IMPACT OF COUNTRY OF ORIGIN DIMENSIONS ON PURCHASE INTENTION OF ECO CAR

WASANA SINRUNGTAM

A DISSERTATION SUBMITTED IN PARTIAL FULLFILLMENT OF THE REQUIREMNTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY PROGRAM IN BUSINESS ADMINISTRATION

FACULTY OF BUSINESS ADMINISTRATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYAPURI

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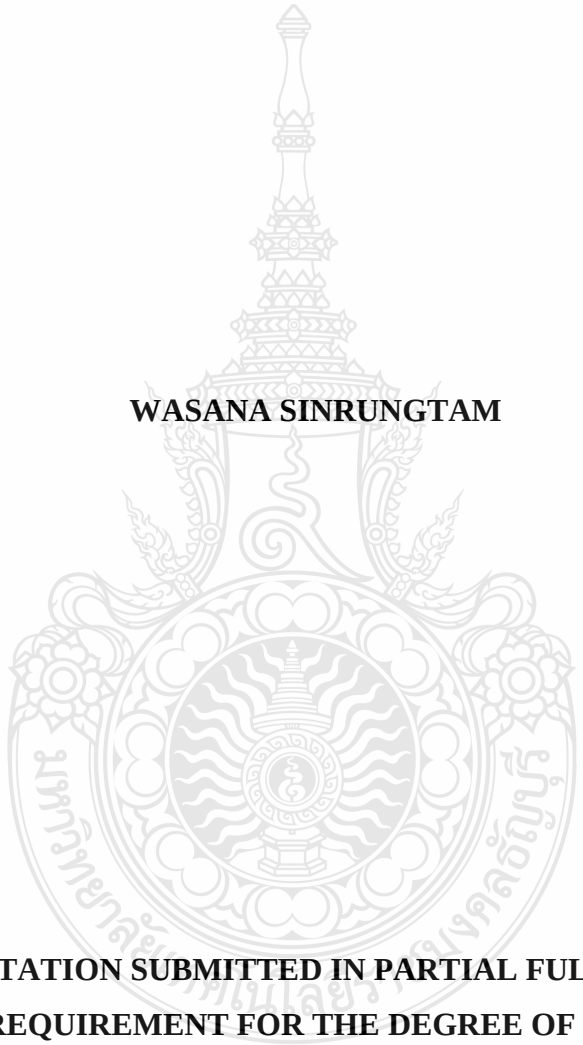

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Program	Business Administration
Dissertation Advisor	Mr. Pirayut Pattanayanon, D.B.A.
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ABSTRACT

The purpose of this study was to investigate the effects of the dimensions of country of origin on product quality assessments, perceptions of product value, and purchase intention of Eco car consumers.

The survey sample consisted of people in Bangkok and Metropolitan Area (BMA), who intended to purchase Eco cars within six months. Survey research with structured questionnaire was the method used for data collection. Multiple regressions were applied to test the research hypotheses, and the sample size required 500 respondents.

The findings revealed that product quality assessment of Eco cars were affected by country of corporate ownership (COC), country of manufacture (COM), country of parts (COP), and country of brand (COB), which in turn had an effect on purchase intention. In other words, on purchase intention through product quality assessment of Eco cars were indirectly affected by COC, COM, COP and COB. Further, the study found that perception of product value of Eco cars were affected by COP and COM, which in turn had an effect on the purchase intention. Thus purchase intention through perception of product value of Eco cars were indirectly affected by COP and COM. Besides, purchase intention was directly affected COP and COM also. On the other hand, product quality assessment, perception of product value, or purchase intention of Eco cars were not affected by country of assembly (COA) and country of design (COD).

Keywords: dimensions of country of origin, product quality assessment, perception of product value, purchase intention, Eco car

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Wasana Sinruntam

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List of Abbreviations

COA	Country of Assembly
COB	Country of Brand
COC	Country of Corporation ownership
COD	Country of Design
COM	Country of Manufacture
COO	Country of Origin
COP	Country of Parts

CHAPTER 1

INTRODUCTION

This chapter provides an overview of the research problem in this study. The area of focus is to examine the importance of Country of Origin on consumers' attitudes and behavior, composed of product quality assessment, perception of product value, and purchase intention. This chapter includes the background and the statement of the problem as well as the importance and purpose of the study. The research questions and hypotheses are discussed later, followed by limitations /delimitations and definitions of terms.

1.1 Background and Statement of the Problem

World fuel consumption indicated in the Annual Energy Outlook 2012 showed that there is a tendency of an increase in the world fuel consumption, which is expected to rise from 86,100,000 barrels per day in 2007 to 110,600,000 barrels per day in 2035. Meanwhile, crude oil prices have been fluctuating in the global market from 2010 to 2013, first increasing steeply from 79.40 to 94.86, then stabilizing at 94.51, followed by a gradual fall to 88.25 U.S. dollars per barrel, respectively (U.S. Energy Information Administration, 2012). These oil price fluctuations have resulted in a global energy crisis, in response to which Thailand has launched a fuel management project to solve the problem by focusing on fuel oil which is mostly imported from other countries. The government has set a goal to decrease the total percentage of liquid fuel oil consumption from 49% to 45% within 2020 (Ministry of Energy, 2011). This

will directly impact the transportation sector, whose current liquid fuel oil use accounts for 36% of the total domestic liquid fuel oil consumption. As a result, the transportation sector has to reduce its costs from oil consumption by using new alternative energy vehicles such as Hybrid or Fuel Cell or electric vehicles. The most feasible choice for mass population is to use energy-efficient cars or 'Eco cars' having engines not exceeding 1300 cc or diesel engines not exceeding 1400 cc. In order to promote energy efficiency in transportation, the Thai government has approved tax refunds for first-time car buyers whose new cars have engines not exceeding 1500 cc (Research Community, 2008).

In addition, with support from the Royal Thai Government for investments in domestic car manufacturing, six large car manufacturers, namely Toyota, Honda, Suzuki, Mitsubishi, Tata, and Nissan have announced investment plans for the manufacturing of Eco cars in Thailand (Thailand Investment Review, 2012). In March 2010, Nissan Motor (Thailand) Co., Ltd. was the first automobile company to manufacture and sell Eco cars in Thailand. This made Nissan a frontrunner in the Thai automobile market by having its total vehicle sales increase by 245.1% from January 2010 to November 2010 compared to the top three car manufacturers including Toyota and Honda whose total vehicle sales had increased by 42.2% and 21.2%, respectively (see Table 1-1) (Business Monitor International, 2011). Besides, Nissan's market share from January 2012 to October 2012 had increased by 15.2%, while its total sales had increased by 61.1% due to the success of its Eco car model (Thailand Autos Report Quarter 1, 2013). Considering total new vehicle registrations of Nissan in March 2011, there were 30,830 cars, which made for an increase of 175.6%, compared to the

company's total new vehicle registrations of 11,186 cars in March 2010 when Nissan March was first launched in the market (Department of Land Transport, 2011). In 2012, total sales of Nissan March were more than 100,000 cars (Nissan Motor Thailand, 2012). The Thailand Board of Investment estimated the total sales of Eco cars in Thailand to be more than 200,000 cars, sold locally, while the current waiting list exceeds 20,000 units for each model (Thailand Investment Review, 2012). This information indicates that Eco cars have been increasingly popular among Thai consumers recently, and it supports Nissan's forecast as shown in Table 1-2. Total sales of Nissan Almera and Nissan March from January 2012 to October 2012 were 41,175 units and 26,662 units, respectively. This is followed by Mitsubishi Mirage, Honda Brio, and Suzuki Swift whose total sales were 25,438 units, 13,157 units, and 11,799 units, respectively (Business Monitor International, 2012).

Table 1.1 Thailand Vehicle Sales from 2010 to 2012

Manufacture	Units			Market Share			% Change year- on- year (sales volume)		
	[a]2010 (Jan.- Nov.)	[a]2011	[b]2012 (Jan.- Oct.)	[a]2010 Jan.- Nov.)	[a]2011	[b]2012 (Jan.- Oct.)	[a]2010 Jan.- Nov.)	[a]2011	[b]2012 (Jan.- Oct.)
Toyota	125,876	138,104	187,220	40.9	38.3	39.5	42.2	9.7	35.6
Honda	93,748	77,933	123,182	37.5	21.6	20.8	21.2	(16.8)	58.1
Nissan	27,024	47,830	77,043	8.8	13.3	15.2	245.1	76.9	61.1

[a]Business Monitor International, 2011
[a]Business Monitor International, 2012

Table 1.2 Thailand's Eco-car Sales from January 2012 to October 2012

Brand name	Units	Market share
Nissan Almera	41,175	34.83
Nissan March	26,662	22.55
Misubishi Mirage	25,438	21.52
Honda Brio	13,157	11.13
Suzuki Swift	11,799	9.98
Total ECO	118,231	100.00

[a]Business Monitor International, 2012

Regarding the phenomena about the response to Eco cars whose country of origin is Thailand (for example, Nissan March), it would appear that Thai consumers buy Eco cars based on the country of manufacture. In fact, Eco cars sold in Thailand have different dimensions of country of origin, composed of country of manufacture (COM), country of assembly (COA), country of parts (COP), country of design (COD), country of brand (COB), and country of corporation ownership (COC). Thus, there is no conclusion yet of the dimensions of country of origin based on which Thai consumers buy Eco cars. Previous research conducted on this topic was that of Srinivasan, Jain, and Sikand (2004), who studied the effects of country of manufacture (COM), country of brand (COB), an intrinsic cue (quality), and other extrinsic cues of economy car and stereo system. The countries studied in this research were the United States of America, Japan, Mexico, and Malaysia. The participants were consumers in the United States of America. The results showed that intrinsic quality had more influence on product assessments and purchase likelihood than COM and COB; while the COB, COM, quality, and price had their effects on product assessments. However, this research focused on only two out of six dimensions of country of origin, and did not study them from the point of view of Thai consumers.

Therefore, this study is to extend from the research mentioned above by concentrating on six country of origin dimensions consisting of country of manufacture (COM), country of assembly (COA), country of parts (COP), country of brand (COB), country of design (COD), and country of corporation ownership (COC) in terms of the effects on product quality assessments and purchase intentions. In other words, it intends to investigate 1) the relationships between the dimensions of country of origin and product quality assessments 2) the relationships between the dimensions of country of origin and perceptions of product value and 3) the relationships between the dimensions of country of origin and purchase intention. Besides, the study investigates the effects of the dimensions of country of origin on purchase intentions of Eco cars through product quality assessments as well as perceptions of product value. Hence, the results of this study could be in accordance with the reality of the current Eco car market in Thailand.

1.2 Importance of the Study

Overall, the study investigates which country of origin dimensions affect consumer behaviors in terms of product quality assessment, perception of product value, and purchase intention. Contributions are expected to be made not only to the academic area but also towards the practice of international business. For the latter, it will help the automobile industry, or more specifically the car manufacturing companies whose country of origin dimensions are foreign countries, in choosing their country of origin to be appropriate for the purpose of marketing, to create incentives for consumers to buy. The results of the study will contribute to an enhanced understanding of the needs of the

customers and to the improvement of international trade practices of car companies.

As for the academic arena, it provides empirical evidence that country of origin dimensions, consisting of country of manufacture (COM), country of assembly (COA), country of parts (COP), country of brand (COB), country of corporation ownership (COC), and/or country of design (COD), are proportionally related to the degrees and the directions of product quality assessment, perception of product value, and purchase intention. For researchers and practitioners, this study will provide a useful guideline for further study of consumer behavior in the automobile industry.

1.3 Purpose of the Study

This study aims to identify the effects of country of origin dimensions on product quality assessment, perception of product value, and purchase intention. The independent variables include all country of origin dimensions, consisting of Country of Manufacture (COM), Country of Assembly (COA), Country of Parts (COP), Country of Design (COD), Country of Brand (COB), and Country of Corporate ownership (COC). The mediating variables comprise of product quality assessment and perception of product value. There is only one dependent variable, which is purchase intention. There are four main objectives of the study, as follows:

1.3.1 To investigate the effects of the dimensions of country of origin (Country of Manufacture (COM), Country of Assembly (COA), Country of Parts (COP), Country of Design (COD), Country of Brand (COB), and Country of Corporate ownership (COC)) on the product quality assessments of Eco cars.

1.3.2 To investigate the effects of the dimensions of country of origin (Country of Manufacture (COM), Country of Assembly (COA), Country of Parts (COP), Country of Design (COD), Country of Brand (COB), and Country of Corporate ownership (COC)) on the perceptions of product value of Eco cars.

1.3.3 To investigate the effects of the dimensions of country of origin (Country of Manufacture (COM), Country of Assembly (COA), Country of Parts (COP), Country of Design (COD), Country of Brand (COB), and Country of Corporate ownership (COC)) on purchase intention of Eco cars.

1.3.4 To investigate the effects of the dimensions of country of origin on purchase intentions through the product quality assessment of Eco cars.

1.3.5 To investigate the effects of the dimensions of country of origin on purchase intentions through the perceptions of product value of Eco cars.

1.4 Research Questions and Hypotheses

This study aims to examine the effects of country of origin dimensions on product quality assessment, perception of product value, and purchase intention. According to the conceptual framework, research questions were as follows:

RQ1: Which dimensions of country of origin have effects on product quality assessment of Eco cars?

RQ2: Which dimensions of country of origin have effects on perception of product value of Eco cars?

RQ3: Which dimensions of country of origin have effects on purchase intentions of Eco cars?

RQ4: To what extent the dimensions of country of origin have effects on purchase intention through product quality assessment of Eco cars?

RQ5: To what extent the dimensions of country of origin have effects on purchase intention through perception of product value of Eco cars?

In order to establish Hypothesis to answer the research questions, several research findings are involved in this context. First, Jang and Kan (2006) revealed that Country of Manufacture has an effect on product quality assessment. This empirical evidence was the same as in the research of Iyer and Kalita (1997) which revealed that the Country of Brand origin and the Country of Manufacture are important in consumers' product quality assessment. Second, Chao (1998) stated that Country of Assembly and Country of Parts affected the product quality assessment, but Country of Design did not affect product quality assessment. Third, Srinivasan, Jain, and Sikand (2004) explained that Country of Brand has an effect on product quality assessment. Fourth, Li, Marray, and Scott (2000) revealed that Country of Corporation Ownership slightly affects product quality assessment.

Due to the reviews above, research hypotheses H1a to H1f were developed to test the first research question, which concentrated on the degree of the effects of Country of Origin dimensions, as follows:

H1a: Country of Manufacture has an effect on product quality assessment of Eco cars.

H1b: Country of Assembly has an effect on product quality assessment of Eco cars.

H1c: Country of Parts has an effect on product quality assessment of Eco cars.

H1d: Country of Design has an effect on product quality assessment of Eco cars.

H1e: Country of Brand has an effect on product quality assessment of Eco cars.

H1f: Country of Corporation Ownership has an effect on product quality assessment of Eco cars.

Country of Origin has an effect on perception of product value. Pharr (2005) mentions that Country of Origin dimensions include Country of Manufacture, Country of Assembly, Country of Parts, Country of Design, Country of Brand, and Country of Corporation Ownership. Besides, Pharr's study showed that country of origin dimensions had a direct effect on perceptions of product value. In addition to Pharr's, Iyer and Kalita (1997) revealed that country of brand and country of manufacture have direct effects on perceptions of product values. Also, Hui and Zhou (2002) stated that the country of origin dimensions have direct effects on perceptions of product value. Thus, these three researches provide empirical evidence that country of origin dimensions (Country of Manufacture, Country of Assembly, Country of Parts, Country of Design, Country of Brand, and Country of Corporation Ownership) have effects on perceptions of product values. Therefore, research hypotheses 2a to 2f were set as follows:

H2a: Country of Manufacture has an effect on the perception of product value of Eco cars.

H2b: Country of Assembly has an effect on perception of product value of Eco cars.

H2c: Country of Parts has an effect on perception of product value of Eco cars.

H2d: Country of Design has an effect on perception of product value of Eco cars.

H2e: Country of Brand has an effect on perception of product value of Eco cars.

H2f: Country of Corporation Ownership has an effect on perception of product value of Eco cars.

There are two possible assumptions regarding the effects of country of origin on purchase intention. The first assumption is that country of origin has a direct effect on purchase intention. The second assumption is that country of origin has a direct effect on product quality assessment, which directly affects purchase intention as a result. Pharr (2005) noted that country of origin dimensions comprising Country of Manufacture, Country of Assembly, Country of Parts, Country of Design, Country of Brand, and Country of Corporation Ownership directly affected the product quality assessments, which affected purchase intentions as a result. Parameswaran and Pisharodi (2002) also found that country of origin directly affected product assessments, which in turn significantly affected purchase intentions. Therefore, research hypotheses 3a to 3f and 4 were shown as follows:

H3a: Country of Manufacture has an effect on purchase intentions of Eco cars.

H3b: Country of Assembly has an effect on purchase intentions of Eco cars.

H3c: Country of Parts has an effect on purchase intentions of Eco cars.

H3d: Country of Design has an effect on purchase intentions of Eco cars.

H3e: Country of Brand has an effect on purchase intentions of Eco cars.

H3f: Country of Corporation Ownership has an effect on purchase intentions of Eco cars.

H4: Product quality assessments have effects on purchase intentions of Eco cars.

According to research hypothesis 4 which was conducted to test the effects of product quality assessment on purchase intentions, it is typically assumed that the degree of purchase intention is likely to be low if the product quality is low. Nevertheless, the fact is that purchasers are categorized into many levels, and low product quality does not really determine low purchase intention. Sweeney and Souter (2001) stated that perception of product value in terms of emotional, social, quality/performance, and price/value for money drove purchase intentions. In addition, Hui and Zhou (2002) concluded that country of origin affected perception of product value, which drove purchase intention. Similarly, Pharr (2005) stated that country of origin dimensions, which consisting of Country of Manufacture, Country of Assembly, Country of Parts, Country of Design, Country of Brand, and Country of Corporation Ownership, directly affected the product quality assessments which, as a result, influenced purchase intentions. Perceptions of product value have effects on purchase intentions. Thus, research hypothesis 5 was set as follows:

H5: Perceptions of product value have effects on purchase intentions of Eco cars.

1.5 Definition of Terms

Country-of-Origin (COO) is usually communicated by the term "Made in" (name of country)" and is the symbol, the reputation, the stereotype that consumers associate a product with a specific country (Nagashima, 1972).

Country–of-Manufacture (COM) is the country in which the product is manufactured or assembled (Hamzaoui & Merunka, 2006).

Country-of-Assembly (COA) is the country where the majority of the product's final assembly occurred (Insch & McBride, 2004).

Country-of-Parts (COP) or Country-of-Components is the country where the majority of the materials and components used in the product came from (Insch & McBride, 2004).

Country-of-Design (COD) is the country where the design was conceived and engineered (through the brand name) (Insch & McBride, 2004).

Country-of-Corporation ownership (COC) is the country with which a firm is associated, and it is typically a multinational corporation's home country. For example, IBM and Kodak are considered to be U.S. corporations (Li, Murray, & Scott, 2000).

Country-of-Brand (COB) is sometimes embedded in many well-known brand names; for example, Honda and Sony are automatically considered to be Japanese brands (Thakor, 1996).

Eco car is an energy efficient car which has important specifications including 1) fuel consumption not over 5 liters/100 km, 2) emissions standards compliant with Euro 4 specification or higher, 3) carbon dioxide emissions of no more than 120 gm/km, 4) satisfy passenger safety standards for both front and side impact as specified by UNECE Reg. 94 and Reg. 95, respectively, and 5) engines smaller than 1,300 cc for petrol engines and 1,400 cc for diesel engines (Thailand Investment Review, 2012).

Product quality assessment is the degree to which a consumer measured quality of product (Jung & Kau, 2006). The quality measurements include performance, reliability, durability, workmanship, and dependability.

Perception of product value is the ratio or trade-off between quality and price, which is a value-for-money conceptualization (Sweeney & Soutar, 2010).

Purchase intention is the degree to which a consumer intends to buy a product (Han, 2005).

1.6 Delimitations and Limitations of the Study

The delimitations and limitations may influence the findings and the conclusions of the study. These delimitations and limitations are as follows:

1.6.1 The target sample of the study is drawn from a specific target group of Thai population with specific conditions in terms of gender, level of income, and intention of buying Eco car within 6 months. Thus, the results of the study could only be generalized to the specific target group of Thai respondents.

1.6.2 Eco car is a specific product used in this study. Therefore, the effects of the country of origin dimensions of Eco cars on purchase intention might be different from the effects of the country of origin dimensions for other product types.

1.6.3 The study concentrates on the effects of country of origin dimensions of Eco cars sold in Thailand only. If it changes to focus on Eco cars sold in other countries, different findings may emerge.

CHAPTER 2

REVIEW OF THE LITERATURE

2.1 Introduction

The theoretical concepts and basis of this study are presented within this chapter. The primary objective is to study about the product's country of origin, leading to researches from past to present about the effects of country of origin. This study focuses on 6 dimensions of country of origin, comprising Country of Manufacture (COM), Country of Assembly (COA), Country of Design (COD), Country of Parts (COP), Country of Brand (COB), and Country of Corporation Ownership (COC). The purpose of the study is to obtain a better understanding of how consumers consider the importance of these 6 dimensions of country of origin in relation to product quality assessment, perception of product value, and purchase intention. The review of literature is divided into 5 parts - the first part is a review on the design of country-of-origin research; the second part discusses the effects of country of origin; the third is about product quality assessment, while the next part is a review of purchase intention; and finally, the last part elaborates on the effects of country of origin of automobiles on Thai consumers.

2.2 The Design of Country-of-Origin Research

Various researches on the effects of country of origin have been conducted for over 47 years since the research of Robert and Schooler (1965). Presently, there are several researches on the effects of the product's country of origin. The word "Country of Origin," shortly called "COO," is a part of information cue. Information cue could be

either an intrinsic cue or an extrinsic cue. Intrinsic cues generally indicate the physical product characteristics, consisting of the size of engine, performance, durability, quality, test, style, and so on (Srinivasan, Jain, & Sikand, 2004; Veale & Quester, 2009). Extrinsic cues, on the other hand, are external to the product, such as its price, brand name, product type, product complexity, and country of origin (Ahmed & d' Astous, 1996; Michaelis, Woisetschläger, Backhaus, & Ahlert, 2008), and also individual consumer factors, consisting of involvement level, involvement type, product familiarity, product importance, and so on (Josiassen, Lukas, & Whitwell, 2008; Pharr, 2005; Veale & Quester, 2009). There are some researches that have classified the design of country of origin research into two types, which are 'single-cue' and 'multi-cue' as discussed in the following paragraphs.

The first type of research on the product's country of origin is 'single cue', where the underlying basis is that the product's country of origin is the only independent variable in testing its relationship with dependent variables such as product quality assessment, perception of product value, purchase intention, attitude, perceived risk, and purchase decision. A good and well-known example of this type is the research of Bilkey and Nes (1982), who studied the effects of country of origin on product quality assessment of the buyer. This research elaborated on important issues about characteristics related to the product comprising 1) the product's country of origin classified by the countries' Economy level or specified country name and 2) types of products, which are consumer goods, industrial goods, hybrid products and specified product name. An example of research about the effects of country of origin that used this single dimensional design having several countries of origin and several types of

products is the research of Manraia, Lascu, and Manraia (1998), which studied the effects of country of origin on product quality assessment. There were 21 countries of origin classified into groups of highly-developed countries, newly-industrialized, newly-marketizing, and developing countries. There were 18 types of products classified into groups of consumer packaged/convenience goods, shopping goods, and luxury/expensive goods. The results showed that highly-developed countries ranked top in terms of product quality assessment, followed by newly-industrialized, newly-marketizing, and developing countries, respectively. Therefore, this research showed that consumers assessed the quality of product based on Economy level of the country which was the product's country of origin.

One of the interesting studies which specified several countries of origin and several types of products is the research of Hanzaee (2008), which focused on the effects of country of origin on the evaluation of foreign products in an Islamic Country. There were 5 different countries of origin namely Japan, Germany, France, South Korea, and China. There were 6 different types of products consisting of automobiles, household appliances, food products, medical products, hygiene products and cosmetics, and computer parts and equipment. The findings showed that consumers' attitudes towards foreign product attributes were significantly different except for a few of these attributes for which the differences among countries were not significant. Furthermore, the findings also indicated that Germany was the country which consumers gave the highest priority when purchasing products. However, regarding special types of products, consumers preferred the German cars or Japanese appliances equally. In the realm of hygiene products and cosmetics, consumers gave the highest

priority to France, followed by Germany and Japan, respectively. In automobiles, consumers gave the highest priority to Germany, followed by Japan and France, respectively. Consequently, this research showed that consumers' attitudes on types of products also rely on country of origin.

In addition, an example of research which specified several countries of origin but only one product is the research of Chinen, Enomoto, and Costley (2000), which studied about the country of origin effect on product evaluation. There were three countries of origin including Japan, United States of America, and Mexico. The product was automobiles identified by their brand as Toyota (Corolla, Camry, and Avalon). The findings revealed that country of origin influenced consumers' product evaluation of automobiles made in different countries. Regarding the researches that studied only one country of origin and had various types of products, the study of Sohail (2005) is a good example worth mentioning. The results showed that products made in Germany had been highly rated for their quality; and that Malaysian consumers generally gave the highest priority to automobiles.

Chinen and Sun (2011) studied the effects of country of manufacture (COM) of Chinese brand automobiles on US consumers' attitude, by focusing on Chinese brand automobiles made in nine countries consisting of China, Japan, Mexico, Canada, South Korea, Germany, Russia, India, and the United States of America. These countries were categorized into groups including most advanced countries and advanced countries, and the participants were U.S. consumers in Sacramento, California. The findings showed that US consumers were rational buyers who concentrated on the perceived product quality rather than emotional factors such as ethnocentrism and

ethnicity. They were, therefore, more receptive to the Chinese brand automobiles which were made in the most advanced countries (Japan, Germany, and the United States of America) than those made in advanced countries (South Korea and China). In addition, the findings indicated that Chinese automakers gained the most benefit from quality image improvements by producing automobiles in advanced countries, such as South Korea and China, than in the most advanced countries.

Rosenbloom and Haefner (2009) conducted research on the relationship between country of origin and global brand trust in 22 product categories, comprising high involvement, durable goods (refrigerators, washing machines), and low involvement, fast moving consumer goods (chocolate bars, yogurt, disposable batteries). Respondents to the study included consumers from the United States of America, Nepal, India, Poland, the Czech Republic, and Bulgaria. The findings indicated that global brand might have a regional or meso level component which brand trust has uncovered for the first time.

The sEcond type of research on the product's country of origin is 'multi cue', which is a research that sets the country of origin and other information cue (price, brand name**,** product type, product complexity, involvement level, involvement type, product familiarity, product importance, etc.) to be independent variables, moderator variables, or mediating variables. The objective is to determine the relationships between these variables and the dependent variables such as perception of product quality/reliability, perceived value, perceived risk, product quality evaluation, purchase intention, purchase decision-making, attitude, brand equity, brand image, and so on (Pharr, 2005). One of the important studies mentioned by many researchers is that of

Chao (1993), who studied the effects of country of origin dimensions (Country of Assembly and Country of Design) and price, on evaluation of product design and quality in newly industrialized countries (NICs) consisting of Taiwan, Thailand, Mexico, the United States of America, and Japan. The product used in this research was television, which is representative of an industrial product as well as a hybrid product, as interviewed from retailers. There is also the research of Ahmed and d'Astous (1996) who had studied the effects of country of origin (Country of Assembly and Country of Design) and brand name on consumer evaluation of quality and purchase value of products. Other examples of studies on country of origin and other variables from extrinsic cues and intrinsic cues are detailed in the following paragraphs.

An instance of research on country of origin and extrinsic cue (price and packaging) is that of Schnettler, Ruiz, Sepulveda, and Sepulveda (2008) focusing on the importance of the country of origin in developing countries, which were Argentina and Brazil. The study focused on the effects of country of origin, price and packaging on purchase decisions in food consumption products, which were beef and rice. The consumers involved in this study were from the cities of Temuco and Talca in the South of Chile. The findings indicated that the most important factor when consumers decided to purchase beef was country of origin, followed by price and packaging, respectively. Regarding rice, the importance of the three product attributes was almost equal to each other. Generally, the country of origin was slightly more important than price and packaging. Therefore, the findings indicated that neither country of origin, price, nor packaging is a dominant factor which can influence consumers' purchase decisions on different products.

Chu, Chang, Chen, and Wang (2010) examined the effects of country of origin on extrinsic cue (brand image) and evaluation mode. The research design used was a 2 (COO) × 2 (brand) × 2 (evaluation mode) experimental design. The research focused on favorable and unfavorable countries (Taiwan and China), while brand names were categorized into strong and weak brands (Sony and Asus), and evaluation mode were joint evaluation mode and separate evaluation mode. The products were laptop computer, while consumers were Taiwanese students. The findings showed that products made in favorable countries were rated higher in joint evaluation mode than in separate evaluation mode. Conversely, products made in unfavorable countries were better evaluated in separate evaluation mode than in joint evaluation mode.

The research of Han (2010) studied the country of origin and extrinsic cue (brand name and price expectation). The objective of this research was to determine the effects of country of origin, brand name, and price expectation on product evaluation and willingness to pay. The countries of origin selected for the study were France, the United States of America, and China. The key products were two brand names of luxury handbags including Louise Vuitton and Coach. Consumers for the study were Taiwanese. The results showed that country of origin had more influence on product evaluation than brand name. Regarding price expectation, Taiwanese consumers were willing to pay a higher price for products with well-known country of origin (the United States of America and France), and also expected greater price discounts for the less well-known country of origin, which is China.

Saffu and Scott (2009) conducted research on the effects of country of origin and extrinsic cue (high and low product involvement) on quality perceptions. The

countries of origin in this research were the United States of America, Australia, Italy, and Brazil, while the products were personal computers and shoes. Consumers were from Malaysia and Papua New Guinea. The findings indicated that country of origin influenced consumers' preferences differently in the case of high and low product involvements.

An example of research on country of origin and extrinsic cue (product familiarity and product involvement) is that of Josiassen, Lukas, and Whitwell (2008). The research was to study the effects of country of origin image, moderated by product familiarity and product involvement, on the evaluation of four different product classes. Participants in this research were consumers in Australia. The results showed that product familiarity and product involvement had significant and negative influences on the effect of country of origin image on behavioral intentions. Product involvement had significant and negative influence on the effect of country of origin image on quality perception, but product familiarity did not.

Henderson and Hoque (2010) studied the effects of country of origin and extrinsic cue (ethnicity and high- and low- product involvement) on product evaluation and purchase evaluation. The results revealed that the impact of ethnicity was more pronounced for high-involvement products.

Cumberland, Solgaard, and Nikodemska-Wolowik (2010) studied the effects of ethnocentrism and country of origin on product quality assessments and buying intentions toward foreign manufactured products. The products used in the study were designer furniture and fashion clothes from Denmark. The respondents were Polish consumers. The results indicated that consumer ethnocentrism was present, as more

than one-fifth of the consumers were highly ethnocentric, and ethnocentrism had no direct effect on either the evaluation of product quality or buying intention for the products from Denmark.

Thorelli, Lim, and Ye (1989) studied the effects of country of origin and extrinsic cues (retail store image, warranty) on overall attitude, perceived quality, and purchase intention. The participants were graduate students at a Midwestern University. The findings showed that country of origin and warranty had significant effects on the perceived product quality, overall attitude, and purchase intention.

Ou (2007) examined the influence of country of origin and extrinsic cues (demographic and cultural factors) on the attitudes of consumers from Taiwan, China, and Thailand, toward product attributes, pre-purchase, and purchase decision of different American-made passenger vehicles. The findings showed that different demographic, cultural, country of origin effects on product attributes, and pre-purchase feedback variables had either positive or negative differences or relationships on purchase decisions in Taiwan, China, and Thailand. The demographic variables also had positive or negative relationships or differences associated with culture, country of origin effects on product attributes, and pre-purchase feedback variables in Taiwan, China, and Thailand. In contrast, the diffusion of information variables had no relationship or differences associated with the purchase decision and demographic variables.

A good example of research that emphasized on country of origin, intrinsic cue and extrinsic cue is the research of Veale and Quester (2009). The study was to investigate the influence of extrinsic cues, which were price and country of origin, on

consumers' evaluation of product quality, using 3 (COO) x 3 (price) x 3 (fat content) when intrinsic cues were experienced through sensory (taste) perception. The test product was Brie cheese. The results showed that country of origin and price had substantial influence on consumers' evaluation of product quality. However, price was found to be the most important attribute contributing to perception of product quality.

In summary, the researches on country of origin as single cue which have been reviewed above, are studies that focused on investigating the effects of country of origin on consumers' quality assessment, although some of the researches were conducted on different products and in different countries. The researches with country of origin as multi-dimensional type also led to similar findings. The difference between single-cue and multi-cue is that the researches which used country of origin as single-cue had greater effect sizes than those which used country of origin as multi-cue. The reason is that multi-cue type studies had additionally investigated on other variables which could influence consumer behaviors regarding product consumption (Peterson & Jolibert, 1995; Verlegh & Steenkamp, 1999). In other words, for a research on country of origin using the single cue design, the researcher has to focus on country of origin which influences consumer behavior in product consumption while controlling other factors. In contrast, for a research that uses the multi cue design, the researcher has to study country of origin and other factors from informational cues, which could influence consumer behavior.

2.3 The Effects of Country of Origin Dimensions

The dimensions of country of origins and their effects are provided in this section. Country of origin can be classified into several dimensions. The first country of origin dimension is Country of Manufacture (COM), which means the country where the product was finally made and has a label of "made in" (Hamzaoui & Merunka, 2006; Jung & Kau, 2006; Ulgado, 2002). The sEcond dimension of country of origin is Country of Assembly (COA) which is the country where a majority of the product's assembly occurred (Insch & McBride, 2004; Chandrasen & Paliwoda, 2009). The third dimension is Country of Parts (COP) which is the country where a majority of the materials used for the product were from and/or the component parts were made (Insch & McBride, 2004). The fourth dimension of country of origin is Country of Design (COD) which is the country where the product was conceived and engineered (Insch & McBride, 2004). The fifth one is Country of Brand (COB) which is the country with which the brand of the product is associated (Thakor, 1996). The next country of origin dimension is Country of Corporation Ownership (COC) which is the country where the firm ownership is located (Jung & Kau, 2006; Li et al., 2000). Other country of origin dimensions also exist, such as the country in which the e-commerce infrastructure is based (COE) (Ulgado, 2002). However, the country of origin's six main dimensions COM, COA, COP, COD, COB, and COC support the researches as discussed in the following paragraphs.

Chao (1993) studied the country of assembly (COA), country of design (COD), and another extrinsic cue, which is price. The design of the research was based on multi country with one type of product. The objective was to investigate the

influences of COA, COD, and price on the assessment of the product quality and its design. The participants were in newly industrialized countries (NICs) consisting of Taiwan, Thailand, Mexico, the United States of America, and Japan. The product used in the research was television, a hybrid product. The findings indicated that consumers' assessment of product design and quality were influenced by price, COD, and COA. COD, specifically, interacted with price significantly in influencing the ratings of product quality.

Lee and Shaninger (1995) conducted research on the effects of country of production/assembly (COP/A) moderated by price, product types, and characteristics of product (high technology and luxury products of global brand) on perception of product value and purchase.

The research of Ahmed and d'Astous (1996), focusing on country of assembly (COA), country of design (COD), and other extrinsic cues including price, brand name, and satisfaction assurance, showed the same findings. The design of the research was based on multi country with multi product. The objective was to investigate the influences of COA, COD, brand name, price, and satisfaction assurance on the consumer assessment of the product quality and purchase. The research was conducted in two different time periods using two different formats. The countries of origin were four countries including Canada, Mexico, Japan, and Italy; and there were three products used in the research including automobile, video-cassette rEcorder (VCR), and shoes; while the participants were Canadian consumers. The findings revealed that the combined effects of COA and COD had a stronger impact than brand name on the assessment of quality and purchase value of those three products. In addition, COD,

COA, brand name, and satisfaction assurance had direct effects on the assessment of quality and purchase value. Nevertheless, price had a direct effect on purchase value but an indirect effect on the assessment of quality.

Furthermore, country of design (COD) and country of assembly (COA) have an effect on purchase value depending on differences of country characteristics and product types. This empirical evidence was found in the research of Chetty, Dzever, and Quester (1999), which concentrated on COD and COA. The design of the research was based on multi country with multi product. The objective was to investigate the influences of COA and COD on industrial purchase decision-making in New Zealand. The study was based on 17 countries as categorized by Economic levels including developed countries (Japan, France, the United States of America, Sweden, Germany, the United Kingdom, and Norway), newly industrialized countries (South Korea, Singapore, Taiwan, and Hong Kong), and newly industrializing countries (Brazil, Mexico, India, Russia, Thailand, and Philippines). The products used in the research were machines and component parts. The results showed that both COD and COA were important elements of choice for purchasing managers. Also, COA was considered more important than COD in newly industrialized countries.

In addition, country of design (COD) and country of assembly (COA) have an effect on beliefs about and attitudes toward purchasing product relying on differences of country characteristics and product type as well as other extrinsic cues such as ethnocentrism. This empirical evidence was found in the research of Brodowsky (1998), which concentrated on COD, COA, and ethnocentrism. The design of the research was based on multi country with one product. The research was basically a

combination of COD and COA, and two countries used in the research were Japan and the United States of America. Consumer participants were divided into two groups consisting of high ethnocentric and low ethnocentric groups from the United States of America. The objective was to investigate the effect of the combination between COA and COD on consumers' evaluative beliefs about and the attitudes toward purchasing automobiles. The findings showed that the effect of the combination of COD and COA on beliefs about and attitudes toward purchasing automobiles depended on the level of consumer ethnocentrism.

The findings about ethnocentrism were supported by the research of Chandrasen and Paliwoda (2009), which focused on country of assembly (COA) and other extrinsic cues (brand name and ethnocentrism) studied from one country. The objective was to investigate the effects of COA and brand name on the assessment of product quality. Consumers classified along ethnocentric lines were Thai consumers and the product was automobiles. The results showed that COA and brand name had an effect on perceived product quality of automobiles depending on consumer ethnocentrism.

Hamzaoui and Merunka (2006) studied the effects of country of design (COD) and country of manufacture (COM) on perceived product quality. The design of the research was based on multi country with multi product. The countries used in this research were the United Stated of America and Mexico, and the products were divided into two groups including products with status symbols (automobiles) and private goods (television sets). Participants were consumers in Tunisia, and the concept of the study was product fit. The findings revealed that COM and COD had an effect on the product

assessments, and the concept of fit of both COM and COD depended on product category. Besides, consumers from emerging countries were more sensitive to COD for products with status symbols (automobiles) than COM for more private goods (television sets), and COM and COM/product fit were more important.

Iyer and Kalita (1997) studied the effects of country of manufacture (COM) and country of brand (COB) on consumer assessments of product quality, product value and willingness-to-buy. The design of the research was based on multi country. The results showed that the effects of COM and COB on consumer assessments of product quality, product value, and willingness-to-buy depended on the differences of the countries' Economic levels.

Similarly, the research of Srinivasan, Jain and Sikand (2004) was to investigate the effects of country of manufacture (COM), country of brand (COB), intrinsic cue (quality), and other extrinsic cues (including price and consumer characteristics such as ethnocentrism, product familiarity, and demographics like gender) on attitude, product category specific image toward a product alternative studied. The product used in the research was an Economy car and stereo system, while the countries were the United States of America, Japan, Mexico, and Malaysia. The participants were consumers in the United States of America. The results showed that intrinsic quality had more influence on product assessments and purchase likelihood than COM and COB. However, COB, COM, quality, and price had effects on product assessments, whereas gender did not have any influence on product assessment and purchase likelihood. The findings were different from the research of Jung and Kau

(2006) which revealed that COM had an effect on product assessment depending on brand and ethnocentrism.

Fetscherin and Toncar (2010) studied the effects of country of manufacture (COM) and country of brand (COB) on brand personality perceptions. The design of the research was based on multi country with one product. The products used were automobiles from China, India, and the United States of America, while the consumers were from the United States of America. The findings showed that COM had more influence on brand personality perceptions than COB.

Ulgado (2002) studied the effects of country of brand (COB), country of manufacture (COM), country in which e-commerce infrastructure is based on (COE), and other extrinsic cues including brand equity, business-to-business experience and familiarity with e-commerce. The design of the research was based on multi country with e-commerce products. The countries used in the research included the United States of America, France, South Korea, and Philippines, as categorized by the level of development of e-commerce infrastructure. The products were categorized into three groups, including printed matters (books, magazines, and newspapers), computer-related products and travel services, and consumer and market environments such as business buyers vs. consumer buyers. The objective was to investigate the effects of all variables on consumer perception and behavior. The findings indicated that the strength of brand equity, which included COB effects and other intrinsic cues such as product attributes, could diminish the impact of COM. In addition, COE was positively related to the level of development of e-commerce infrastructure, and the effects of COE were lower than those of COB. Furthermore, business-to-business experience and familiarity

with e-commerce had an effect on business-to-consumer community and the industrial buying situation. The effects of COE on consumer perception and behavior depended on the differences of business type and product category.

The research of Chao (1998) concentrated on country of assembly (COA), country of design (COD), and country of parts (COP). The design of the research was based on multi country with multi product. The focused countries were the United States of America and Mexico, whereas the product was a hybrid type, stereo television. The participants were consumers in the United States of America. The results showed that COA and COP had influence on the product quality perception, while COD had influence on design quality perception of the hybrid product. The research was partially supported by the findings of Insch and McBride (2004) in that COA and COP had influence on product quality perception, but COD did not have any influence on product quality perception, which is in conflict with the research of Chao (1998).

Insch and McBride (2004) studied the effects of country of assembly (COA), country of parts (COP), country of design (COD), and another extrinsic cue, warranty, on the perceptions of product quality. The design of the research was based on multi country with multi product. The countries used in the research were the United States of America and Mexico, while the products were television, athletic shoes, and mountain bike. The findings revealed that COA, COP, and COD affected perception of product quality depending on various products; with COP having the most influence on perception of product quality.

Chao (2001) studied the effects of country of assembly (COA), country of parts (COP), and country of design (COD), moderating of two country of origin levels

(COA moderated by COD, COP moderated by COA, and COD moderated by COP), on attitudes and purchase intentions. The respondents were from the United States of America and Mexico, while the products used in the study were two hybrid products, televisions and stereos. The results showed that respondents' attitudes were more positive when the product was assembled in the United States of America, and US parts were used, than when Mexican parts were used. Similarly, purchase intention was higher when the product was assembled in the United States of America, and US parts were used, than when Mexican parts were used. The results showed partial support to the congruity principle.

The research of Li, Murray, and Scott (2000) was to investigate the effects of country of assembly (COA), country of design (COD), country of corporation ownership (COC), and another extrinsic cue, warranty, on the assessment of product quality. The countries focused in the research were the United States of America, Taiwan, Japan, and Mexico. The product used was color television, while the participants were consumers in Australia. The four manipulated factors were COC ("GIW, a U.S. Corporation" versus "GIW, a Taiwan Corporation"), COD (Designed in Japan" versus "Designed in Taiwan"), COA ("Assembled in U.S." versus "Assembled in Mexico"), and warranty ("Full Warranty" versus "Limited Warranty"). The results showed that COD had more influence on the assessment of a product's functional and symbolic qualities than COC and COA. Nevertheless, warranty had a stronger influence than other country of origin factors (COD, COC, and COA).

Pharr (2005) presented a holistic model of country-of-origin (COO) influence based on a narrative review of empirical studies of country-of-origin assessments

conducted from 1995-2005. The research focused on several dimensions of country of origin including COM, COA, COP, COD, COB, and COC and their effects on product quality assessments and purchase intentions. The moderators were grouped into product-based and individual-based categories. The findings showed that the effects of COO assessments were based on holistic brand constructs such as brand image, brand equity or perceived value, rather than directly on purchase intentions.

In all researches mentioned here, the research design was multi-cue, which was the study of the effects of country of origin and other information cues, with multi-country (including several countries or several groups of countries categorized by Economic levels) and either multi-product (either product group or representative of product group with specific product name) or one product. Generally, the reviewed researches focused on one, two, three, or six dimensions of country of origin. The findings of these researches show that country of origin and other information cues have influences on consumer behavior and the differences of product types and consumer characteristics.

In conclusion, the effects of the various countries of origin dimensions rely on dependent variables. The researches indicate that COA, COD, COM, and COB have an effect on the assessment of product quality (Ahmed & d'Astous, 1996; Chao, 1993; Iyer & Kalita, 1997; Jung & Kau, 2006; Srinivasan et al., 2004; Li, Murray, & Scott, 2000; Pharr, 2005). The COC also has an effect on the assessment of product quality (Li et al., 2000), while COM, COA, and COP have an effect on the perception of product quality (Chandrasen & Paliwoda, 2009; Chao, 1998, Insch and McBride, 2004; Hamzaoui & Merunka, 2006). COD has an effect on the perception of product quality

(Insch & McBride, 2004; Hamzaoui & Merunka, 2006), while both COD and COA have effects on the assessment of design (Chao, 1993), evaluative belief about, attitudes toward buying (Brodowsky, 1998), purchase decision making (Chetty, Dzever, & Quester, 1999), and purchase value (Ahmed & d'Astous, 1996). Furthermore, COM and COB have effects on product value and willingness-to-buy (Iyer & Kalita, 1997; Pharr, 2005), purchase likelihood (Srinivasan et al., 2004), and brand personality perceptions (Fetscherin & Toncar, 2010). COE, COB, and COM have effects on consumer perception and behavior of e-commerce (Ulgado, 2002) while COD has an effect on design quality perception (Chao, 1998).

2.4 Product Quality Assessment

As indicated in several researches, five dimensions of country of origin which have an effect on product quality assessment are COA, COD, COM, COB, and COC (Ahmed & d'Astous, 1996; Chao, 1993; Iyer & Kalita, 1997; Jung & Kau, 2006; Srinivasan et al., 2004; Li et al., 2000; Pharr, 2005). In addition, the dimensions of country of origin which have an effect on perceptions of product quality are COM, COA, COP, and COD (Chandrasen & Paliwoda, 2009; Chao, 1998; Insch & McBride, 2004; Hamzaoui & Merunka, 2006). The questionnaire regarding product quality assessments and perceptions of product quality are similar to each other in many aspects as discussed in the following paragraphs.

The definition of product quality assessment is the degree to which a consumer measured quality of product (Jung & Kau, 2006). The research had 11 components of measurement consisting of reliability, price, workmanship, quality,

technology, performance, durability, breakdown, service, class, and pride to own, and it also had similar questions. However, Li, Murray, and Scott (2000) indicated in their research that there were two parts including 1) functional - consisting of performance, serviceability, reliability, durability, aesthetics, and conformance and 2) symbolic - consisting of features and image. The results showed that the values of coefficients were as follows: performance (.91), serviceability (.87), durability (.88), features (.81), reliability (.68), conformance (.60), image (.75), and overall quality (.77). Dodds, Monroe, and Grewal (1991) measured perceptions of product quality in 5 aspects including reliability, workmanship, quality, dependability, and durability. The findings indicated that the value of coefficient alpha was (.95). However, when comparing the questions about assessment of product quality between the research of Li, Murray, and Scott (2000) and the research of Dodds, Monroe, and Grewal (1991), significant differences were found with respect to terms of serviceability, aesthetics, features, and image. Therefore, the questions to measure the effects of product quality assessments and perceptions of product quality could be replaceable, since they are the same type of questions.

2.5 Perception of Product Value

From the researches mentioned above, it could be concluded that COM and COB had an effect on product value (Iyer & Kalita, 1997). The research of Pharr (2005) stated that Country of Origin assessment, consisting of Country of Manufacture, Country of Assembly, Country of Parts, Country of Design, Country of Brand, and Country of Corporation Ownership, had a direct effect on perceived value. This is

consistent with the research of Hui and Zhou (2002) which concluded that country of origin had a direct effect on perceived product values.

Perception of product value refers to a utilitarian value or a personal value. A utilitarian value is a term for what one perceives as worthy things, and a personal value is a term for what one believes to be important in his or her life (Zeithaml, 1988). The research of Sweeney and Souter (2001) used 19 questions to measure perceived value. On the other hand, Dodds, Monroe, and Grewal (1991) measured perceived value by using five questions consisting of product-value for money, price-Economy, product-good, price-acceptance, and product bargain, and the values of coefficient alpha was (.93). These two researches vary due to the inconsistent definitions of perception of product value. Sweeney and Souter (2001) defined perception of product value in terms of its emotional, social, quality/performance, and price-value for money, while Dodds, Monroe, and Grewal (1991) only focused on two aspects, that is, product quality and price.

2.6 Purchase Intention

According to previous researches reviewed, the dimensions of country of origin which had an effect on purchase intention in terms of willingness-to-buy (Iyer & Kalita, 1997; Pharr, 2005) and purchase likelihood (Srinivasan, Jain, & Sikand, 2004) were COM and COB. Pharr (2005) also noted that country of origin, comprising Country of Manufacture, Country of Assembly, Country of Parts, Country of Design, Country of Brand, and Country of Corporation Ownership, affected directly the assessment of products which, in turn, affected purchase intentions. This was supported

by the research of Parameswaran and Pisharodi (2002) which showed that country of origin directly affected product assessments which, in turn, had a significant effect on purchase intentions. The research of Jung and Kau (2006) supported this finding by indicating that COO (COM and KCMO) slightly affected purchase intention.

The questionnaire in the research of Dodds, Monroe, and Grewal (1991) was used to measure purchase intention through product quality assessment in terms of likelihood, probability, and willingness to buy. As for the research of Pharr (2005), it was found that the dimensions of country of origin were directed through perceived product values which, in turn, influenced purchase intention. In addition, the research of Hui and Zhou (2002) concluded that country of origin affected perception of product value, which drove purchase intention.

Dodds, Monroe, and Grewal (1991) measured the effects of country of origin on purchase intention through perception of product value based on five aspects including 1) likelihood, 2) product, 3) price, 4) probability, and 5) willingness to buy. The results showed that the value of coefficient alpha was (.96).

In summary, Dodds, Monroe, and Grewal (1991) used different questions to measure purchase intention in their research. The questions to measure purchase intention through perception of product value referenced the price, but the questions to measure purchase intention through product quality assessment did not consider price.

2.7 The Effects of Country of Origin of Automobiles on Thai Consumers

The research of Chandrasen and Paliwoda (2009) had focused on the effects of country of assembly (COA), brands of products, and ethnocentrism of Thai consumers.

The results indicated that COA had an effect on Thai consumers' perceived quality of automobiles. In addition, a brand with a strong quality image could reduce COA bias when evaluating automobiles from a country with a negative quality image. Apart from this, the results revealed that ethnocentric consumers exhibit their home country bias by championing locally-assembled automobiles. Ethnocentric consumers were found to have lower education achievements and lived in larger households. Nevertheless, age and income of ethnocentric consumers were found to have no bearing, unlike previous researches.

Thanasuta, Patoomsuwan, Chaimahawong, and Chiaravutthi (2009) studied the effects of countries of origin and brands of automobiles on Thai consumers. The research focused on seven countries of origin (including France, Germany, Japan, Korea, Malaysia, Sweden, and the United States of America) and twenty brands (including Audi, BMW, Chevrolet, Citroen, Ford, Honda, Hyundai, Isuzu, Kia, Mazda, Mercedes, Mitsubishi, Nissan, Peugeot, Proton, Ssangyong, Subaru, Suzuki, Toyota, and Volvo), which were classified into luxury car segment and Economy car segment. The results showed that there was a direct relationship between market acceptance and the price premium for automobiles in the luxury car segment. However, the results did not indicate the same relationship between market acceptance and the price premium for automobiles in the Economy car segment. Different brands affected Thai consumers in terms of willingness to pay. The results showed that Mercedes, BMW, and Audi brands were ranked the highest, while Subaru, Mitsubishi, and Toyota were the only Japanese brands to have significant brand values. It also appeared that Thai consumers put the highest value on cars from Germany, while cars from Japan and the United States of

America possessed approximately the same value. On the other hand, Korean and Malaysian cars, focusing on low price strategy as a competitive advantage, were ranked the last.

In summary, according to the researches mentioned, it can be concluded that there are significant effects of country of origin of automobiles on Thai's consumer behaviors consisting of perception of product quality, perceived value of country of origin, and willingness to pay. What needs to be taken into consideration include country of origin dimensions, types of cars, and characteristics of Thai consumers.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter begins with the theoretical framework which is drawn based on previous researches on country of origin dimensions, followed by the research design consisting of the selection of the subjects, instrumentation, variables, and data collection. Finally, the chapter ends with data processing and analysis used to answer the research questions of the study.

3.2 Theoretical Framework

Due to the theoretical framework of the effects of country of origin on consumer behavior in various aspects including product quality assessment, perception of product value and purchase intention, many related researches stated that country of origin dimensions could be classified into six dimensions including COM, COA, COP, COD, COB, and COC.

The study of Pharr (2005) focused on several dimensions of country of origin including COM, COA, COP, COD, COB, and COC and their effects on product quality assessments and purchase intentions. The findings showed that the effects of COO assessments were based on holistic brand constructs such as brand image, brand equity, or perceived value rather than directly on purchase intentions.

The study of Pharr concluded that country of origin assessments, consisting of COM, COA, COP, COD, COB, and COC, had direct effects on perceived value. These

findings are the same as the research of Hui and Zhou (2002) which concluded that country of origin had a direct effect on perceived product values.

The dimensions of country of origin had their effects on purchase intention in terms of willingness-to-buy (Iyer & Kalita, 1997; Pharr, 2005) and purchase likelihood (Srinivasan et al., 2004) that is, the COM and COB. Pharr (2005) also noted that country of origin, comprising COM, COA, COP, COD, COB, and COC, directly affected the assessment of products which, in turn, affected purchase intentions. Besides, it was found that the dimensions of country of origin were directed through perceived product values which, in turn, influenced purchase intention.

According to previous researches reviewed above, the conceptual framework shown in Figure 3.1 was designed based on these references. The figure shows the conceptual framework regarding the effects of the dimensions of country of origin on purchase intention, the effects of the dimensions of country of origin on purchase intention through product quality assessments, and the effects of the dimensions of country of origin on purchase intention through perception of product value. The dimensions of country of origin were classified into six groups consisting of Country of Manufacture (COM), Country of Assembly COA), Country of Parts (COP), Country of Design (COD), Country of Brand (COB), and Country of Corporation Ownership (COC). According to this conceptual framework, four hypotheses on the effects of country of origin of Eco cars were formed. Hypothesis 1 was to investigate the effects of the dimensions of country of origin on product quality assessments, comprising hypotheses H1a to H1f as shown in the following:

H1a: Country of Manufacture has an effect on the product quality assessment of Eco cars;

H1b: Country of Assembly has an effect on the product quality assessment of Eco cars;

H1c: Country of Parts has an effect on the product quality assessment of Eco cars;

H1d: Country of Design has an effect on the product quality assessment of Eco cars;

H1e: Country of Brand has an effect on the product quality assessment of Eco cars; and

H1f: Country of Corporation Ownership has an effect on the product quality assessment of Eco cars.

Hypothesis 2 was formulated to investigate the effects of the dimensions of country of origin on perceptions of product value of Eco cars, comprising hypotheses H2a to H2f as follows:

H2a: Country of Manufacture has an effect on the perception of product value of Eco cars;

H2b: Country of Assembly has an effect on the perception of product value of Eco cars;

H2c: Country of Parts has an effect on the perception of product value of Eco cars;

H2d: Country of Design has an effect on the perception of product value of Eco cars;

H2e: Country of Brand has an effect on the perception of product value of Eco cars; and

H2f: Country of Corporation Ownership has an effect on the perception of product value of Eco cars.

Hypothesis 3 was to investigate the effects of the dimensions of country of origin on purchase intentions of Eco cars, comprising hypotheses H3a to H3f as follows:

H3a: Country of Manufacture has an effect on purchase intentions of Eco cars;

H3b: Country of Assembly has an effect on purchase intentions of Eco cars;

H3c: Country of Parts has an effect on purchase intentions of Eco cars;

H3d: Country of Design has an effect on purchase intentions of Eco cars;

H3e: Country of Brand has an effect on purchase intentions of Eco cars; and

H3f: Country of Corporation Ownership has an effect on purchase intentions of Eco cars.

Hypothesis 4 was to investigate the effects of the dimensions of country of origin on purchase intentions through product quality assessments as shown in the following:

H4: Product quality assessments have effects on purchase intentions of Eco cars.

Hypothesis 5 was to investigate the effects of the dimensions of country of origin on purchase intentions through perceptions of product value as shown in the following:

H5: Perceptions of product value have effects on purchase intentions of Eco cars.

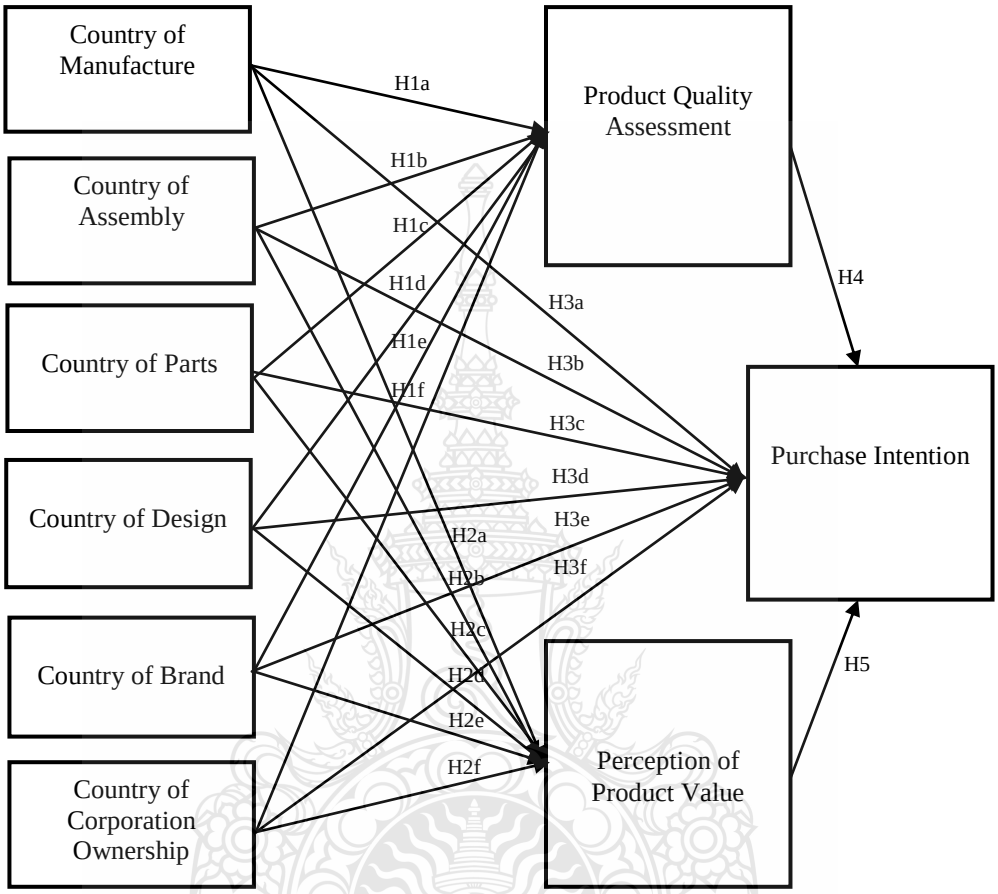

Figure 3.1 The Conceptual Framework

3.3 Research Design

The research design comprised of population and sampling, data gathering, research instrumentation, measurement, validity and reliability, data processing and analysis, and statistical analysis as discussed in the following paragraphs.

3.3.1 Population and Sampling

Total population in Bangkok and Metropolitan Areas (BMA), as of 2011, was estimated to be 9,011,591 people; out of which there were 5,674,843 people in Bangkok, 1,010,898 people in Pathum Thani, 1,122,627 people in Nonthaburi, and 1,203,223 people in Samut Prakan (National Statistical Office Thailand, 2011).

Sampling frame was drawn based on people in Bangkok and Metropolitan Areas (BMA) who intended to buy Eco cars within six months of the survey. The reason that the researcher chose respondents in the BMA region was that the statistics of new vehicle registrations for sedans (not more than 7 passengers) in BMA was 66.9 percent, while new vehicle registrations in 2012 were 984,183 cars out of 1,336,715 cars (Department of Land Transport, 2012).

The unit of analysis of this study is taken from visitors at the Thailand Motor Expo 2011 who intended to purchase an Eco car within six months after responding to the questionnaire. The reason that the researcher chose respondents at the Thailand Motor Expo 2011 was that there were almost 1,314,240 visitors, out of which 927,854 visitors (70.6%) were primarily from Bangkok, followed by 139,310 visitors (10.6%) from the Central region, and 247,077 visitors (18.8%) from other regions (Thailand Motor Expo, 2011).

Sampling selection was purposive sampling based on proportions of each province of visitors: 350 people (70%) from Bangkok and 150 people (30%) from the surrounding Metropolitan Area (Pathum Thani, Nonthaburi, and Samut Prakan). With the demographic information mentioned, sampling size was, therefore, approximately 361 people calculated from the below formula:

$N \geq (8/f^2) + (m - 1)$ ($f^2 = .15$ and $m = 6$)

Account effect size: $N \geq (8/f^2) + (m - 1)$ where $f^2 = .01, .15$, and $.35$ for small, medium, and large effects, respectively, and m is the number of independent variables. For more precise estimated effect sizes, note that $f^2 = R^2/(1- R^2)$, where R^2 is the expect squared multiple correlation. Six independent variables consist of country of manufacture (COM), country of assembly (COA), country of parts (COP), country of brand (COB), country of corporation ownership (COC), and country of design (COD). The effect sizes are medium, f^2 is .15 (Tabachnick & Fidell, 2001).

Nevertheless, this study gathered information from approximately 500 respondents living in Bangkok and Metropolitan Area. This number of the sample fulfils the requirement of the selected statistical method.

3.3.2 Data Gathering

The period of data gathering was from December 1 to 12, 2011. Over 500 copies of the questionnaire were distributed to target respondents in BMA who planned to purchase an Eco car within six months. The target area to distribute the questionnaires was the Thailand Motor Expo 2011 which had a road show of Eco cars. After checking for completion of data, 500 copies of questionnaires were completely filled in.

3.3.3 Research Instrumentation

The questionnaire was used as a research instrument developed to measure all variables in this study, as developed from the research of Dodds, Monroe, and Grewal (1991).

The questionnaire was divided into four sections. The first section included questions to seek general information of the respondents, such as gender, age, income, and also questions for screening the respondent's target group. The sEcond section included questions to determine the level of importance of the dimensions of country of origin of Eco cars to the buyers. The third section contained questions to measure the level of product quality assessment and perception of product value of the Eco cars. The fourth section had questions to determine the potential buyers' purchase intention of Eco car after assessing its quality as well as perceiving its value. The details of research instrumentation are discussed in the following paragraphs.

Section 1 of the questionnaire included questions about general information of the respondents, such as:

Gender (male or female)

Age (an open-ended question)

Monthly household income ranging from "Under 60,000 Baht", "60,000-70,000 Baht", "70,001-80,000 Baht", "80,001-90,000 Baht", "90,001-100,000 Baht", and "More than 100,000 Baht"

Have you purchased an Eco car or intend to buy one in six months? "Yes", "No" (If you responded "No" to this question, please return this questionnaire to the researcher)

Which price range do you plan to buy?, "300,000-450,000 Baht", 450,001-550,000 Baht", "550,001-650,000 Baht", "650,001-750,000 Baht", "More than 750,000 Baht" (If your answer is "300,000-450,000 Baht or 450,001-550,000 Baht" please do next)

What brand of Eco car do you intend to buy? “Honda Brio”, “Nissan March”, “ Nissan Almera”, “Suzuki Swift”, “Mitsubishi Mirage”, “Chery QQ”, “Toyota Yaris”, “Toyota Prius”, “Toyota Camry”, “Toyota Vios”, and “Other brand name” (If your answer is in 1-6, please do next).

Section 2 of the questionnaire was used to determine the buyers’ level of importance given to the dimensions of country of origin of Eco cars, consisting of Country of Manufacture (COM), Country of Assembly (COA), Country of Parts (COP), Country of Design (COD), Country of Brand (COB), and Country of Corporation Ownership (COC). There were six questions in this section. The respondents were asked to rate these questions in terms of the levels of importance, using a 9-point scale ranging from 1 = not at all important to 9 = very important.

Section 3 of the questionnaire started with having the respondents to consider an advertisement of an Eco car, and then answer the corresponding sets of questions, which were developed from the work of Dodds, Monroe, and Grewal (1991). The brand of the Eco car used in the advertising sample was called “A Automobile”, which is not a real brand name, but rather made up for the purpose of the survey, in order to avoid any biases. Information indicated in the advertisement comprised of the country of origin and other main specifications of the Eco car regarding its engine, engine features, fuel, average fuel, speed, transmission, safety (euro cap), safety features, colors and price. The respondents were then asked to answer the first set of five questions about the quality of the advertised Eco car in terms of performance, reliability, durability, workmanship, and dependability. The question nos. 1, 2, and 4 were asked to rate the Eco car on its reliability, workmanship, and dependability, respectively, using a 9-point

scale ranging from 1 = very low to 9 = very high. The question no. 3 was asked to rate the Eco car on its performance, using a 9-point scale ranging from 1 = very poor quality to 9 = very good quality. The question no. 5 was asked to rate the Eco car on its durability, using a 9-point scale ranging from 1 = strongly disagree to 9 = strongly agree. Next, the respondents were asked to answer the second set of five questions about the quality of the advertised Eco car in terms of quality/performance, and price/value for money. The question no. 1 asked the respondents to rate the Eco car on its value for money, using a 9-point scale ranging from 1 = a very poor value for money to 9 = a very good value for money. The question no. 2 was asked to rate the Eco car on its price, using a 9-point scale ranging from 1 = very uneconomical to 9 = very economical. The question nos. 3 and 5 were asked to rate the Eco car on whether it was a good buy and if it appeared to be a bargain, using a 9-point scale ranging from 1 = strongly disagree to 9 = strongly agree. Finally, the question no. 4 was asked to rate the Eco car on whether its price was acceptable, using a 9-point scale ranging from 1 = very unacceptable to 9 = very acceptable.

Section 4 of the questionnaire contained questions about the purchase intention of the buyers after assessing the Eco car's quality and perceiving its product value. The respondents were asked to rate their purchase intentions in terms of likelihood, probability and willingness, by using a 9-point scale ranging from 1 = very low to 9 = very high and also to rate their purchase intentions related to the Eco car's price, using a 9-point scale ranging from 1 = strongly disagree to 9 = strongly agree.

3.3.4 Measurement

The variables in this study comprised of several independent variables and some dependent variables. The independent variables included Country of Manufacture (COM), Country of Assembly (COA), Country of Parts (COP), Country of Design (COD), Country of Brand (COB), and Country of Corporation Ownership (COC). Product quality assessment and perception of product value were dependent variables. Concurrently, product quality assessment and perception of product value were also independent variables, while purchase intention was a dependent variable.

Referring to Table 3.1, independent variables were the dimensions of country of origin of the Eco car which consumers considered important when they assessed its quality. The measurement of these variables was based on interval scales using a 9-point scale in order to determine the relationship between the dimensions of country of origin of Eco cars and the level of product quality assessment, as well as to investigate the relationship between the dimensions of country of origin of Eco cars and the level of perception of product value. Dependent variable was the purchase intention of Eco cars related to product quality assessment and perception of product value of Eco cars, measured based on interval scales using a 9 -point scale.

Table 3.1 Operational Definitions of Variables

Conceptual Definition	Operational Definition	Expectation	Measurement Scale
Country of Manufacture	Consumers' consideration of the level of importance of country of manufacture of Eco cars to product quality assessment and perception of product value means how important the country where the Eco car was finally made and has a label "made in" is, when the consumers assess the product quality, and how important the consumers perceive its product value based on that country of manufacture.	Relationship with product quality assessment, perception of product value, and purchase intention	Interval Scale
Country of Assembly	Consumers' consideration of the level of importance of country of assembly of Eco cars to product quality assessment and perception of product value means how important the country where the majority of the Eco car was assembled is when the consumers assess the product quality, and how important the consumers perceive its product value based on that country of assembly.	Relationship with product quality assessment, perception of product value, and purchase intention	Interval Scale
Country of Design	Consumers' consideration of the level of importance of country of design of Eco cars to product quality assessment and perception of product value means how important the country where the Eco car was conceived and engineered is when the consumers assess the product quality, and how important the consumers perceive its product value based on that country of design.	Relationship with product quality assessment, perception of product value, and purchase intention	Interval Scale

Table 3.1 Operational Definitions of Variables (Cont.)

Conceptual Definition	Operational Definition	Expectation	Measurement Scale
Country of Brand	Consumers' consideration of the level of importance of country of brand of Eco cars to product quality assessment and perception of product value means how important the country with which the brand of Eco car is associated is when the consumers assess the product quality, and how important the consumers perceive its product value based on that country of brand.	Relationship with product quality assessment, perception of product value, and purchase intention	Interval Scale
Country of Parts	Consumers' consideration of the level of importance of country of parts of Eco cars to product quality assessment and perception of product value means how important the country where the majority of the materials used for the Eco car were from and/or the component parts of Eco car were made is when the consumers assess the product quality, and how important the consumers perceive its product value based on country of parts.	Relationship with product quality assessment, perception of product value, and purchase intention	Interval Scale

Table 3.1 Operational Definitions of Variables (Cont.)

Conceptual Definition	Operational Definition	Expectation	Measurement Scale
Country of Corporation Ownership	Consumers' consideration of the level of importance of country of corporation ownership of Eco cars to product quality assessment and perception of product value means how important the country where a firm ownership of Eco car is when the consumers assess the product quality, and how important the consumers perceive its product value based on that country of corporation ownership.	Relationship with product quality assessment, perception of product value, and purchase intention	Interval Scale
Product quality assessment	Product quality assessment is the degree to which a consumer measured performance, reliability, durability, workmanship, and dependability of Eco cars	Relationship with the dimensions of country of origin and purchase intention	Interval Scale
Perception of product value	Perception of product value is the degree to which a consumer determines a product in terms of emotional, social, quality/performance, and price/value for money of Eco cars	Relationship with the dimensions of country of origin and purchase intention	Interval Scale

Table 3.1 Operational Definitions of Variables (Cont.)

Conceptual Definition	Operational Definition	Expectation	Measurement Scale
Purchase intention	Purchase intention is the degree to which a consumer intends to buy an Eco car after assessing its quality and perceiving its product value.	Relationship with the dimensions of country of origin, product quality assessment, and perception of product value	Interval Scale

3.3.5 Validity and Reliability

The content validity of the questionnaire was then constructed by professionals in order to create appropriate measurement for answering the research questions. Reliability of the questionnaire was conducted by using pre-test from 30 samples. After obtaining the result whereby the Cronbach's alpha coefficient was calculated to be 0.93, the questionnaire was given to those 30 samples by using "hand to hand" method.

3.3.6 Data processing and analysis

Data processing basically began with the rechecking process for the completion of the collected questionnaires. The purpose was to summarize the contents that could be described by a quantitative method as well as to answer the research questions. Statistical treatment technique was chosen as the most appropriate method

for analysis of the data collected in this study. The data were tested for normality under the requirements of the statistical technique used.

Statistical treatment technique was Exploratory Factor Analyses which is done by using Principal Axis Factoring extraction techniques in order to reconfirm that the questions developed from the research of Dodds, Monroe, and Grewal (1991) were in fact for product quality assessments and perception of product value; and the factor scores were later used in an analysis of multiple regressions.

However, independent variables in every hypothesis were tested to avoid multicollinearity problem. This step was done by measuring Variance Inflation Factor (VIF), which was set to be lower than 5 and tolerance which was close to 1 when independent variables of every hypothesis did not have multicollinearity problem. Once no multicollinearity problem was found, those independent variables could be continually used for the next step of hypothesis testing.

Multiple regressions were applied to test the research hypotheses. This study had five dimensions of findings, consisting of the effects of country of origin dimensions on product quality assessments, the effects of country of origin dimensions on perceptions of product value, the effects of product quality assessments on purchase intentions, the effects of perceptions of product value on purchase intentions, and the effects of country of origin dimensions on purchase intention.

3.3.7 Statistical Analysis

The measurement was done in four stages. The first stage was to measure the effects of the dimensions of country of origin on product quality assessment of Eco cars while multiple regressions were applied, since both the dimensions of country of origin

and product quality assessment were measured based on interval level of measurement. The next stage was to measure the effects of the dimensions of country of origin on perception of product value by using multiple regressions to process the data since both the dimensions of country of origin and perception of product value were measured based on interval scales. The third stage was to measure the effects of the dimensions of country of origin on purchase intention of Eco cars, and multiple regressions were applied since both the dimensions of country of origin and product quality assessment were measured based on interval levels of measurement. The last stage was to measure the effects of product quality assessment and perception of product value on purchase intention. Multiple regressions were also used since product quality assessment, perception of product value, and purchase intention were measured at interval level.

The determining level of significance for the hypotheses testing is 0.05. If the probability of the data is smaller than the level of significance (0.05), the null hypothesis is rejected. If the probability of the data is greater than the level of significance (0.05), the null hypothesis is accepted.

After testing the research hypotheses, the results were shown through the formulas with respect to the relationships of the effects of the dimensions of country of origin on purchase intention of Eco cars, the effects of the dimensions of country of origin on purchase intention through product quality assessment of Eco cars, and the effects of the dimensions of country of origin on purchase intention through perception of product value of Eco cars. The formula was from multiple regressions, as described in the following paragraphs.

Due to multiple regressions, one way to develop multiple correlations is to obtain the prediction equation for $\hat{Y}$ in order to compare the predicted value of the dependent variable with obtained Y. The formula is shown as follows:

$$\hat{Y} = a + b_1X_1 + b_2X_2 + \ldots + b_kX_k$$

Where $\hat{Y}$ is the predicted value of Y, A is the value of $\hat{Y}$ when all X_s are zero, b_2 to b_k represent regression coefficients, and X_1 to X_k represent the independent variable (see Table 3.2) (Tabachnick & Fidell, 2001).

Table 3.2 Process and Technique of Hypothesis Testing

Hypotheses	Description	Analysis Technique	Selection Criteria
H1a	Relationship between country of manufacture and product quality assessment	H1a to H1f Multiple regression	$0 \leq R^2 \leq 1$; $R^2 = 1$ is a "perfect score" R^2 (adjusted R^2 is a more accurate goodness-of- fit measure than R^2)
H1b	Relationship between country of assembly and product quality assessment		
H1c	Relationship between country of parts and product quality assessment		H_0; $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$ H_1 ; at least one of β_i is not zero; i=1,2,…6
H1d	Relationship between country of brand and product quality assessment		*P-Value* < α
H1e	Relationship between country of design and product quality assessment		product quality assessment = $A + \beta_1 COM + \beta_2 COA + \ldots + \beta_k COC + \varepsilon$
H1f	Relationship between country of corporation ownership and product quality assessment		

Table 3.2 Process and Technique of Hypothesis Testing (Cont.)

Hypotheses	Description	Analysis Technique	Selection Criteria
H2a	Relationship between country of manufacture and perception of product value	H2a to H2f Multiple regression	$0 \leq R^2 \leq 1$; $R^2 = 1$ is a "perfect score" $\overline{R^2}$ (adjusted R^2 is a more accurate goodness-of- fit measure than R^2)
H2b	Relationship between country of assembly and perception of product value		
H2c	Relationship between country of parts and perception of product value		H_0; $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$ H_1 ; at least one of β_i is not zero; i=1,2,…6
H2d	Relationship between country of brand and perception of product value		*P-Value* < α
H2e	Relationship between country of design and perception of product value		Perception of product value = $\beta_O + \beta_1 COM + \beta_2 COA + \ldots + \beta_k COC + \varepsilon$
H2f	Relationship between country of corporation ownership and perception of product value		
H3a	Relationship between country of manufacture and purchase intention	H3a to H3f Multiple regression	$0 \leq R^2 \leq 1$; $R^2 = 1$ is a "perfect score" $\overline{R^2}$ (adjusted R^2 is a more accurate goodness-of- fit measure than R^2)
H3b	Relationship between country of assembly and purchase intention		
H3c	Relationship between country of parts and purchase intention		H_0; $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$ H_1 ; at least one of β_i is not zero; i=1,2,…6
H3d	Relationship between country of brand and purchase intention		
H3e	Relationship between country of design and purchase intention		*P-Value* < α
			Purchase intention = $\beta_O + \beta_1 COM + \beta_2 COA + \ldots + \beta_k COC + \varepsilon$

Table 3.2 Process and Technique of Hypothesis Testing (Cont.)

Hypotheses	Description	Analysis Technique	Selection Criteria
H4	Relationship between product quality assessment and purchase intention	H4 to H5 Multiple regression	$0 \leq R^2 \leq 1$; $R^2 = 1$ is a "perfect score" $\overline{R^2}$ (adjusted R^2 is a more accurate goodness-of- fit measure than R^2)H_0; $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$
H5	Relationship between perception of product value and purchase intention		H_0; $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$ H_1 ; at least one of β_i is not zero; i=1,2,…6 *P-Value* < α Purchase intention = β_O + β_1 Product quality assessment + β_2 Perception of product value + ε

CHAPTER 4

RESEARCH RESULT

4.1 Introduction

The country of origin, as the core factor of this study, is one of the extrinsic cue variables in determining the customers' intention in purchasing the product. The researcher intends to investigate the relationships between the various dimensions of country of origin on product quality assessments, perceptions of product value, and purchase intentions of Eco cars. Therefore, the results of the study could be in accordance with the reality of the current Eco car market.

This chapter proceeds to illustrate the information obtained from the research results, and summarize the results of the hypotheses testing through analysis of multiple regressions modeling.

4.2 Research Result

The research results comprise of the demographic summary and confirmatory factor analyses of the product quality assessment and the perception of product value as discussed in the following paragraphs.

4.3 The Demographic Summary

At first, the subjects' demographic variables were summarized by using descriptive statistics to describe the variables in terms of category, frequency, and respondent percentage.

As shown in Table 4.1, the respondents included 250 males (50.0%) and 250 females (50.0%).

A majority of the respondents were in the age group of 20 to 24 years old, which accounted for 155 respondents (31.0%), followed by 101 respondents in the range 25 to 29 years old (20.2%), 74 respondents between 30 to 34 years old (14.8%), 61 respondents between 35 to 39 years old (12.2%), 42 respondents aged 40 to 44 years old (8.4%), 26 respondents aged 45 to 49 years old (5.2%), 16 respondents in the age range below 20 years old (3.2%), 15 respondents aged between 50 to 54 years old (3.0%), 4 respondents between 55 to 59 years old (0.8%), and 6 respondents aged over 59 years old (1.2 %).

Most of the respondents, numbering 350 people (70.3%), had their address location in Bangkok, followed by 62 people (12.1%) from Nonthaburi Province, 56 people (11.3%) from Pathum Thani Province, and the last 32 people (6.3%) from Samut Prakan Province.

Most respondents had a monthly household income ranging from 60,000 Baht to 70,000 Baht which accounted for 254 respondents (50.8%), followed by 143 respondents (28.6%) with a monthly household income ranging from 70,001 Baht to 80,000 Baht, 72 respondents (14.4%) with a monthly household income ranging from 80,001 Baht to 90,000 Baht, 18 respondents (3.6%) with a monthly household income ranging from 90,001 Baht to 100,000 Baht, 10 respondents (2.0%) with a monthly household income of more than 100,000 Baht, and the last 3 respondents (0.6%) with a monthly household income lower than 60,000 Baht.

The price of the Eco cars, which a majority of the respondents were interested in purchasing, ranged from 450,001 Baht to 550,000 Baht as preferred by 350 respondents (70.0%), and from 300,001 Baht to 450,000 Baht as preferred by 150 respondents (30.0%).

The brands of Eco cars which most of the respondents were interested in purchasing consisted of Honda Brio, which was voted for by 174 respondents (34.8%), Nissan March by 127 respondents (25.4%), Suzuki Swift by 83 respondents (16.6%), Mitsubishi Mirage by 78 respondents (15.6%), Nissan Almera by 35 respondents (7.0%), and Chery QQ by 3 respondents (0.6%).

Table 4.1 Summary of the Demographic Information

Demographic	Description	Frequency	Percentage (%)
Gender			
	Male	250	50
	Female	250	50
Age			
	Less than 20	16	3.2
	20-24	155	31.0
	25-29	101	20.2
	30-34	74	14.8
	35-39	61	12.2
	40-44	42	8.4
	45-49	26	5.2
	50-54	15	3.0
	More than 59	6	1.2
Address location			
	Bangkok	350	70.3
	Pathum Thani	56	11.1
	Nonthaburi	62	12.3
	Samut Prakan	32	6.3

Table 4.1 Summary of the Demographic Information (Cont.)

Demographic	Description	Frequency	Percentage (%)
Household Income (Baht)	lower than 60,000	3	.6
	60,000 - 70,000	254	50.8
	70001 - 80,000	143	28.6
	80,001 - 90,000	72	14.4
	90,001 - 100,000	18	3.6
	More than 100,000	10	2.0
Car Price (Baht)			
	300,001 - 450,000	150	30.0
	450,001 - 550,000	350	70.0
Car Brand name	Honda Brio	174	34.8
	Nissan March	127	25.4
	Suzuki Swift	83	16.6
	Chery QQ	3	.6

4.4 Exploratory Factor Analyses of the Product Quality Assessment and Perception of Product Value

Exploratory Factor Analyses were done by using Principal Axis Factoring extraction techniques in order to uncover the underlying structure of a relatively large set of variables that are factors of product quality assessments and perception of product value.

As shown in Table 4.2, Exploratory Factor Analyses has two components that were explained as 73.8% of the total variance.

Table 4.3 shows Exploratory Factor Analyses of the five questions about reliability, workmanship, dependability, quality and durability, which were the factors of product quality assessment; while the other five questions about the value for money, Economical, good to buy, price, and bargain were factors of the perception of product value.

Table 4.2 Total Variance Explained of Product quality Assessment and Perception of Product Value

Component	Rotation Sums of Squared Loadings		
1	5.502	55.022	55.022
2	1.879	18.794	73.816

Extraction Method: Principal Axis Factoring

Table 4.3 Descriptive Statistic and Correlations between Product Quality Assessment Variable and Perception of Product Value Variable in the Exploratory Factor Analyses

	Reliability	**Workmanship**	**Dependability**	**Quality**	**Durable**	**Value for the money**	**Economical**	**Good to buy**	**Price**	**Bargain**
Reliability	1.000									
Workmanship	.709 (**)	1.000								
Quality	.657 (**)	.684 (**)	1.000							
Dependability	.627 (**)	.606 (**)	.744 (**)	1.000						
Durable	.494 (**)	.512 (**)	.610 (**)	.563 (**)	1.000					
Value for the money	.507 (**)	.450 (**)	.432 (**)	.433 (**)	.416 (**)	1.000				
Economical	.269 (**)	.310 (**)	.179 (**)	.242 (**)	.137 (**)	.604 (**)	1.000			
Good to buy	.406 (**)	.434 (**)	.367 (**)	.374 (**)	.326 (**)	.653 (**)	.697 (**)	1.000		
Price	.413 (**)	.436 (**)	.353 (**)	.376 (**)	.392 (**)	.699 (**)	.720 (**)	.766 (**)	1.000	
Bargain	.397 (**)	.400 (**)	.342 (**)	.370 (**)	.370 (**)	.670 (**)	.688 (**)	.735 (**)	.801 (**)	1.000
M	7.07	7.01	7.14	7.13	6.85	6.97	6.60	6.72	6.75	6.88
SD	1.171	1.132	1.206	1.183	1.373	1.287	1.705	1.355	1.416	1.381

** Correlation is significant at the 0.01 (1-tailed) N = 500

As shown in table 4.3, a two-factor solution revealed all the items of product quality assessment and perception of product value. Results from the exploratory factor analyses also support the appropriate use of the instrument for this research.

4.5 Hypothesis Testing

This section presents and discusses the results of the testing of the five hypotheses, as described in the following paragraphs.

4.5.1 Hypothesis 1

Hypothesis 1, consisting of six subhypotheses, was developed to examine the relationships between country of origin dimensions and product quality assessment. Multiple regression analysis was used to test this hypothesis. There were four independent variables related to purchase intention, that is, Country of Corporate Ownership, Country of Manufacture, Country of Parts, and Country of Brand, which explained significant proportions of variance in product quality assessment, $R^2 = .290$, $F(4, 495) = 50.654$, $p < .001$. The results showed that Country of Corporate Ownership significantly affected product quality assessment, $b = .172$, $t(495) = 4.642$, $p < .001$, VIF(2.127). Country of Manufacture significantly affected product quality assessment, $b = .117$, $t(495) = 3.124$, $p < .01$, VIF(1.922). Country of Parts significantly affected product quality assessment, $b = .111$, $t(495) = 3.303$, $p < .01$, VIF(2.126). Country of Brand significantly affected product quality assessment, $b = .090$, $t(495) = 2.209$, $p < .01$, VIF(1.973). Nonetheless, Country of Assembly and Country of Design did not significantly affect product quality assessment (see Tables 4.4, 4.5 and 4.6). The equation is shown as follows:

Product quality assessment = -3.492 + .172 COC+ .117COM+.111COP + .090COB

Regarding hypothesis 1 (H1a – H1f), the subhypotheses which supported the criteria of multiple regression analysis included H1a, H1c, H1e, and H1f. On the other

hand, the subhypotheses which did not support the hypothesis testing were H1b and H1d. The rationale behind these results could be that Country of Manufacture, Country of Parts, Country of Brand, and Country of Corporate ownership significantly affected product quality assessment whereas Country of Assembly and Country of Design did not significantly affect product quality assessment.

Table 4.4 Model Summary of Hypothesis 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.539	.290	.285	.804	1.906	1.973

Table 4.5 Overall Results of Hypothesis 1

Model	Sum of Squares	*df*	Mean Square	*F*(4, 495)	*P-Value*
Regression	131.164	4	32.791	50.654	.000
Residual	320.443	495	.647		
Total	451.607	499			

Predictors: (Constant), COC , COP, COB, COM
Dependent Variable: Product quality assessment

Table 4.6 Multiple Regression of Product Quality Assessment as a Function of Country of Origin Dimensions

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-3.492	.251		-13.937
COC	.172	.037	.247***	4.642
COM	.117	.038	.173**	3.124
COP	.111	.034	.173**	3.303
COB	.090	.041	.122**	2.209

Dependent Variable: Product quality assessment
* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.2 Hypothesis 2

Hypothesis 2, consisting of six subhypotheses, was developed to examine the relationships between country of origin dimensions and perception of product value. Tables 4.7, 4.8 and 4.9 further present the Enter multiple regression analysis which was conducted to test this hypothesis. There were two independent variables related to purchase intention namely Country of Parts and Country of Manufacture, which explained significant proportions of variance in perception of product value, $R^2 = .258$, $F(3, 496) = 86.590$, $p < .001$. Country of Parts significantly affected perception of product value, $b = .257$, $t(496) = 7.293$, $p < .001$, VIF(1.918). Country of Manufacture significantly affected perception of product value, $b = .105$, $t(495) = 2.865$, $p < .01$, VIF (1.918). Nevertheless, Country of Assembly, Country of Design, Country of Brand, and Country of Corporate Ownership did not significantly affect perception of product value (Table 4.7, Table 4.8 and Table 4.9). The equation used was as follows:

Perception of product value = -2.458 + .257 COP +.105 COM

Due to hypothesis 2 (H2a – H2f), the subhypotheses which supported the hypothesis testing comprised of H2a and H2c. In contrast, the subhypotheses which did not support the hypothesis testing were H2b, H2d, H2e, and H2f. The reasoning behind these results could be that the Country of Manufacture and Country of Parts significantly affected perception of product value of Eco cars while Country of Assembly, Country of Design, Country of Brand, and Country of Corporate ownership did not significantly affect perception of product value of Eco cars.

Table 4.7 Model Summary of Hypothesis 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.508	.258	.255	.828	1.697	1.918

Table 4.8 Overall Results of Hypothesis 2

Model	Sum of Squares	*df*	Mean Square	*F*(2, 497)	*P-Value*
Regression	118.913	2	59.457	86.590	.000
Residual	341.263	497	.687		
Total	460.176	499			

Predictors: (Constant), COP, COM
Dependent Variable: Perception of Product Value

Table 4.9 Multiple Regression of Perception of Product Value as a Function of Country of Origin Dimensions

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-2.458	.195		-12.518
COP	.257	.035	.390 ***	2.865
COM	.105	.037	.153 **	7.297

Dependent Variable: Perception of Product Value
* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.3 Hypothesis 3

Hypothesis 3, consisting of six subhypotheses, was developed to examine the relationships between country of origin dimensions and purchase intention. Tables 4.10, 4.11 and 4.12 present the Enter multiple regression analysis which was conducted to test this hypothesis. There were two independent variables related to purchase intention, that is, Country of Parts and Country of Manufacture, which explained significant proportions of variance in purchase intention, $R^2 = .164$, $F(2, 497) = 48.761$, $p < .001$. Country of Parts significantly affected purchase intention, $b = .205$, $t(497) = 5.388$, $p < .001$, VIF(1.918). Country of Manufacture significantly affected purchase intention, $b = .089$, $t(495) = 2.249$, $p < .05$, VIF(1.918). Nevertheless, Country of Assembly, Country of Brand, Country of Design, and Country of Corporate Ownership did not significantly affect purchase intention (Tables 4.10, 4.11 and 4.12). The equation was as follows:

Purchase Intention = -1.997 +.205 COP +.089 COM

Due to hypothesis 3 (H3a – H3f), the subhypotheses which supported the hypothesis testing comprised of H3a and H3c. In contrast, the subhypotheses which did

not support the hypothesis testing were H3b, H3d, H3e, and H3f. The cause of these results could be that Country of Manufacture and Country of Parts significantly affected purchase intention of Eco cars while Country of Assembly, Country of Design, Country of Brand, and Country of Corporate ownership did not significantly affect purchase intention of Eco cars.

Table 4.10 Model Summary of Hypothesis 3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.405	.164	.161	.894	1.313	1.918

Table 4.11 Overall Results of Hypothesis 3

Model	Sum of Squares	*df*	Mean Square	*F*(1, 497)	*P-Value*
Regression	78.081	2	39.041	48.761	.000
Residual	397.927	497	.801		
Total	476.008	499			

Predictors: (Constant), COP ,COM
Dependent Variable: Purchase intention

Table 4.12 Multiple Regression of Purchase Intention a Function of Country of Origin Dimensions

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-1.997	.211		-9.475
COP	.205	.038	.306 ***	5.388
COM	.089	.040	.128 *	2.249

Dependent Variable: Purchase Intention
* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.4 Hypothesis 4

Hypothesis 4 was developed to examine the relationship between the independent variable, product quality assessment, and the dependent variable, which is purchase intention. Tables 4.13, 4.14 and 4.15 present the Enter multiple regression analysis which was conducted to test this hypothesis. The results indicate that product quality assessment explained a significant proportion of variance in purchase intention, $R^2 = .443$, $F(2, 497) = 193.171$, $p < .001$. In other words, product quality assessment significantly affected purchase intention, $b = .117$, $t(497) =,2.816$ $p < .001$, VIF (1.401).

Due to hypothesis 4, the result of the hypothesis testing indicated that product quality assessment has an effect on purchase intention.

4.5.5 Hypothesis 5

Hypothesis 5 was developed to examine the relationship between the independent variable, which is, perception of product value, and the dependent variable, that is purchase intention. Tables 4.13, 4.14 and 4.15 present the Enter multiple regression analysis which was conducted to test this hypothesis. The results indicate that perception of product value explained a significant proportion of variance in purchase intention, $R^2 = .443$, $F(2, 497) = 193.171$, $p < .01$. In other words, perception of product value significantly affected purchase intention, $b = .720$, $t(497) = 14.932$, $p < .01$, VIF (1.401).

Due to hypothesis 5, the result of the hypothesis testing indicated that perception of product value has an effect on purchase intention.

According to hypotheses H4 and H5, the equation used was as follows.

Purchase Intention = -.958 + .720 Perception of product value

+.117 Product quality assessment

Table 4.13 Model Summary of Hypothesis 4 and 5

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.665	.443	.441	.722	1.386	1.401

Table 4.14 Overall Results of Hypothesis 4 and 5

Model	Sum of Squares	*df*	Mean Square	*F*(1, 497)	*P-Value*
Regression	201.560	1	100.780	193.171	.000
Residual	253.553	497	.522		
Total	455.113	499			

Predictors: (Constant), Perception of product value and Product quality assessment

Dependent Variable: Purchase Intention

Table 4.15 Multiple Regression of Purchase Intention as a Function of Perception of Product Value and Product Quality Assessment

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-.958	.071		-13.447
Perception of product value	.720	.048	.598***	14.932
Product quality assessment	.117	.042	.113**	2.816

Dependent Variable: Purchase intention

* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.6 The effect of Country of Manufacture on Purchase Intention through Product Quality Assessment

The effect of Country of Manufacture on purchase intention through product quality assessment was developed to examine the relationships between the independent variable, which is the Country of Manufacture, the product quality assessment, and the dependent variable, that is purchase intention. Tables 4.16, 4.17 and 4.18 present the Enter multiple regression analysis. The results indicate that Country of Manufacture and product quality assessment explained a significant proportion of variance in purchase intention, $R^2 = .234$, $F(2, 497) = 75.902$, $p < .001$. In other words, Country of Manufacture significantly affected purchase intention through product quality assessment, $b = .390$, $t(497) = 8.779$, $p < .001$, VIF (1.219).

The results of the testing indicate that the Country of Manufacture has an effect on purchase intention through product quality assessment.

According to the relationship, the equation used was as follows.

Purchase Intention = -.841 + .390 Product quality assessment

+.125 Country of Manufacture

Table 4.16 Model Summary the effect of Country of Manufacture on Purchase Intention through Product Quality Assessment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.484	.234	.231	.856	1.335	1.219

Table 4.17 Overall Results of the effect of Country of Manufacture on Purchase Intention through Product Quality Assessment

Model	Sum of Squares	*df*	Mean Square	*F*(1, 497)	*P-Value*
Regression	111.375	2	55.687	75.902	.000
Residual	364.634	497	.734		
Total	476.008	499			

Predictors: (Constant), COM and Product quality assessment

Dependent Variable: Purchase Intention

Table 4.18 Multiple Regression of Purchase Intention as a Function of Country of Manufacture and Product Quality Assessment

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-.841	.208		-4.043
COM	.125	.030	.178**	4.113
Product quality assessment	.390	.044	.380***	8.779

Dependent Variable: Purchase intention

* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.7 The effect of Country of Parts on Purchase Intention through Product Quality Assessment

The effect of Country of Parts on purchase intention through product quality assessment was developed to examine the relationships between the independent variable, which is Country of Parts, the product quality assessment, and the dependent variable, that is purchase intention. Tables 4.19, 4.20 and 4.21 present the Enter multiple regression analysis. The results indicate that Country of Parts and product

quality assessment explained a significant proportion of variance in purchase intention, $R^2 = .716$, $F(2, 497) = 260.905$, $p < .001$. In other words, Country of Parts significantly affected purchase intention through product quality assessment, $b = .673$, $t(497) = 18.465$, $p < .001$, VIF (1.243).

Thus, the results of the testing indicate that Country of Parts has an effect on purchase intention through product quality assessment.

According to the relationship, the equation used was as follows.

Purchase Intention = -.670 + .673 Product quality assessment

+.061 Country of Parts

Table 4.19 Model Summary of the effect of Country of Parts on Purchase Intention through Product Quality Assessment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.716	.512	.510	.683	1.446	1.243

Table 4.20 Overall Results of the effect of Country of Parts on Purchase Intention through Product Quality Assessment

Model	Sum of Squares	*df*	Mean Square	*F*(1, 497)	*P-Value*
Regression	243.473	2	121.737	260.905	.000
Residual	231.897	498	.467		
Total	475.370	499			

Predictors: (Constant), COP and Product quality assessment

Dependent Variable: Purchase Intention

Table 4.21 Multiple Regression of Purchase Intention as a Function of Country of Parts and Product Quality Assessment

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-.670	.305		.162
COP	.061	.024	.092**	2.563
Product quality assessment	.673	.036	.665***	18.465

Dependent Variable: Purchase intention
* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.8 The effect of Country of Brand on Purchase Intention through Product Quality Assessment

The effect of Country of Brand on purchase intention through product quality assessment was developed to examine the relationships between the independent variable, which is Country of Brand, the product quality assessment, and the dependent variable, that is purchase intention. Tables 4.22, 4.23 and 4.24 present the Enter multiple regression analysis. The results indicate that Brand and product quality assessment explained a significant proportion of variance in purchase intention, $R^2 = .461$, $F(2, 497) = 67.038$, $p < .001$. In other words, Country of Brand significantly affected purchase intention through product quality assessment, $b = .304$, $t(497) = 10.301$, $p < .001$, VIF (1.002).

Thus, the results of the testing indicate that Country of Brand has an effect on purchase intention through product quality assessment.

According to the relationship, the equation used was as follows.

Purchase Intention = -3.554 +.190 Product quality assessments

+.304 Country of Brand

Table 4.22 Model Summary of The effect of Country of Brand on Purchase Intention through Product Quality Assessment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.461	.212	.209	.849	1.854	1.002

Table 4.23 Overall Results of The effect of Country of Brand on Purchase Intention through Product Quality Assessment

Model	Sum of Squares	*df*	Mean Square	*F*(1, 497)	*P-Value*
Regression	96.785	2	48.393	67.038	.000
Residual	358.771	497	.722		
Total	455.557	499			

Predictors: (Constant), COB and Product quality assessment

Dependent Variable: Purchase Intention

Table 4.24 Multiple Regression of Purchase Intention as a Function of Country of Brand and Product Quality Assessment

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-3.554	.346		-10.280
COB	.304	.030	.410***	10.301
Product quality assessment	.190	.039	.192***	4.828

Dependent Variable: Purchase intention

* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.9 The effect of Country of Corporation ownership on Purchase Intention through Product Quality Assessment

The effect of Country of Corporation ownership on purchase intention through product quality assessment was developed to examine the relationships between the independent variable, which is Country of Corporation ownership, the product quality assessment, and the dependent variable, that is purchase intention. Tables 4.25, 4.26 and 4.27 present the Enter multiple regression analysis. The results indicate that Country of Corporation ownership and product quality assessment explained a significant proportion of variance in purchase intention, $R^2 = .429$, $F(2, 497) = 56.006$, $p < .001$. In other words, Country of Corporation ownership significantly affected purchase intention through product quality assessment, $b = .483$, $t(497) = 10.566$, $p < .001$, VIF (1.213).

Thus, the results of the testing indicate that Country of Corporation ownership has an effect on purchase intention through product quality assessment.

According to the relationship, the equation used was as follows.

Purchase Intention = .941 + .124 Product quality assessment

+.483 Country of Corporation ownership

Table 4.25 Model Summary of the effect of Country of Corporation ownership on Purchase Intention through Product Quality Assessment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.429	.184	.181	.887	1.196	1.213

Table 4.26 Overall Results of The effect of Country of Corporation ownership on Purchase Intention through Product Quality Assessment

Model	Sum of Squares	*df*	Mean Square	*F*(1, 497)	*P-Value*
Regression	87.861	2	43.931	56.006	.000
Residual	389.845	497	.784		
Total	477.706	499			

Predictors: (Constant), COC and Product quality assessment

Dependent Variable: Purchase Intention

Table 4.27 Multiple Regression of Purchase Intention as a Function of Country of Corporation ownership and Product Quality Assessment

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	.941	.247		3.814
COC	.483	.046	.471***	10.566
Product quality assessment	.124	.032	.172***	3.864

Dependent Variable: Purchase Intention

* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.10 The effect of Country of Manufacture on Purchase Intention through Perception of Product Value

The effect of Country of Manufacture on purchase intention through perception of product value was developed to examine the relationships between the independent variable, which is Country of Manufacture, the perception of product value, and the dependent variable, that is purchase intention. Tables 4.28, 4.29 and 4.30 present the Enter multiple regression analysis. The results indicate that Country of

Manufacture and perception of product value explained a significant proportion of variance in purchase intention, $R^2 = .155$, $F(2, 497) = 44.638$, $p < .001$. In other words, Country of Manufacture significantly affected purchase intention through perception of product value, $b = .277$, $t(497) = 5.478$, $p < .001$, VIF (1.006).

Thus, the results of the testing indicate that Country of Manufacture has an effect on purchase intention through perception of product value.

According to the relationship, the equation used was as follows.

Purchase Intention = -1.772 + .277 Perception of product value

+.211 Country of Manufacture

Table 4.28 Model Summary of the effect of Country of Manufacture on Purchase Intention through Perception of Product Value

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.394	.155	.152	.892	1.286	1.006

Table 4.29 Overall Results of the effect of Country of Manufacture on Purchase Intention through Perception of Product Value

Model	Sum of Squares	*df*	Mean Square	*F*(1, 498)	*P-Value*
Regression	71.133	2	35.566	44.638	.000
Residual	387.235	497	.797		
Total	458.367	499			

Predictors: (Constant),COM, and Perception of product value

Dependent Variable: Purchase Intention

Table 4.30 Multiple Regression of Purchase Intention as a Function of Country of Manufacture and Perception of Product Value

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-1.772	.203		-8.718
COM	.211	.029	.303***	7.239
Perception of product value	.277	.051	.229***	5.478

Dependent Variable: Purchase Intention
* $p < .05$, ** $p < .01$, *** $p < .001$

4.5.11 The effect of Country of Parts on Purchase Intention through Perception of Product Value

The effect of Country of Parts on purchase intention through perception of product value was developed to examine the relationships between the independent variable, which is Country of Parts, the perception of product value, and the dependent variable, that is purchase intention. Tables 4.31, 4.32 and 4.33 present the Enter multiple regression analysis. The results indicate that Country of Parts and perception of product value explained a significant proportion of variance in purchase intention, $R^2 = .234$, $F(2, 497) = 75.902$, $p < .001$. In other words, Country of Parts significantly affected purchase intention through perception of product value, $b = .390$, $t(497) = 8.779$, $p < .001$, VIF (1.014).

Thus, the results of the testing indicate that Country of Parts has an effect on purchase intention through perception of product value.

According to the relationship, the equation used was as follows.

Purchase Intention = -.2.060 + .249 Perception of product value

+.257Country of Parts

Table 4.31 Model Summary of The effect of Country of Parts on purchase intention through perception of product value

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	VIF
1	.466	.217	.214	.85924152	1.310	1.014

Table 4.32 Overall Results of the effect of Country of Parts on Purchase Intention through Perception of Product Value

Model	Sum of Squares	*df*	Mean Square	*F*(1, 498)	*P-Value*
Regression	99.555	2	49.778	67.422	.000
Residual	358.812	498	.738		
Total	458.367	499			

Predictors: (Constant),COP, and Perception of product value

Dependent Variable: Purchase Intention

Table 4.33 Multiple Regression of Purchase Intention as a Function of Country of Parts and Perception of Product Value

Model	Unstandardized Coefficients		Standardized Coefficients	*t*
	B	Std. Error	Beta	
(Constant)	-2.060	.185		-11.153
COP	.257	.049	.206***	5.107
Perception of product value	.249	.026	.394***	9.749

Dependent Variable: Purchase Intention

* $p < .05$, ** $p < .01$, *** $p < .001$

Summary of hypothesis testing in this study is presented in Table 4.34.

Table 4.34 Summary of Hypothesis Testing

Hypothesis	Description	Result	Relationship
The effect of Country of Manufacture on product quality assessment, perception of product value and purchase intention. (H1a,H2a and H3a)	Country of Manufacture has a direct effect on product quality assessment.	Supported	Country of Manufacture had a significant effect on product quality assessment.
	Country of Manufacture has a direct effect on perception of product value.	Supported	Country of Manufacture had a significant effect on perception of product value.
	Country of Manufacture has a direct effect on purchase intention.	Supported	Country of Manufacture had a significant effect on purchase intention.
The effect of Country of Manufacture on purchase intention through product quality assessment.	Country of Manufacture has an indirect effect on purchase intention through product quality assessment.	Supported	Country of Manufacture and product quality assessment had significant effects on purchase intention.
The effect of Country of Manufacture on purchase intention through perception of product value.	Country of Manufacture has an indirect effect on purchase intention through Perception of product value.	Supported	Country of Manufacture and perception of product value had significant effects on purchase intention
The effect of Country of Assembly on product quality assessment, perception of product value and purchase intention. (H1b,H2b, and H3b)	Country of Assembly has a direct effect on product quality assessment.	Not Supported	Country of Assembly did not have a significant effect on product quality assessment.
	Country of Assembly has a direct effect on perception of product value.	Not Supported	Country of Assembly did not have a significant effect on perception of product value.
	Country of Assembly has an effect on purchase intention.	Not Supported	Country of Assembly did not have a significant effect on purchase intention.
The effect of Country of Assembly on purchase intention through product quality assessment.	Country of Assembly has an indirect effect on purchase intention through product quality assessment.	Not Supported	Country of Parts did not have a significant effect on product quality assessment and purchase intention.

Table 4.34 Summary of Hypothesis Testing (Cont.)

Hypothesis	Description	Result	Relationship
The effect of Country of Assembly on purchase intention through perception of product value.	Country of Assembly has an indirect effect on purchase intention through perception of product value.	Not Supported	Country of Parts did not have a significant effect on perception of product value and purchase intention.
The effect of Country of Parts on product quality assessment, perception of product value and purchase intention. (H1c,H2c, and H3c)	Country of Parts has a direct effect on product quality assessment.	Supported	Country of Parts had a significant effect on product quality assessment.
	Country of Parts has a direct effect on perception of product value.	Supported	Country of Parts had a significant effect on perception of product value.
	Country of Parts has a direct effect on purchase intention.	Supported	Country of Parts had a significant effect on purchase intention.
The effect of Country of Parts on purchase intention through product quality assessment.	Country of Parts has an indirect effect on purchase intention through product quality assessment.	Supported	Country of Parts and product quality assessment had significant effects on purchase intention.
The effect of Country of Parts on purchase intention through perception of product value.	Country of Parts has an indirect effect on purchase intention through perception of product value.	Supported	Country of Parts and perception of product value had significant effects on purchase intention
The effect of Country of Design on product quality assessment, perception of product value and purchase intention. (H1d,H2d, and H3d)	Country of Design has a direct effect on product quality assessment.	Not Supported	Country of Design did not have a significant effect on product quality assessment.
	Country of Design has a direct effect on perception of product value.	Not Supported	Country of Design did not have a significant effect on perception of product value.
	Country of Design has a direct effect on purchase intention.	Not Supported	Country of Design did not have a significant effect on purchase intention.

Table 4.34 Summary of Hypothesis Testing (Cont.)

Hypothesis	Description	Result	Relationship
The effect of Country of Design on purchase intention through product quality assessment.	Country of Design has an indirect effect on purchase intention through product quality assessment.	Not Supported	Country of Design did not have a significant effect on perception of product value and purchase intention.
The effect of Country of Design on purchase intention through perception of product value.	Country of Design has an indirect effect on purchase intention and perception of product value.	Not Supported	Country of Design did not have a significant effect on perception of product value and purchase intention.
The effect of Country of Brand on product quality assessment, perception of product value and purchase intention. (H1e,H2e, and H3e)	Country of Brand has a direct effect on product quality assessment.	Supported	Country of Brand had a significant effect on product quality assessment.
	Country of Brand has a direct effect on perception of product value.	Not Supported	Country of Brand did not have a significant effect on perception of product value.
	Country of Brand has a direct effect on purchase intention.	Not Supported	Country of Brand did not have a significant effect on purchase intention.
The effect of Country of Brand on purchase intention through product quality assessment	Country of Brand has an indirect effect on purchase intention through product quality assessment	Supported	Country of Brand and product quality assessment had significant effects on purchase intention.
The effect of Country of Brand on purchase intention through perception of product value.	Country of Brand has an indirect effect on purchase intention and perception of product value.	Not Supported	Country of Brand did not have a significant effect on perception of product value and purchase intention.

Table 4.34 Summary of Hypothesis Testing (Cont.)

Hypothesis	Description	Result	Relationship
The effect of Country of Corporation Ownership on product quality assessment, perception of product value and purchase intention. (H1f,H2f, and H3f)	Country of Corporation Ownership has a direct effect on product quality assessment.	Supported	Country of Corporation Ownership had a significant effect on product quality assessment.
	Country of Corporation Ownership has a direct effect on perception of product value.	Not Supported	Country of Corporation Ownership did not have a significant effect on perception of product value.
	Country of Corporation Ownership has a direct effect on purchase intention.	Not Supported	Country of Corporation Ownership did not have a significant effect on purchase intention.
The effect of Country of Corporation ownership on purchase intention through product quality assessment.	Country of Corporation ownership has an indirect effect on purchase intention through product quality assessment.	Supported	Country of Corporation ownership and product quality assessment had significant effects on purchase intention.
The effect of Country of Corporation ownership on purchase intention through perception of product value.	Country of Corporation ownership has an indirect effect on purchase intention and perception of product value.	Not Supported	Country of Corporation ownership did not have a significant effect on perception of product value and purchase intention.
The effect of product quality assessment on purchase intention. (H4)	Product quality assessment has an effect on purchase intention.	Supported	Product quality assessment had a significant effect on purchase intention.
The effect of perception of product value on purchase intention. (H5)	Perception of product value has an effect on purchase intention.	Supported	Perception of product value had a significant effect on purchase intention.

The research model with the results of each hypothesis is presented in Figure 4.1 below.

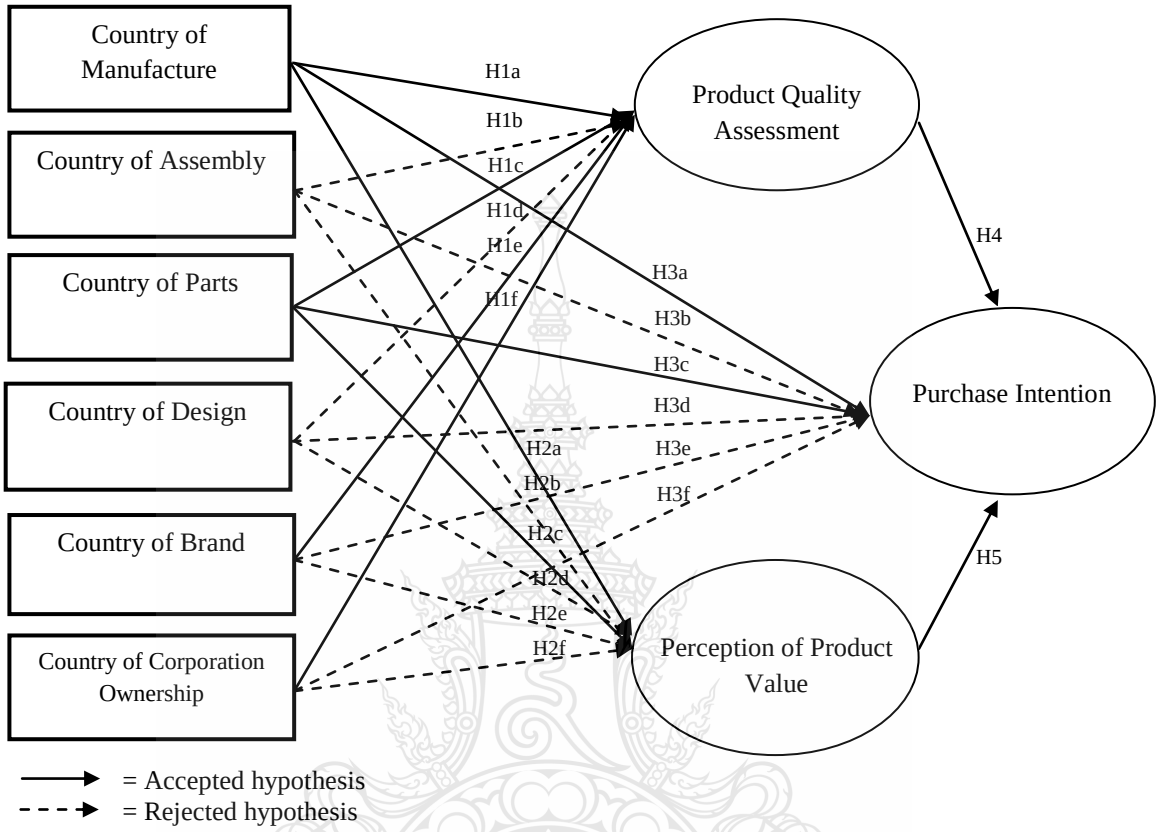

Figure 4.1 Research Model and the Results of Hypothesis Testing

CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

This chapter summarized the findings of this study and provided the discussions. The chapter consisted of four sections: summary of the findings; discussion of findings; limitations of the study and implications for practice**,** academic contribution and future study.

5.1 Summary of the Findings

This study investigated the effects of the country of origin dimensions on product quality assessment, perception of product value, and purchase intention of Eco car consumers. The independent variables of this study were the country of manufacture, country of assembly, country of parts, country of design, country of brand, and country of corporation ownership. The product quality assessment and perception of product value were dependent variables. Concurrently, product quality assessment and perception of product value were independent variables while purchase intention was a dependent variable. The Eco car was selected as a product to be investigated in this study. The questionnaire was an instrument used to examine consumers who intended to purchase Eco cars within six months of the survey. Target respondents were consumers who lived in Bangkok and Metropolitan Area (BMA) with an equal proportion between male and female respondents. The results indicated that a majority of the respondents lived in Bangkok with ages ranging from 20 to 24 years old, and with monthly household income ranging from 60,000 - 70,000 Baht. Moreover, these

respondents were interested in purchasing an Eco car with prices ranging from 450,001 - 550,000 Baht, with Honda Brio being the most preferred brand of Eco car they would purchase.

The five hypotheses of this study could be summarized as follows.

Hypothesis 1 (H1a – H1f), the sub-hypotheses which supported the criteria of multiple regression analysis were H1a, H1c, H1e, and H1f. On the other hand, the sub-hypotheses which did not support the hypothesis testing were H1b and H1d. The results could be explained that Country of Manufacture, Country of Parts, Country of Brand, and Country of Corporate ownership significantly affected product quality assessment whereas Country of Assembly and Country of Design did not significantly affect product quality assessment.

Hypothesis 2 (H2a – H2f), the sub-hypotheses which supported the hypothesis testing were H2a and H2c. In contrast, the sub-hypotheses which did not support the hypothesis testing were H2b, H2d, H2e, and H2f. The results could be explained that Country of Manufacture and Country of Parts significantly affected perception of product value of Eco cars while Country of Assembly, Country of Design, Country of Brand, and Country of Corporate ownership did not significantly affect perception of product value of Eco cars.

Hypothesis 3 (H3a – H3f), the sub-hypotheses which supported the hypothesis testing comprised H3a and H3c. In contrast, the sub-hypotheses which did not support the hypothesis testing were H3b, H3d, H3e, and H3f. The results could be explained that Country of Manufacture and Country of Parts significantly affected purchase intention of Eco cars while Country of Assembly, Country of Design, Country of Brand,

and Country of Corporate ownership did not significantly affect purchase intention of Eco cars.

Hypothesis 4, the result of the hypothesis testing indicated that product quality assessment had an effect on purchase intention.

Hypothesis 5, it revealed that perception of product value had an effect on purchase intention.

Summary of the findings revealed that country of corporate ownership (COC), country of manufacture (COM), country of parts (COP), and country of brand (COB) had an indirect effect on purchase intention through product quality assessment of Eco cars. COP and COM had an indirect effect on purchase intention through perception of product value of Eco cars; while COP and COM had a direct effect on purchase intention. However, country of assembly (COA) and country of design (COD) did not have any effect on product quality assessment, perception of product value, and purchase intention of Eco cars. Summary of hypothesis testing in this study was presented in Figure 5.1 and Figure 5.2.

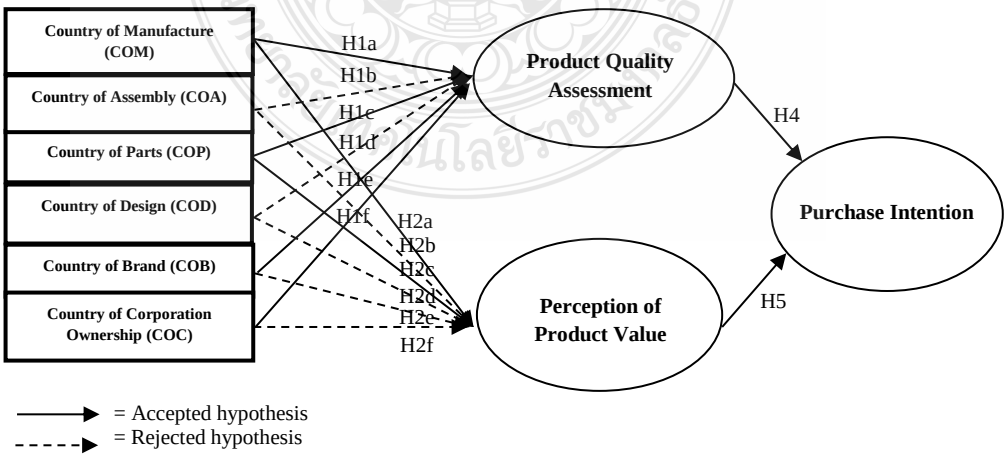

Figure 5.1 The Results of Hypothesis 1, 2, 4 and 5

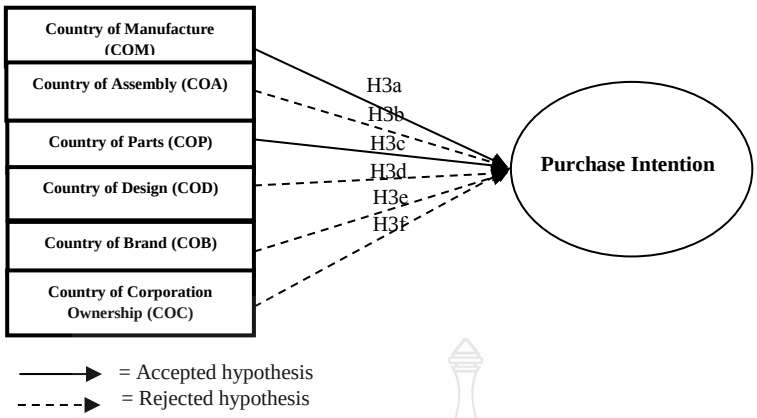

Figure 5.2 The Results of Hypothesis 3

5.2 Discussion of Findings

Comparing hypothesis 1 with previous studies, the findings showed that Country of Manufacture (COM) was related to product quality assessment, which was consistent with the study of Srinivasan, Jain, and Sikand (2004) that presented the relation of Country of Manufacture of Economy car, in terms of product used for studying. The results showed that COM had an impact on product quality assessments. Additionally, Country of Parts (COP) was related to product quality assessment, revealing results consistent with the study of Chao (1998) which indicated that COP had an influence on the product quality assessments. The study focused on a hybrid product, a stereo television product, similar to this finding which involves a high involvement product. Moreover, Country of Brand (COB) was related to product quality assessment, showing that COB had an impact on product quality assessment of Eco cars, which was also supported by the study of Srinivasan, Jain, and Sikand (2004). Country of Corporate ownership (COC) was related to product quality assessment, as supported by the study of Li, Murray, and Scott (2000) which showed that COC had

more influence on the assessments of a product's functional and symbolic qualities than Country of Design (COD) and Country of Assembly (COA). The study of Li, Murray, and Scott (2000) focused on color television, which is indeed consistent to the current study's emphasis on a high-involvement product.

It ~~coud~~ could be concluded from the findings of this research that COM, COP, COB and COC are related to product quality assessment. Besides, the research also supported the conclusions of previous studies which showed the effectiveness of high involvement products.

Regarding the finding that Thai consumers assess the product quality of Eco cars by considering COM and COP, the reasoning is that Thailand has been the COM and COP of cars with large and medium engines for a long time, resulting in the fact that cars with small engines are also accepted in terms of their quality. Therefore, a majority of Thai consumers considered COB and COC as important factors when assessing an Eco car. Meanwhile, the main reason that Thai consumers assess the product quality of Eco cars by considering COB and COC was that most cars in Thailand were made by Japanese manufacturers, which were accepted by Thai consumers because of their high quality; so Eco cars were also easily accepted by Thai consumers in terms of the Japanese companies' high product quality. Most of the Eco cars of Japanese brands such as Honda Bio, Nissan March, Nissan Almera, Suzuki Swift, and Mitsubishi Mirage were owned by the Japanese companies, namely, Honda Motor, Nissan Motor, Suzuki Motor, and Mitsubishi Motor.

Nevertheless, there were two sub-hypotheses which were rejected. First, COA was not related to product quality assessment, and hence did not support the results of

the studies of Chandrasan and Paliwoda (2009) which revealed that COA had a direct effect on the assessment of quality and purchase value. Ethnocentric consumers' factor was a personal factor that reflected the relationship between COA and product assessment. Finally, COD was not related to product quality assessment, indicating that COD did not have an influence on product quality assessment. This was inconsistent with the results of the study of Insch and McBride (2004) which had indicated that COD had an influence on product quality assessment. The current research did not focus on high ethnocentric consumers, which was where it differed from the study of Insch and McBride (2004), and hence led to a difference in the findings of the two researches.

The reason of discordance that Thai consumers assessed the product quality of Eco cars without considering the COA was because most of the Eco cars sold in Thailand were indeed manufactured in Thailand (COM), without having been assembled from other countries. The popular brands of Eco cars ~~here~~ in Thailand included Honda Brio, Nissan March, Nissan Almera, Suzuki Swift, and Mitsubishi Mirage. Therefore, a majority of Thai consumers did not consider COA as an important factor when assessing an Eco car. Meanwhile, the reason that Thai consumers assessed the product quality of Eco cars without considering the COD was that Eco cars available in Thailand had the same specifications in terms of engine, average fuel consumption, and safety (euro cap). As a result of these factors, Thai consumers did not consider COD as an important factor when assessing an Eco car.

Comparing hypothesis 2 with previous studies, it showed that COM was related to perception of product value, which supported the findings from the study of Iyer and Kalita (1997) indicating that the effects of COM on consumer assessments of

product quality, product value, and willingness-to-buy depend on the differences of the countries' Economic levels. Therefore, it could be ~~said~~ supposed that country is one of the factors that affect perception of product value. Besides, COP was related to perception of product value, supporting the study of Pharr (2005) which showed that country-of-origin (COO) had an effect on perceived value. The research focused on dimensions of COO including COM, COA, COP, COD, COB, and COC and their effects on perceived value. However, the study of Pharr (2005) showed that COP was part of COO.

As to the reason of accordance that Thai consumers perceived the product value of Eco cars by considering COM and COP, Thailand has been the COM and COP of cars with large and medium engines for a long time, as a result of which cars with small engines are easily accepted in terms of their quality. Moreover, the price of Eco cars was cheaper than cars with large and medium engines, as a result of which Thai consumers perceive the product value of Eco cars.

In addition, there were four sub-hypotheses which were rejected. First, COA was not related to perception of product value, and hence did not support the study of Lee and Shaniger (1995) which was conducted to investigate the effects of country of production/assembly (COA) moderating by price, product types, and characteristics of product (high technology and luxury products of global brand) on perception of product value and purchase. The work of Lee and Shaniger (1995) defined product origin into two meanings: Country of Manufacture and Country of Assemble, which was different from the current research which defined COA as Country of Assembly; therefore the results of the two findings were inconsistent. SEcondly, COB was not related to the

perception of product value, in conflict with the results of Iyer and Kalita (1997) which revealed that the effects of COB on consumer assessments of product quality and product value depended on the differences of the latter product category. The study of Iyer and Kalita (1997) focused on non-technical fashion products (e.g. Jeans) and low-technology technical products (e.g. Stereos). The current research focused only on the Eco car which was a high technology product; and thus inconsistent in findings from the work of Iyer and Kalita (1997). Thirdly, COD was not related to perception of product value, and hence not in accordance with the study of Pharr (2005) which revealed that COD had an effect on the perception of product value. Finally, COC was not related to perception of product value. Thus, the results did not support the findings from the study of Pharr (2005), which focused on dimensions of COO including COM, COA, COP, COD, COB, and COC and their effects on perceived value. COD and COC were part of COO only.

Regarding the reason of discordance, Thai consumers perceived the product value of Eco cars without considering COA because most of the Eco cars sold in Thailand were indeed manufactured in Thailand (COM), without having been assembled from other countries. These Eco car brands include Honda Brio, Nissan March, Nissan Almera, Suzuki Swift, and Mitsubishi Mirage. Therefore, a majority of the Thai consumers did not consider COA as an important factor when perceiving the value of an Eco car. Furthermore, Thai consumers perceived the product value of Eco cars without considering COD as an important factor, the reason being that Thai consumers perceive the same design and specifications of Eco cars in Thailand in terms of engine, average fuel consumption, and safety (euro cap). Hence, a majority of Thai

consumers did not consider COD as an important factor when perceiving the value of an Eco car.

The reason that Thai consumers perceived the product value of Eco cars without considering COB and COC was that a majority of Eco cars in Thailand had the same brands, which were also Japanese-owned, causing Thai consumers to indifferently perceived the value of Eco cars. As a result, Thai consumers did not consider country of brand and owner of Eco car as important factors.

Comparing hypothesis 3 with previous studies, it showed that COM and COP were related to purchase intention, supporting the study of Pharr (2005) which showed that COO had an effect on purchase intention. The research focused on dimensions of COO including COM, COA, COP, COD, COB, and COC and their effects on purchase intention. However the study of Pharr (2005) showed that COM and COP were part of COO.

Regarding the reason of accordance that Thai consumers intended to purchase Eco cars by considering COM and COP, it can be argued that Thailand has been the COM and COP of cars with large and medium engines for a long time, as a result of which cars with small engines, including Eco cars, were easily accepted by the Thai consumers.

Nevertheless, there were four sub-hypotheses which were rejected. In summary, the COA, COD, COB, and COC were not related to purchase intention. These results did not support the findings from the study of Pharr (2005) which focused on dimensions of COO including COM, COA, COP, COD, COB, and COC and their effects on purchase intention. Even though the work of Pharr (2005) showed that COA,

COD, COB and COC were the major factors of COO, there were other factors that affected purchase intention. In addition, the moderators were grouped into product-based and individual-based categories. Therefore, the results showed the inconsistency in the findings of the two studies.

The reason of discordance that Thai consumers intended to purchase Eco cars without considering COA is that most of the Eco cars sold in Thailand have their Country of Manufacture in Thailand, without having been assembled from other countries. These Eco car brands include Honda Brio, Nissan March, Nissan Almera, Suzuki Swift, and Mitsubishi Mirage. Therefore, a majority of the Thai consumers do not consider COA as an important factor for the purchase of an Eco car.

Thai consumers' intention to purchase Eco cars without considering COD is because they perceived the same design and specifications of Eco cars in Thailand in terms of engine, average fuel consumption, and safety (euro cap). Hence, a majority of Thai consumers did not consider COD as an important factor for the purchase of an Eco car.

The main reason that Thai consumers intended to purchase Eco cars without considering COB and COC is that most of the Eco cars in Thailand consist of a few popular brands owned by Japanese manufacturers, thus causing Thai consumers to be indifferent in their intention, as a result of which they did not consider the country of brand and owner of Eco car as important factors.

Comparing hypothesis 4 with previous studies, the result of the hypothesis testing indicated that product quality assessment had an effect on purchase intention. The result ~~did~~ was supported by the findings of Parameswaran and Pisharodi (2002)

which revealed that product quality assessments significantly affected purchase intentions. The current findings were also supported by Pharr (2005) in that product quality assessment was related to purchase intention. This showed that Thai consumers intend to purchase Eco cars relying on an assessment of the Eco car's quality and efficiency in terms of being energy-saving, Eco-friendly, and of a world-class standard.

Comparing hypothesis 5 with previous studies, it revealed that the perception of product value had an effect on purchase intention, as was supported by the study of Hui and Zhou (2002) which concluded that country of origin affected the perception of product value, and drove purchase intention. In addition, Pharr (2005) indicated that the dimensions of country of origin were directed through perceived product values which, in turn, influenced purchase intention. This indicated that Thai consumers intend to purchase Eco cars by perceiving their product value. Since the prices of Eco cars were high, they would consider in terms of the value for money compared to its quality.

It could be concluded that the current research supported the work of Pharr (2005), which indicated that COM indirectly affects purchase intention through product quality assessment and through the perception of product value; while directly affecting purchase intention. Furthermore, COP also affected purchase intention through product quality assessment and through the perception of product value, while directly affecting purchase intention. The COB and COC also affected purchase intention through product quality assessment. In contrast, COA and COD did not directly or indirectly affect purchase intention of Eco cars. According to the study of Pharr (2005), the Country-of-Origin including COM, COA, COP, COD, COB, and COC indirectly affected purchase intention through product quality assessment and through the

perception of product value. Moreover, the moderators were grouped into product-based and individual-based categories. The findings showed that the effects of COO assessments were based on holistic brand constructs such as brand image, brand equity, or perceived value rather than directly on purchase intentions. The work of Pharr (2005) did not focus on each dimension of country-of-origin, and also there were some varied factors such as product-based and individual-based categories. Thus, the two studies had inconsistencies in their findings.

In summary, the study could answer the five research questions including "Which dimensions of country of origin have an effect on product quality assessment of Eco cars?," "Which dimensions of country of origin have an effect on perception of product value of Eco cars?," "Which dimensions of country of origin have an effect on purchase intention of Eco cars?," "To what extent the dimensions of country of origin have an effect on purchase intention through product quality assessment of Eco cars?," and "To what extent the dimensions of country of origin have an effect on purchase intention through perception of product value of Eco cars?" The answers to these five research questions were as follows: COM, COP, COB, and COC did affect purchase intentions but through product quality assessment; however, COM and COP directly affected purchase intentions and purchase intention through perception of product value. On the other hand, COA and COD did not have a direct effect on purchase intention as well as purchase intention through product quality assessment and through perception of product value. In other words, it could be concluded that Thai consumers intended to purchase Eco cars by considering COM, COP, COB, and COC which had effects on purchase intention through product quality assessment of Eco cars. They also intended

to purchase Eco cars by considering COM and COP which had effects on purchase intention through perception of product value of Eco cars. Therefore, purchase intention of Thai consumers was based on COP and COM.

5.3 Limitations of the Study

There were several limitations to be addressed in this study. First of all, there was a limitation arising from using an Eco car as the specific product in this study since the Eco car was representative of a high involvement product, and most of the products used in these kinds of studies are such: for example televisions and other high technology products. However, the study did not consider low involvement product groups such as shoes, handbags, consumer products, and so on. Thus, a limitation was that the findings were only applicable to specific high involvement products. Further, the sample of the study was drawn from a specific target group of Thai population who intended to purchase an Eco car within six months of the survey, and they were categorized as high familiarity consumers. Thus, the study did not consider low familiarity consumers or consumers who have already decided to purchase an Eco car. Another limitation was that the study did not include other factors such as brand, price, etc. There was also no comparison with consumers from other countries; and the research did not use purchase intention, as a dependent variable, to be an important factor of marketing strategies. In addition, the study did not investigate the total effects of the dimensions of country of origin on perception of product value of Eco cars through product quality assessment as well as perception of produce value. Finally, the study did not investigate the effects of the dimensions of country of origin on perception

of product value of Eco cars through product quality assessment which was also through purchase intention of consumers.

5.4 Implication for Practice, Academic Contribution and Future Research

5.4.1 Implication for Practice

The findings of this study could be utilized at the automotive industry level since the country of origin was one of the factors taken into consideration when companies selected countries to manufacture their products, especially hybrid products of important country of origin. The results of the study proved that Country of Manufacture and Country of Parts ~~are~~ were important factors for perception of product value leading to purchase intention. As a result, COM, COP, COB, and COC ~~are~~ were important factors for purchase intention by consumers. Therefore, it could be concluded that Eco car manufacturers should consider the importance of the dimensions of country of origin comprising COM, COP, COB, and COC, which Thai consumers considered as important factors influencing perception of product value and purchase intention. This allowed marketers to select the appropriate country of origin dimensions in the international market.

5.4.2 Academic Contribution

The scope of this study could be extended with respect to the country of origin to provide a clearer and more detailed view that consumers consider the dimensions of country of origin as important factors affecting product quality assessment, perception of product value, and purchase intention. This could be done by expanding the concepts of country of origin from previous studies, which specifically focused on COM or COA,

and COD or COB, to include six dimensions of country of origin comprising COM, COA, COP, COD, COB, and COC.

Regarding many researches, five dimensions of country of origin which effected on product quality assessment are COA, COD, COM, COB, and COC (Ahmed & d'Astous, 1996; Chao, 1993; Iyer & Kalita, 1997; Jung & Kau, 2006; Srinivasan et al., 2004; Li et al., 2000; Pharr, 2005). In addition, the dimensions of country of origin which effected on perceptions of product quality are COM, COA, COP, and COD (Chandrasen & Paliwoda, 2009; Chao, 1998; Insch & McBride, 2004; Hamzaoui & Merunka, 2006). The research of Pharr (2005) stated that Country of Origin assessment, consisting of Country of Manufacture, Country of Assembly, Country of Parts, Country of Design, Country of Brand, and Country of Corporation Ownership, had direct effects on perceived value. This was consistent with the research of Hui and Zhou (2002) which concluded that country of origin had a direct effect on perceived product values.

The results of the research showed that four of the dimensions were important and affected the purchase intention. Considering the details, it was found that the respondents did not consider COA as an important factor when purchasing Eco cars sold in Thailand even though these Eco cars have Thailand as COM, COP, and COA. Meanwhile, although Japan is COB, COC, and COD, the respondents did not consider COD as an important factor when purchasing Eco cars. Therefore, a study on the six dimensions of country of origin would help to better identify the importance of these dimensions of country of origin, and further research could be conducted on other

dimensions and/or products in order to clearly illustrate the importance of country of origin dimensions.

5.4.3 Future Research

Future studies could focus on other factors such as Country of E-commerce and other information cues such as price, brand name, product type, product complexity involvement level, involvement type, product familiarity, product importance, and so on to be used as independent variables. This could be done by studying the direct and indirect relationships between these variables and the dependent variables such as perception of product quality/reliability, perceived value, perceived risk, product quality assessment, purchase intention, purchase decision-making, attitude, brand equity, and brand image and then test by focusing on the products which are representative of high involvement products; with the demography as moderating variables, such as gender, age, or income. Consequently, future studies could clearly and accurately explain that the dimensions of country of origin together with other information cues affect purchase intention of consumers regarding the cars categorized in luxury car segment.

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APPENDICES

APPENDIX A

Questionnaire

(English Version)

QUESTIONNAIRE: IMPACT OF COUNTRY OF ORIGIN DIMENSIONS ON PURCHASE INTENTION OF ECO CAR

Thank you for agreeing to participate in this study. The purpose of the study is to identify the effects of country of origin dimensions on product quality assessment, perception of product value, and purchase intention. **Your answers and the results of the study will be used for academic-research purposes only.**

The questionnaire is divided into 4 sections consisting of:
Section 1: General information
Section 2: Levels of importance of the dimensions of country of origin of eco car
Section 3: An assessment of eco car's quality and perception of product value of eco car
Section 4: Purchase intention after assessing product quality and perceiving product value

This questionnaire will take approximately 15-25 minutes to complete. You can indicate your voluntary agreement to participate by completing and returning this questionnaire. You should feel free to discontinue your participation at any time.

Rajamangala University of Technology Thanyaburi
Wasana Sinrungtam, The Doctoral Candidate
Pirayut Pattanayanon , Ph.D.: Chairperson

A Survey of the Effects of Country of Origin Dimensions of Eco Car on Product Quality Assessment, Perception of Product Value, and Purchase Intention

Section 1 General Information

1. Your age: _____ years
2. Your gender: ○ 1) Male ○ 2) Female
3. Your address location:

○ 1) Bangkok ○ 2) Pathumthani ○ 3) Nonthaburi ○ 4) Samutprakarn

4. Your monthly household income level:
   - ○ 1) Under 60,000 Baht
   - ○ 2) 60,000-70,000 Baht
   - ○ 3) 70,001 -80,000 Baht
   - ○ 4) 80,001 -90,000 Baht
   - ○ 5) 90,001 -100,000 Baht
   - ○ 6) More than 100,000 Baht

5. Have you purchased an Eco car or intend to buy one in six month?

○ Yes ○ No

(If you responded "No" to this question, please return this questionnaire to the researcher)

6. Which price range do you plan to buy?
   - ○ 1) 300,000 -450,000 Baht
   - ○ 2) 450,001-550,000 Baht
   - ○ 3) 550,001- 650,000 Baht
   - ○ 4) 650,001-750,000 Baht
   - ○ 5) More than 750,000 Baht

(If your answer is "300,000-450,000 Baht or 450,001-550,000 Baht" please do next)

7. What brand of eco cars do you intend to buy? (Choose only 1 answer)
   - ○ 1) Honda Brio
   - ○ 2) Nissan March
   - ○ 3) Nissan Almera
   - ○ 4) Suzuki Swift
   - ○ 5) Mitsubishi Mirage
   - ○ 6) Chery QQ
   - ○ 7) Toyota Yaris
   - ○ 8) Toyota Prius
   - ○ 9) Toyota Camry
   - ○ 10) Toyota Vios
   - ○ 11 Other……..

(If your answer is in 1-6, please do next)

Advertising Eco car

Engine	1.2-liter 4 Cylinder i-VTEC engine
Fuel	91 gasoline, gasohol 91,E20 gasohol
The average fuel	20 km/liter
Transmission	5-speed (manual gearbox or continuously variable Transmission)
Safety (euro cap)	4 STAR
Safety features	Dual SRS front airbags, disc brakes, Anti-Lock Brake System (ABS) which prevents wheel locking and Electronic Brake Distribution (EBD) which enhances braking performance. (available in all versions).
Colors	Fresh Lime Metallic (new), Taffeta White, Cerulean Blue Metallic, Alabaster Silver Metallic and Crystal Black Pearl.
Price	MSRP Include A/C with VAT (in Thai Baht) S MT 399,900 VMT 469,500 VCVT 508,500

Section 2 Please consider the advertising of eco car above and then answer each of the questions with the response that best describes your view by checking the number (1-9)

Country of Origin Dimensions	**Levels of Importance**										
1) How important is the country where the eco car was final made and has a label of "made in" of?	Not at all important	1	2	3	4	5	6	7	8	9	Very important
2) How important is the country where the majority of the eco car's assembly?	Not at all important	1	2	3	4	5	6	7	8	9	Very important
3) How important is the country where the majority of the materials used for the eco car were from and/or the component parts were made?	Not at all important	1	2	3	4	5	6	7	8	9	Very important
4) How important is the country where the eco car was conceived and engineered?	Not at all important	1	2	3	4	5	6	7	8	9	Very important
5) How important is the country with which the brand of the eco car is associated?	Not at all important	1	2	3	4	5	6	7	8	9	Very important
6) How important is the country which is a firm ownership of the eco car?	Not at all important	1	2	3	4	5	6	7	8	9	Very important

Section 3 Please consider the advertising of eco car above and then answer the questions regarding product quality assessment and perception of product value.

Product Quality Assessment	**Levels of Product Quality**										
1. The likelihood that the eco car would be reliable is	Very low	1	2	3	4	5	6	7	8	9	Very high
2. The workmanship of the eco car would be	Very low	1	2	3	4	5	6	7	8	9	Very high
3. This eco car should be of	Very poor quality	1	2	3	4	5	6	7	8	9	Very good quality
4. The likelihood that this eco car is dependable is	Very low	1	2	3	4	5	6	7	8	9	Very high
5. This eco car would seem to be durable.	Strongly disagree	1	2	3	4	5	6	7	8	9	Strongly agree

Perception of Product Value	Levels of Perception of Product Value										
1. This eco car is	A very poor value for the money	1	2	3	4	5	6	7	8	9	A very good value for the money
2. At the price shown the eco car is	Very uneconomical	1	2	3	4	5	6	7	8	9	Very economical
3. The eco car is considered to be a good buy.	Strongly disagree	1	2	3	4	5	6	7	8	9	Strongly agree
4. The price shown for the eco car is	Very unacceptable	1	2	3	4	5	6	7	8	9	Very acceptable
5. This eco car appears to be a bargain.	Strongly disagree	1	2	3	4	5	6	7	8	9	Strongly agree

Section 4 After assessing the product quality and perceiving the product value; please kindly answer the following questions regarding your purchase intention.

Purchase Intention	Levels of Purchase Intention										
1. The likelihood of purchasing this eco car is	Very low	1	2	3	4	5	6	7	8	9	Very high
2. If I were going to buy this eco car, I would consider buying this model at the price shown.	Strongly disagree	1	2	3	4	5	6	7	8	9	Strongly agree
3. The probability that I would consider buying the eco car is	Very low	1	2	3	4	5	6	7	8	9	Very high
4. My willingness to buy the eco car is	Very low	1	2	3	4	5	6	7	8	9	Very high

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APPENDIX B

The Validity Investigation Form

Validity Investigation Form

The purpose of validity investigation form is part of the refinement process of scale measurement. The comments from the experts will make the research more precise.

Please make a mark in a column which corresponds with your opinion. The column "congruent" means the question is corresponding with the meaning of the item and its dimension. The column "not sure" means the question is not exactly corresponding with the meaning of the item and its dimension. The column "not congruent" means the question is not corresponding with the meaning of the item and its dimension.

<u>In case of "not sure" and "not congruent", please recommend for correction the related question.</u>

No	Dimension / Questions developed from other researchers			Recommendation	Item Objective Congruency		
					Congruent (+1)	Not Sure (0)	Not congruent (1)
1	Country of Origin Dimensions	Levels of Importance (1-9 point scale)					
	1) How important is the country where the car was final made and has a label of "made in" of?	Not at all important	Very important				
	2) How important is the country where the majority of the car's assembly?	Not at all important	Very important				
	3) How important is the country where the majority of the materials used for the car were from and/or the component parts were made?	Not at all important	Very important				
	4) How important is the country where the car was conceived and engineered?	Not at all important	Very important				
	5) How important is the country with which the brand of the car is associated?	Not at all important	Very important				
2	Product Quality Assessment	Levels of Product Quality (1-9 point scale)					
	1. The likelihood that the car would be reliable is	Very low	Very high				
	2. The workmanship of the car would be	Very low	Very high				
	3. This car should be of	Very poor quality	Very good quality				
	4. The likelihood that this car is dependable	Very low	Very high				
	5. This car would seem to be durable.	Strongly disagree	Strongly agree				

No	Dimension/ Questions developed from other researchers			Recommendation	Item Objective Congruency		
					Congruent (+1)	Not Sure (0)	Not congruent (1)
3	Perception of Product Value	Levels Perception of Product Value (1-9 point scale)					
	1. This car is	A very poor value for the money	A very good value for the money				
	2. At the price shown the car is	Very uneconomical	Very economical				
	3. The car is considered to be a good buy.	Strongly disagree	Strongly agree				
	4. The price shown for the car is	Very unacceptable	Very acceptable				
	5. This car appears to be a bargain.	Strongly disagree	Strongly agree				
4	Purchase Intention	Levels Purchase Intention (1-9 point scale)					
	1. The likelihood of purchasing this car is	Very low	Very high				
	2. If I were going to buy this car, I would consider buying this model at the price shown.	Strongly disagree	Strongly agree				
	3. The probability that I would consider buying the car is	Very low	Very high				
	4. My willingness to buy the car is	Very low	Very high				

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Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and beliefs, contains on material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my dissertation, when deposited in the university library, being available for loan and photocopying.

Wasana Sinrungtam