THE IMPACT OF VEHICLE SAFETY TECHNOLOGYON ON CONSUMER BUYING BEHAVIOR IN AUTOMOBILE INDUSTRY

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"I hereby declare that I have checked this project and in my opinion this report is adequate in terms of scope and quality for the award of the degree of Bachelor of Technology Management (High Technology Marketing)"

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This report is submitted in partial fulfillment of the requirements for the award of a Bachelor of Technology Management (High Technology Marketing)

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DECLARATION

"I hereby declare that the work in this report is my own expect for quotations and summaries which have been duly acknowledged."

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DEDICATION

Special thanks to my parents, family members, supervisor, and panels for helping me throughout the project towards achieving its objective.

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ABSTRACT

In the modern world, the innovation and creation of new technology has increased rapidly. Vehicle safety technology is one of the concepts that getting growing attentions among drivers which are consumers due to the increasing rate of accidents at road. Consumer research shows new car buyers prone to consider vehicle safety technology before making a vehicle purchase decision. To maintain relevance, consumers need to be exposed or educated by access to a wide range of safety technology on the Internet. It is need of future clarification for both theoretically and methodologically. The main purpose of this study is to know the impact of vehicle safety technology on consumer buying behavior in automobile industry among Malaysians. A total of 100 usable questionnaires were prepared and analyzed. Statistical techniques such as descriptive analysis, reliability, and validity were used in this study. This paper contributes to an increased understanding of vehicle safety technology impacts on consumer in automobile industry in Malaysia.

Keyword: Vehicle Safety Technology, Customer Buying Behavior, Automobile Industry.

ABSTRAK

Dalam dunia moden, inovasi dan penciptaan teknologi baru meningkat dengan cepat. Teknologi keselamatan kenderaan adalah salah satu konsep yang kini semakin mendapat perhatian di kalangan pemandu iaitu pengguna, disebabkan oleh kadar peningkatan kemalangan di jalan raya. Penyelidikan pengguna menunjukkan pembeli kereta baru ingin mempertimbangkan teknologi keselamatan kenderaan sebelum membuat keputusan pembelian kenderaan. Untuk mengekalkan relevan, pengguna perlu didedahkan atau dididik dari akses kepada pelbagai data teknologi keselamatan yang terdapat di Internet. Ia memerlukan penjelasan masa depan kedua-dua teori dan metodologi. Tujuan utama kajian ini adalah untuk mengetahui kesan teknologi keselamatan kenderaan kepada kelakuan pembelian pengguna dalam industri automobil di kalangan rakyat Malaysia. Sebanyak 100 borang soal selidik telah disediakan dan dianalisis. Teknik statistik seperti analisis deskriptif, kebolehpercayaan dan kesahihan telah digunakan dalam kajian ini. Kertas kerja ini menyumbang kepada peningkatan pengetahuan tentang impak teknologi keselamatan kenderaan pengguna dalam industri automobil di Malaysia.

Kata kunci: Teknologi Keselamatan Kenderaan, Pelanggan Membeli Kelakuan, Industri Automobil.

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LIST OF ABBREVIATIONS

ASIRT	=	Association for Safe International Road Travel
ABS	=	Anti-Lock Braking System
ECU	=	Electronic Control Unit
ESC	=	Electronic Stability Control
IIHS	=	Insurance Institute for Highway Safety
ITS	=	Intelligent Transport System
NHTSA	=	National Highway Traffic Safety Administration‟s
NVS	=	Night Vision Systems
SPSS	=	Statistical Package for Social Sciences
U.S	=	United States of America
VSC	=	Vehicle Stability Control
VST	=	Vehicle Safety Technology

LIST OF SYMBOLS

%	=	Percent
<	=	Greater-than
>	=	Less-than
=	=	Equals

LIST OF APPENDIXES

CHAPTER 1

INTRODUCTION

1.1 Introduction

Safety technology in the automobile industry refers to special technology developed to ensure the safety and security of automobiles and passengers. According to the Association for Safe International Road Travel (ASIRT), those numbers become even more startling globally as 1.24 million people died and 50 million more are seriously injured in traffic accidents every year. To help combat this problem, in-car crash prevention systems are beginning to take hold in new models. In 2014, there are 20 percent of car models have a front-crash prevention system with automatic breaking a standard option when a consumer buy a car, according to the Insurance Institute for Highway Safety (IIHS). Besides, due to technology advancement, producing new types of car was rapidly demanded and manufacturing took initiative to understand consumers‟ preference on near future and took actions whereby it focused customer needs is based on how deep understanding of the consumer behavior. Consumer buying behavior is the process by which individuals search for, select, purchase, use, and dispose of goods and services, in satisfaction of their needs and wants. It could be very interesting research to know what is the alternatives that can be mastered in order to know the consumer preference and buying behavior for automobile industry. Furthermore, safety system developers finding a way to reduce injuries to vehicle occupants within the event of a crash by enhancing current airbag and seat belt systems and also by incorporating new whiplash prevention and head protection designs.

The result‟s that every characteristic is that able to offer more than its individual contribution to overall vehicle safety. As an example, adaptation headlights will facilitate drivers to detect the potential road hazards earlier than they would without this feature. Anti-lock braking systems (ABS) and electronic stability control (ESC) also act each other in similar ways.

Many consumers don‟t fully understand what vehicle safety systems are designed to do and the way they are design it. Explanations of marketer manuals could typically be unclear, and car buyers not continually obtain or receive clarification of how their safety options work upon buying a vehicle. This general lack of data or information has consequences downstream that may undermine the performance of safety options. Drivers could lack of clear vision of how their driving habits relate to the functioning of their safety features. This presents a major problem, since driving habits directly affect how much benefit a driver will expect to accrue from having safety features. The benefits for road safety won‟t be completed if drivers don‟t understand how the safety systems on their vehicles operate and the way their driving habits have an effect on the effectuality of these systems. (Roberston.R.D, et al.2008).

1.2 Problem statment

Safety factors play an important role in everything, for instance, building, machine, vehicle or any structures, moving or automated mechanisms in the whole world. Specifically, safety factor in vehicle is one of the important aspects. It can be related to few issues such as accident or theft which involve people‟s life endanger. The risk of injury after accident massively impacted on vehicle‟s safety technology as well as risk of theft. Essentially, potential consumers will show importance on few factors when buying a car. The main factor would be safety and other considerations such as cost, design and performance. In addition, Traffic accidents and highway congestion continues to stay at a serious problem world-wide. The lack of public awareness of road and vehicle safety issues in general, and information of vehicle safety systems in particular, is of considerable concern.

If consumers are not aware of the benefits of these potentially life-saving technologies, they will not be in a position to seek out vehicles which are equipped with the technology. Nowadays, vehicle manufacturer tend to invent safety technologies with higher effectiveness and at the same time, cheaper cost as well. Since safety factor is an important as aspect, still the decision made by consumer, based on their requirements as having different behaviors.

1.3 Objective

The study on vehicle safety technology impact on consumer buying behavior in automobile industry is developed with several objectives. Those objectives are:

1. To explore the importance of vehicle safety Technology .
2. To determine the system of vehicle safety technology.
3. To analyze the relationship between vehicle safety technology and consumer buying behaviors.

1.4 Research questions

Based on research objective, the research questions are as follow:

1. How important the vehicle safety to consumer?
2. What are the important system of vehicle safety technology?
3. How vehicle safety technology impact on consumer buying behaviors?

1.5 Scope of study and limititation

This research is focused on vehicle safety technology towards consumer buying behavior in automobile industry. Moreover, to study the vehicle safety and technology used and find the importance of vehicle safety to consumer. Besides, knowing how consumers consider the vehicle safety when purchasing a vehicle.

Impact of vehicle safety technology in consumer buying behavior is based on research of two factors have been choosing in order to analyze the impact of the vehicle safety technology in this research. There are importances of vehicle safety and the system of vehicle safety. In order to arrive at more specific research objectives and to clarify theoretical contribution of this research, a literature review is presented next starting with an introduction of vehicle safety, importances of vehicle safety and the system and some example of safety system.

For the limitation of this research it would be the consumer ability to interpret the survey questions that will be distribute. Consumer may be a bit confused on how to answer the survey questions and where to put they answers. Besides that, consumer also may lack of knowledge about the vehicle safety technology and the system that it has because vehicle safety technology have many types of system that may be difficult to consumer to identify name and the systems functions. Furthermore, the researcher is given limited time to do this research and need to complete within the period. Other than that, the cost also became one of the limitations of this research because the position of researcher as a student.

Next, in the literature review, there are information about buying behavior in vehicle which is the factors are benefit-to-self, and environmental benefit in order to get better understanding. Furthermore, the proposed integration of those factors, theoretical framework is presented together with the objectives of this research followed by hypotheses. Data collection for this research was carried out at Melaka Tengah. This study target is based on 100 respondents. Last but not least, the discussion of this research is carried out and followed by main conclusion and recommendation.

1.6 Significant of study

This research is beneficial for marketers and also manufacturer in automotive industry as a reference to study on what does the view of the customer‟s towards vehicle safety. To study what are the impact of vehicle safety to customer buying behavior. Furthermore, the marketers or manufactures should able to improve their services and produce more information in terms of vehicle safety in automobile industry.

This research also will provide a data to relate the importance of having a vehicle safety and the relationship between the customer behaviors towards vehicle safety in automobile industry. From this, marketer or manufacturer can convince the customer‟s on the benefit of vehicle safety in automobile industry.

1.7 Summary

In this chapter it has include the introduction of the study, the problem statement, research objective, research question and scope of study. In the upcoming chapter 2, literature review will be discussed.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter, the review of pass journals is done. Literature review is essentially examined according to the sources and described to justify the statements with proof of research or study in related subject. For this research, vehicle safety technology importance, information about the technology has, and the price influence as well as the consumer buying behavior is discussed.

2.2 Vehicle safety technology (VST)

According to B.zhu and C. Grundstrom (2004), the statistics 1.17 million people are killed worldwide in road crashes every year, and 10 million people are seriously injured. Besides that, traffic safety ranks as one of the most important societal issues like health and economic activities. There are many vehicle inventions with great safety potential still wait for their product realization and the vehicle safety performance has become a more and more important factor influencing customers buying behavior. Vehicle safety product realization is one of the core competences in the automotive industry nowadays but different individuals have different demands for safety due to differences in perception level with several factors. For example, some people consider the seatbelt as very important for their traffic safety while others do not this is due to their different traffic safety demands.

According to traffic accident statistics from the early 21" century, speed is one of the most important contributors to accidents. Enforcing speed management would therefore be an important and probably effective means to improve the traffic safety. An individual's traffic safety need and demand are different in many situations since the individual lacks the motivation to perceive their safety needs.

Most of the car technology for few years ago focused on entertainment and now the vehicle safety is beginning to take center stage in the car technology space. As 20 percent for front crash prevention systems is twice the rate it was in 2012 and added with warning systems, the auto-braking, are now optional in almost 40 percent of new vehicles being issued. The U.S. government has been functioning on an action which will eventually need automakers to equip all new vehicles with technology that lets cars warn one another car if they are plunging toward a possible accident. This action should be in few some years off and it will clearly have „game-changing potential" to cut collisions, deaths and injuries, according to several traffic safety specialists. (Michael McEnaney, 2014)

Other than that, many of vehicle safety systems are available on current vehicle models, either as standard equipment or offered as extra-cost options. Some safety features are not widely available in the present vehicle fleet. Besides, these systems are limited to being installed only on the most expensive vehicles in manufacturer"s lines. However, it is anticipated that as the technologies are further developed, manufacturing costs reduced, and the safety benefits of the systems are realized, public demand will increase, and more of these systems will trickle down into lower priced vehicle models (McClafferty.K, 2008).

Other than that, technology development has created the „Safety Shield" concept, as shown in figure 2.1, incorporating various safety systems that offer continuous defense against potentially dangerous conditions from normal driving to post accident. From this idea, the technology also introduce a series of latest safety and Intelligent Transport System (ITS) technologies in the near future. (Atsugi, 2007).