinances in the City Calapan reveal that still most of the drivers and road users are not so aware of those ordinances. Considering the behavioural management theory, wherein it explains that people behave in accordance with their knowledge and or awareness, the road accidents and road problems can be associated with the level of awareness of the road users and drivers. Thus, to lessen such, there is a need to increase their level of awareness.

The awareness on the traffic management ordinances is very important for the drivers and road users. This will pave way for a better flow of traffic to accommodate additional road users and passers in the City being part of the Strong Republic Nautical Highway. Most of the tourists passed by the island of Mindoro going to the Southern part of the Philippines. Some stop in the island to explore the tourism sites in the City of Calapan and the other part of Mindoro such as in Puerto Galera, Bulalacao, Mansalay and all other municipalities within the province with each unique characteristics and beauty to attract local and foreign tourists. Even though as Miera and Rossello (2012) had pointed out in their study that the cause of traffic congestions are the tourists passing by the area, still having a better traffic management system and smooth flow of traffic in the area will matter a lot.

2. **On the traffic violations commonly committed by drivers.**

Table 2 Traffic Violations Commonly Committed by Drivers

Indicators	*f	%	Rank
1. Driving without license and plate number	81	87	8
2. Driving without proper seat belt	74	80	13
3. Overloading	77	83	11
4. Driving under the influence of alcohol, dangerous drugs and other similar substance	70	75	15
5. Driving without helmet	85	91	5
6. Right Side Driving	64	68	17
7. Violation of Speed Restriction	60	65	18
8. Violation on U-turn and Left turn	80	86	9
9. Violation of Pedestrians	82	88	7
10. Illegal Overtaking	87	94	3
11. Cutting an overtaken vehicle	72	77	14
12. Increasing speed when overtaken	83	89	6
13. Overtaking in restricted road areas	45	48	19
14. Failure to yield the right of way	76	81	12
15. Failure to yield the right way to pedestrians	78	84	10
16. Failure to yield at the right of way to ambulance, police or fire department and other emergency vehicle	68	73	16
17. Failure to give signals	88	95	2
18. Allowing a passenger on top or cover of vehicle	86	92	4
19. Disregards traffic signs and traffic lights	90	96	1
N = 93			

* *Multiple responses*

Table 2 shows the frequency and percentage distribution of the traffic violations commonly committed by the drivers.

Ninety six percent (96%) or 90 respondents revealed that the most common violation on traffic is as regards to "disregarding traffic signs and traffic lights". Ninety five percent (95%) or 88 respondents answered that public utility drivers commits "failure to give signals". The problem on "illegal overtaking" is the 3rd common problem as revealed by ninety four percent (94%) or 87 of the respondent, while "allowing a passenger on top or cover of vehicle" ranked 4 as disclosed by ninety two percent (92%) or 86 respondents. Item 5 "Driving without helmet" ranked 5th common problem based on the response of the ninety one percent (91%) or 85 respondents while item number 12 "Increasing speed when overtaken" ranked 7th.

On the other hand, the least common violations are as regards to "right side driving" as revealed by 68% or 64 respondents; "violation on speed restriction" as disclosed by 65% or 60 respondents and the last violation commonly committed by drivers is "overtaking in restricted road areas" as revealed by 48% or 45 respondents.

The findings indicated that drivers tend to disregard traffic rules. This is supported by the fact that even the most legible and obvious traffic signs and traffic lights are not being observed or followed by drivers. These can be explained by the three phase traffic theory, wherein the different traffic scenarios happen due to problem or lapses in even one area as

regards to traffic. As revealed by the findings on the awareness there is a gap between what must be known by the drivers and road users as regards to traffic management ordinances. Failure or gaps contribute to many commission of road violations.

3. **The solutions offered to minimize the commission of the traffic violations**

Table 3 Solutions Offered to Minimize the Commission of the Traffic Violation

Indicators	*f	%	Rank
1. There must be training and seminars for public utility vehicle drivers	80	86	3
2. There must be construction of additional traffic signs, traffic lights and pavement markings	65	70	6
3. There must be retraining of traffic law enforcer	86	92	1
4. There must be strict implementation of policies	81	87	2
5. There must be additional equipment and assets must be acquired like CCTV	74	80	4
6. There must be living of additional personnel who are competent in the work.	67	72	5
N= 93			

Multiple response

Table 3 shows the solutions offered base on the findings to minimize the commission of the traffic violations.

Results showed that "there must be retraining of traffic law enforcer" which is revealed by 92% or 86 respondents, ranked 1; rank 2 is the suggestion that "There must be strict implementation of policies" as given by 87% or 81 respondents. "There must be training and seminars for public utility vehicle drivers" which is ranked 3 answered by the 86% or 80 respondents. 4th suggestion is that "There must be additional equipment and assets that should be acquired like CCTV" as given by 74 or 80% of the respondents. While the least suggested solution is that "There must be hiring of additional personnel who are competent in the work", which is on the fifth rank as revealed 67 or 72% of the respondents.

The findings on the suggested solution to solve the gaps and problems as regards to traffic management system can be a great help in accommodating more tourists in the area. The findings is corollary with the behavioural management theory which focused on the human need for work-related satisfaction and even for self-satisfaction for the local and foreign tourists.

7. CONCLUSION

Based on the findings of the study, it can therefore be concluded that despite the implementation of traffic management ordinances that govern the flow of traffic, most of the drivers and road users in the City of Calapan, Oriental Mindoro are moderately aware only of the traffic management policies being implemented in the city. The drivers commonly violate such ordinances even those which are very common like simple traffic signages and traffic lights. There are solutions being offered by drivers to minimize the commission of traffic violations. Foremost of these is the retraining of traffic enforcers and the strict implementation of the policies.

8. RECOMMENDATION

Since, traffic flow really matters a lot not only among the common road users and drivers but most of all for the tourists even local or foreign, some recommendations had been crafted. Such as for the public utility drivers to undergo seminar workshop once a year on traffic policies, which to be implemented the City Government must craft a mechanism on how they can oblige the drivers to undergo such training. Traffic law enforcers also need to have retraining as regards to the implementation of traffic policies. Provision of additional equipment like CCTV is a must to deter criminals and to enhance security of public. It is also suggested that there must be strict implementation traffic management ordinances particularly on motorcycle riders without helmet. Further, there is a need to increase police or traffic enforcer visibility to deter traffic violators. Likewise, it is recommended that additional hiring of competent traffic law enforcer be done to ensure implementation of traffic ordinances. Lastly, it is recommended that the training program crafted to enhance the implementation of the traffic management ordinances, as an output of the study be utilized by the City Government of Calapan.

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