

Impact of Country of Origin Dimensions on Purchase Intention of Eco Car

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Abstract

The objective 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 intentions. The samples were people in Bangkok and Metropolitan Area (BMA), who intended to purchase eco cars within the next six months. Survey research with structured questionnaire was a 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 country of corporate ownership (COC), country of manufacture (COM), country of parts (COP), and Country of Brand (COB) had the effects on product quality assessment of eco cars while product quality assessment also had an effect on purchase intention. Moreover, COP and COM had the effects on perception of product value of eco cars whereas the perception of value also had an effect on purchase intention of eco cars. In addition, COP and COM had the effects on purchase intention. Product quality assessment and perception of product value had the effects on purchase intention. Nevertheless, country of assembly (COA) and country of design (COD) did not have the effects on product quality assessment, perception of product value, and purchase intention of eco cars. The contributions are expected to the practice arena to help the automobile industry or car manufacturing companies, whose country of origin dimensions are foreign countries, in choosing their country of origin to be appropriate for their marketing and to create incentives for consumers to buy.

Keywords: the dimensions of country of origin, country of manufacture, country of assembly, country of parts, country of design, country of brand, country of corporation ownership, product quality assessment, perception of product value, purchase intention

1. Introduction

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 be increased from 86,100,000 barrels/day in 2007 to 110,600,000 barrels/day in 2035. Meanwhile, there have been the fluctuations of crude oil price in the global market from 2010 to 2013 as 79.40, 94.86, 94.51 and 88.25 U.S. dollars per barrel, respectively (U.S. Energy Information Administration, 2012). This results in global energy crisis. According to energy crisis, Thailand has then launched fuel management project to solve this problem by focusing on fuel oil which is mostly imported from other countries. The government has set the goal to decrease total percentage of liquid fuel oil consumption from 49% to 45% by 2020 (Ministry of Energy, 2011). This directly impacts transportation sector, which currently uses liquid fuel oil for 36% of total domestic liquid fuel oil consumption. As a result, transportation sector has to reduce transportation costs from oil consumption by using new alternative energy vehicles such as hybrid or fuel cell and electric vehicle. Most feasible choice for mass population is to use energy efficiency cars like eco cars having major engines not exceeding 1300 cc or diesel engines not exceeding 1400 cc since the Thai cabinet has currently approved tax refund for the first-time car buyers who buy cars having engines not exceeding 1500 cc (Research Community, 2008).

In addition, with the promotion from the Royal Thai Government to have investments in car manufacturing domestically, six large car manufacturers consisting of Toyota, Honda, Suzuki, Mitsubishi, Tata, and Nissan have announced the investment plan and car manufacturing plan of eco cars in Thailand (Thailand Investment Review, 2012). In March 2010, Nissan Motor (Thailand) Co., Ltd. was the first car manufacturer who

manufactured and sold eco cars in Thailand. As a result, Nissan caused new phenomena in the Thai automobile market by having its total vehicle sales increased for 245.1% from January 2010 to November 2010 compared to the first top three car manufacturers including Toyota and Honda whose total vehicle sales had increased for 42.2% and 21.2%, respectively (Business Monitor International, 2011). Besides, Nissan's market share from January 2012 to October 2012 had increased to 15.2% while its total sales had increased for 61.1% due to the success of its eco car model (Business Monitor International, 2013). Considering total new vehicle registrations of Nissan in March 2011, there were 30,830 cars, which increased for 175.6% compared to the company's total new vehicle registrations of 11,186 cars in March 2010 when Nissan March was first launched to the market (Department of Land Transport, 2011). In 2012, total sales of Nissan March were more than 100,000 cars (Nissan Motor Thailand, 2012). Moreover, Thailand Board of Investment expect that total sales of eco cars in Thailand would be more than 200,000 cars, which have been sold locally while the current waiting list exceeds 20,000 units for each model (Thailand Investment Review, 2012). This information indicated that eco cars had increasingly been popular among Thai consumers recently, and it supports Nissan's forecast that total sales of Nissan Almera and Nissan March from January 2012 to October 2012 were 41,175 and 26,662 units, respectively. This is followed by Misubishi Mirage, Honda Brio, and Suzuki Swift whose total sales were 25,438, 13,157, and 11,799 units, respectively (Business Monitor International, 2012).

Regarding a phenomena about response to eco cars whose country of origin is Thailand like Nissan March, it might seem that Thai consumers buy eco cars based on country of manufacture (COM). In fact, eco cars sold in Thailand have different dimensions of country of origin composing 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 that Thai consumers buy eco cars based on which of the dimensions of country of origin. The previous research conducted to find out about this topic was the research of Srinivasan, Jain, and Sikand (2004), which studied on the effects of COM, COB, an intrinsic cue (quality), and other extrinsic cues of economy car and stereo system. The countries used 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. However, COB, COM, quality, and price had the effects on product assessments. However, this research focused on only two out of six dimensions of country of origin and did not study from Thai consumers' viewpoints.

As a result, this study was 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 intended 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. Moreover, it investigated the effects of the dimensions of country of origin on purchase intentions of eco cars through product quality assessments and perceptions of product value. Therefore, the results of this study could be in accordance with the reality of current eco car market.

1.2 Importance of the Study

Overall, the study investigated what country of origin dimensions affect consumer behaviors in terms of product quality assessment, perception of product value, and purchase intention. The study was expected to contribute to the practice arena to help the automobile industry or car manufacturing companies, whose country of origin dimensions are foreign countries, in choosing their country of origin appropriate for the purpose of marketing and to create incentives for consumers to buy. The results would also contribute to an enhanced understanding of the needs of customers and the improvement of international trade practices of car companies.

1.3 Purpose of the Study

This study aimed to identify the effects of country of origin dimensions on product quality assessment, perception of product value, and purchase intention. The independent variables included 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 comprised product quality assessment and perception of product value. The dependent variable was purchase intention. There were four main objectives of the study as shown in the following:

- 1) To investigate the effects of the dimensions of country of origin on the product quality assessments of eco cars.
- 2) To investigate the effects of the dimensions of country of origin on the perceptions of product value of eco cars.
- 3) To investigate the effects of the dimensions of country of origin on purchase intentions of eco cars.
- 4) To investigate the effects of the dimensions of country of origin on purchase intentions through the product quality assessments of eco cars.
- 5) To investigate the effects of the dimensions of country of origin on purchase intentions through the perceptions of product value of eco cars.

2. Review of the Literature

2.1 Country of Origin Dimensions

Due to 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. The first country of origin dimension is country of manufacture (COM) (Hamzaoui & Merunka, 2006; Jung & Kau, 2006; Ulgado, 2002). The second dimension of country of origin is country of assembly (COA) (Insch & McBride, 2004; Chandrasen & Paliwoda, 2009). The third dimension is country of parts (COP) (Insch & McBride, 2004). The fourth dimension of country of origin is country of design (COD) (Insch & McBride, 2004). The fifth one is country of brand (COB) (Thakor, 1996). The last country of origin dimension is country of corporation ownership (COC) (Li, Murray, & Scott, 2000).

2.2 Product Quality Assessment

Regarding many researches, the dimensions of country of origin which have the effects on product quality assessment are COA, COD, COM, COB, and COC (Ahmed & d'Astous, 1996; Chao, 1993; Iyer & Kalita, 1997; Jung & Kau, 2006; Srinivasan, Jain, & Sikand, 2004; Li et al., 2000; Pharr, 2005). Meanwhile, the dimensions of country of origin which have the effects on perceptions of product quality are COM, COA, COP, and COD (Chandrasen & Paliwoda, 2009; Chao, 1998; Insch & McBride, 2004; Hamzaoui & Merunka, 2006).

The definition of product quality assessment is the degree to which a consumer measured quality of product (Jung & Kau, 2006). Moreover, Dodds, Monroe, & Grewal, 1991 measured perceptions of product quality in 5 aspects including reliable, workmanship, quality, dependable, and durable. 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), the significant differences were in 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 types of questions.

It could be concluded that country of origin assessment, consisting of COM, COA, COP, COD, COB, and COC, had direct effects on perceived value (Pharr, 2005). This is the same as the research of Hui and Zhou (2002) which was concluded that country of origin had a direct effect on perceived product values.

2.3 Perception of Product Value

Perception of product value refers to a utilitarian value and a personal value. A utilitarian value is a term of what one gets as worthy things, and a personal value is a term of 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 the money, price-economical, product-good, price-acceptance, and product bargain, and the values of coefficient alpha was (.93). These two researches are different due to the different definitions of perception of product value. Sweeney and Souter (2001) defined perception of product value that it is a product in terms of emotional, social, quality/performance, and price-value for money while Dodds, Monroe, and Grewal (1991) only focused on two aspects which were product quality and price.

2.4 Purchase Intention

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

of country of origin were directed through perceived product values which, in turn, influenced purchase intention.

This was supported by the research of Dodds, Monroe, and Grewal (1991) which 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) was 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).

3. Methodology

The research methodology comprised the theoretical framework drawn based on previous researches on country of origin dimensions, followed by the research design consisting of population and sampling, data gathering, research instrumentation, result methodology, and measurement.

3.1 Theoretical Framework

Figure 1 and 2 showed the conceptual frameworks regarding the effects of the dimensions of country of origin on purchase intention through product quality assessment and perception of product value as well as the effects of the dimensions of country of origin on purchase intention. Figure 1 and 2 showed that the dimensions of country of origin were classified into six groups including 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 these conceptual frameworks, four hypotheses on the effects of country of origin of eco car were conducted. 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: COM has an effect on product quality assessment of eco car; H1b: COA has an effect on product quality assessment of eco car; H1c: COP has an effect on product quality assessment of eco car; H1d: COD has an effect on product quality assessment of eco car; H1e: COB has an effect on product quality assessment of eco car; and H1f: COC has an effect on product quality assessment of eco car.

Hypothesis 2 was conducted to investigate the effects of the dimensions of country of origin on perceptions of product value of eco car, comprising hypotheses H2a to H2f as follows: H2a: COM has an effect on perception of product value of eco car; H2b: COA has an effect on perception of product value of eco car; H2c: COP has an effect on perception of product value of eco car; H2d: COD has an effect on perception of product value of eco car; H2e: COB has an effect on perception of product value of eco car; and H2f: COC has an effect on perception of product value of eco car.

Hypothesis 3 was to investigate the effects of the dimensions of country of origin on purchase intentions of eco car, comprising hypotheses H3a to H3f as follows: H3a: COM has an effect on purchase intentions of eco car; H3b: COA has an effect on purchase intentions of eco car; H3c: COP has an effect on purchase intentions of eco car; H3d: COD has an effect on purchase intentions of eco car; H3e: COB has an effect on purchase intentions of eco car; and H3f: COC has an effect on purchase intentions of eco car.

Hypothesis 4 was to investigate the effects of the dimensions of country of origin on purchase intentions through product quality assessments.

Hypothesis 5 was to investigate the effects of the dimensions of country of origin on purchase intentions through perceptions of product value.

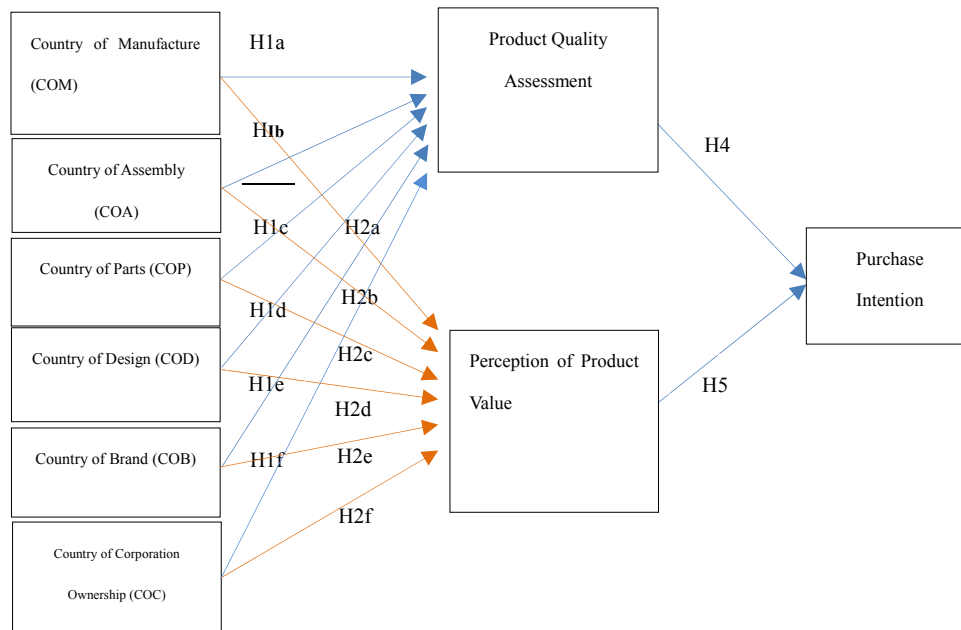


Figure 1. The Conceptual framework of hypothesis 1, 2, 4 and 5

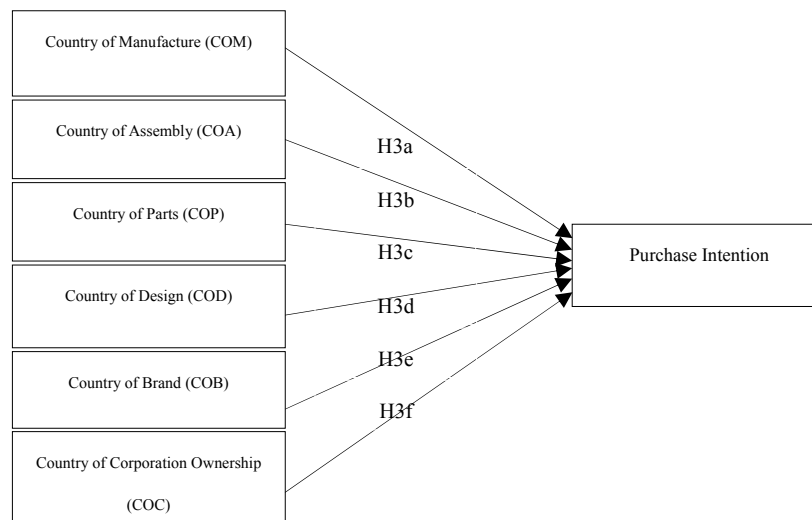


Figure 2. The Conceptual framework of hypothesis 3

3.2 Population and Sampling

Total population in Bangkok and Metropolitan Areas (BMA) were 9,011,591 people. The statistics indicated that 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 BMA, who intended to buy eco cars within the next six months. This study had gathered information from consumers in BMA for approximately 500 people. Thus, the number of the sample fulfilled the statistical method requirement. The unit of analysis was respondents who intended to purchase an eco car within six months after responding to the questionnaire. Sampling selection was a purposive sampling based on the proportions of each province of visitors as 350 people from Bangkok (70%) and 150 people from Metropolitan Area including Pathum Thani, Nonthaburi, and Samut Prakan (30%).

3.3 Data Gathering

The period of data gathering was during December 1-12, 2011. The 500 copies of the questionnaire were distributed to the target respondents in BMA who planned to purchase an eco car within the next six months.

The target area was Thailand Motor Expo 2011 which had road shows of eco cars. Considering the completion of the collected questionnaire, a rechecking process was taken until the 500 copies of questionnaire were completely filled in.

3.4 Research Instrumentation

The questionnaire was used as a research instrument developed to measure all variables in this study. It contained color advertising pictures designed of eco car, which was not the real name of the brand, in order to avoid any biases. The details of advertising of eco car comprised country of origin and its specifications including engine, engine features, fuel, average fuel, speed, transmission, safety (euro cap), safety features, colors, and price.

The questionnaire developed from the research of Dodds, Monroe, and Grewal (1991) was divided into four sections. The first section was general information of the respondents consisting of gender, age, and income intend to buy eco car in six month, price range, brand of eco car intended to buy. The second section contained the questions to determine the levels of importance of the dimensions of country of origin of eco car, consisting of COM, COA, COP, COD, COB, and COC. The third section contained the questions to measure the levels of product quality assessment, consisting of performance, reliability, durability, workmanship, and dependability. In addition, perception of product value of the eco car were asked in terms of product value, value for the money, economical, good to buy, price, and bargain. The fourth section contained the questions to determine purchase intention in terms of likelihood, product, probability, and willingness to buy. The measurements were based on 9-point interval scales.

The variables comprised independent variables and dependent variable. The independent variables included COM, COA, COP, COD, COB, and COC. The 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 dependent variable.

3.5 Result Methodology

The content validity of the questionnaire was constructed by professional persons 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 that Cronbach's alpha coefficients were 0.93, the questionnaire was given to those 30 samples by using "hand to hand" method.

Confirmatory Factor Analyses (CFA) were 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 the factors of product quality assessments and perception of product value, and the factor scores were further used in an analysis of multiple regressions.

3.6 Measurement

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

Multiple regressions were applied to test the research hypotheses. There were five stages of finding comprising 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. Due to multiple regressions, one way to develop multiple correlation is to obtain the prediction equation for Y' in order to compare the predicted value of the dependent variable with obtained Y . The formula is shown as follows:

$$Y' = A + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$$

Where Y' is the predicted value of Y , A is the value of Y' when all X s are zero, β_2 to β_k represent regression coefficients, and X_1 to X_k represent the independent variable (Tabachnick & Fidell, 2001).

4. Research Findings

4.1 The Demographic Summary

The effects of the country of origin dimensions on product quality assessment, perception of product value, and

purchase intention of eco car consumers were investigated. There were six dimensions of country of origin, as independent variables, which included COM, COA, COP, COD, COB, and COC. Product quality assessment and perception of product value were independent variables while purchase intention was dependent variable. The products focused and used were eco cars. The questionnaire was an instrument used to examine consumers who intended to purchase eco cars within six months. Target respondents were consumers who live in BMA with an equal proportion between male and female respondents. The results indicated that the majority of the respondents lived in Bangkok with ages ranging from 20 to 24 years old and the monthly household income between 60,000-70,000 Baht. Moreover, these respondents were interested in purchasing an eco car with prices ranging from 450,001 to 550,000 Baht, and Honda Brio was the most selected brand of eco cars they would purchase.

4.2 Hypothesis Testing

The results of Hypothesis 1 could be stated that COC, COM, COP, and COB had the effects on product quality assessment of eco cars. The equation was shown as follows:

$$\text{Product quality assessment} = -3.492 + .172\text{COC} + .117\text{COM} + .111\text{COP} + .090\text{COB}, R^2 = .290, \text{Adjusted } R^2 = .285, F(4, 495) = 50.654$$

The results of Hypothesis 2 could be stated that COP and COM had the effects on perception of product value of eco cars. The equation was shown as follows:

$$\text{Perception of product value} = -2.458 + .257\text{COP} + .105\text{COM}, R^2 = .258, \text{Adjusted } R^2 = .255, F(3, 496) = 86.590$$

The results of Hypothesis 3 could be stated that COP and COM had the effects on purchase intention. The equation was shown as follows:

$$\text{Purchase Intention} = -1.997 + .205\text{COP} + .089\text{COM}, R^2 = .164, \text{Adjusted } R^2 = .161, F(2, 497) = 48.761$$

The results of Hypothesis 4 and 5 could be stated that product quality assessment and perception of product value had the effects on purchase intention. The equation was shown as follows:

$$\text{Purchase Intention} = -.958 + .720 \text{ Perception of Product Value} + .117 \text{ Product Quality Assessment}, R^2 = .443, \text{Adjusted } R^2 = .441, F(2, 497) = 193.171$$

As a result, the five research questions including “Which dimensions of country of origin have the effects on product quality assessment of eco car?”, “Which dimensions of country of origin have the effects on perception of product value of eco car?”, “Which dimensions of country of origin have the effects on purchase intention of eco car?”, “To what extent the dimensions of country of origin have the effects on purchase intention through product quality assessment of eco car?”, and “To what extent the dimensions of country of origin have the effects on purchase intention through perception of product value of eco car?” could be answered. The answers were as follows: COM, COP, COB, and COC affected purchase intention through product quality assessment. However, COM and COP directly affected purchase intentions and purchase intention through perception of product value. Meanwhile, COA and COD did not have the direct effects on purchase intention as well as purchase intention through product quality assessment and perception of product value. In other words, Thai consumers intend to purchase eco cars based on COM, COP, COB, and COC when considering the product quality assessment of eco cars and based on COM and COP when considering the perception of product value of eco cars. Thus, purchase intention of Thai consumers is based on COM and COP.

Summary of hypothesis testing is presented in figure 3 and figure 4.

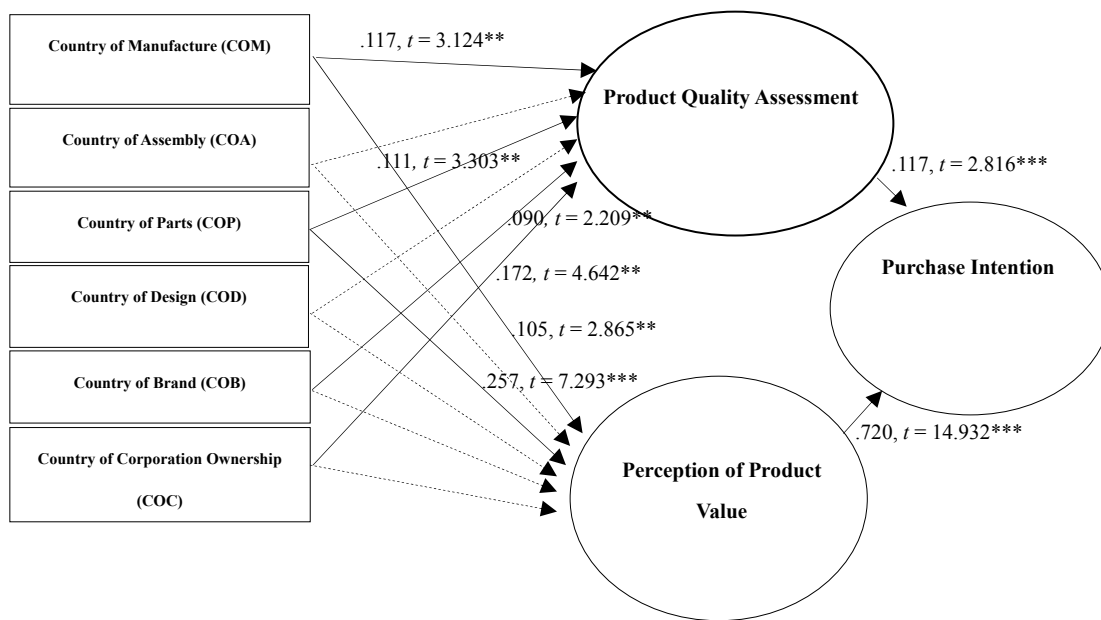


Figure 3. The results of hypothesis 1, 2, 4 and 5

—→ = Accepted hypothesis.

---→ = Rejected hypothesis.

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

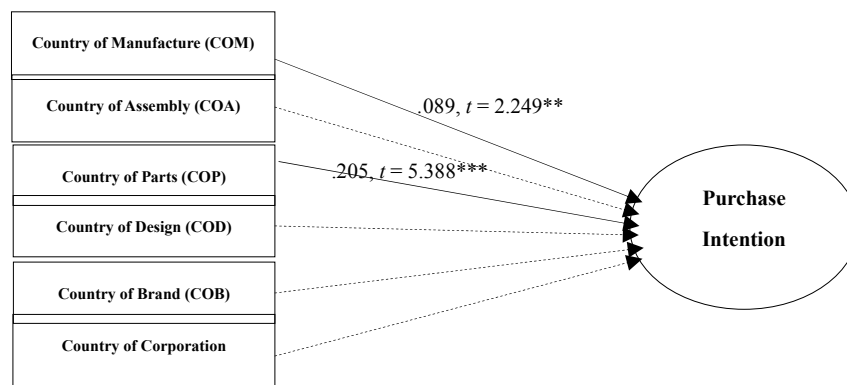


Figure 4. The results of hypothesis 3

—→ = Accepted hypothesis.

---→ = Rejected hypothesis.

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

5. Discussion

Comparing the hypothesis 1 with previous studies, the subhypothesis H1a, stating that COM was related to product quality assessment, was consistent with the research of Srinivasan, Jain, and Sikand (2004). The results showed that COM had an impact on product quality assessments. Additionally, the subhypothesis H1c, stating that COP was related to product quality assessment, revealed the same result as the research of Chao (1998) indicating that COP had the influences on the product quality assessments. Moreover, the results of the subhypothesis H1e, stating that COB was related to product quality assessment, showed that COB had an impact on product quality assessments, which was also supported by the research of Srinivasan, Jain, and Sikand (2004). The subhypothesis H1f, stating that COC was related to product quality assessment, was supported by the research of Li, Murray, and Scott (2000) showing that COC had more influence on the assessments of a

product's functional and symbolic qualities than COD and COA. Nevertheless, there were two subhypotheses which were rejected. The subhypothesis H1b, stating that COA was not related to product quality assessment, did not support the results of the researches of Ahmed and d'Astous (1996) and Chandrasan and Paliwoda (2009) which revealed that COA had the direct effects on the assessment of quality and purchase value. Finally, the result of the subhypothesis H1d, stating that COD was not related to product quality assessment, indicated that COD did not have an influence on the product quality assessment, providing the same result as found in the research of Insch and McBride (2004). However, the result was in conflict with the research of Chao (1998).

Regarding the discordance that Thai consumers assess the product quality of eco car without considering COA, the reason was that most of eco cars sold in Thailand have Thailand as COM, without having assembled from other countries. These are brands such as Honda Bio, Nissan March, Nissan Almera, Suzuki Swift, and Mitsubishi Mirage. Therefore, the majority of Thai consumers do not consider COA as an important factor when assessing an eco car. Meanwhile, the reason Thai consumers assess the product quality of eco car without considering COD was that eco cars available in Thailand have the same specifications in terms of engine, average fuel consumption, or safety (euro cap). Therefore, the majority of Thai consumers do not consider COD as an important factor when assessing an eco car.

Comparing the hypothesis 2 with previous studies, the result of the subhypothesis H2a, which stated that COM was related to the perception of product value, did support the findings from the research of Iyer and Kalita (1997) indicating that the effects of COM on consumer assessments of product quality, product value, and willingness-to-buy depended on the differences of the countries' economic levels. Besides, the subhypothesis H2c, stating that COP was related to the perception of product value, supported the research of Pharr (2005) showing that COP had the effects on perceived value.

In addition, there were four sub-hypotheses which were rejected. The subhypothesis H2b, stating that COA was not related to the perception of product value, do not support the research 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 the perception of product value and purchase intention. The subhypothesis H2d, stating that COD was not related to the perception of product value, was not in accordance with the research of Pharr (2005), which revealed that COD had the effects on to the perception of product value. The subhypothesis H2e, stating that COB was not related to perception of product value, was in conflict with the research of Iyer and Kalita (1997) revealing that the effects of COB on consumer assessments of product quality and product value depended on the differences of the countries' economic levels. This is the same as the result of the subhypothesis H2f, stating that COC was not related to the perception of product value. However, the result did not support the findings from the research of Pharr (2005) indicating that the effects of COC assessments were based on holistic brand constructs such as brand image, brand equity, or perceived value rather than directly on purchase intentions.

Regarding the discordance that Thai consumers perceive the product value of eco cars without considering COA, the reason was that most of eco cars sold in Thailand have Thailand as COM, without having assembled from other countries. These are brands such as Honda Bio, Nissan March, Nissan Almera, Suzuki Swift, and Mitsubishi Mirage. Therefore, the majority of Thai consumers do not consider COA as an important factor when perceiving the value of an eco car. Furthermore, Thai consumers perceive the product value of eco cars without considering COD as an important factor. The reason was that Thai consumers perceive the same design and specifications of eco cars in Thailand in terms of engine, average fuel consumption, or safety (euro cap). Similarly, the majority of Thai consumers do not consider COD as an important factor when perceiving the value of an eco car.

Moreover, the reason that Thai consumers perceive the product value of eco cars without considering COB and COC was that the majority of eco cars in Thailand have the same brands and owned by Japan causing Thai consumers to indifferently perceive the value of eco cars. As a result, Thai consumers do not consider COB and COC as the important factors.

Comparing the hypothesis 3 with previous studies, the result of the subhypothesis H3a, stating that COM was related to purchase intention, supported the findings from the research of Jung and Kau (2006) indicating that COO (COM and KCMO) slightly affected purchase intention. Besides, the subhypothesis H3c, stating that COP was related to purchase intention, supported the research of Pharr (2005) which showed that COP had the effects on purchase intention. Nevertheless, there were four subhypotheses which were rejected. The subhypothesis H2b, stating that COA was not related to purchase intention, did not support the research of Ahmed and d'Astous (1996), which was that the effect of COA had direct effects on purchase value of automobile,

video-cassette recorder (VCR), and shoes. The subhypothesis H3d, stating that COD was not related to purchase intention, was not in accordance with the research of Pharr (2005), revealing that COD had the effects on purchase intention. The subhypothesis H3e stating that COB was not related to purchase intention. However, the results of this subhypothesis was not supported by the research of Iyer and Kalita (1997) revealing that the effects of COB on consumer purchase intention depended on the differences of the countries' economic levels. This is the same as the result of the subhypothesis H2f, stating that COC was not related to purchase intention. However, the result was not supported the findings from the research of Pharr (2005) indicating that the effects of COC assessments were based on holistic brand constructs such as brand image, brand equity, or perceived value rather than directly on purchase intentions.

The reason of the discordance that Thai consumers intend to purchase eco cars without considering COA was that most of eco cars sold in Thailand have Thailand as COM, without having assembled from other countries. These are brands such as Honda Bio, Nissan March, Nissan Almera, Suzuki Swift, and Mitsubishi Mirage. Therefore, the majority of Thai consumers do not consider COA as an important factor when purchasing an eco car.

Thai consumers also intend to purchase eco cars without considering COD since they perceive the same design and specifications of eco cars in Thailand in terms of engine, average fuel consumption, or safety (euro cap). Similarly, the majority of Thai consumers do not consider COD as an important factor when purchasing an eco car.

Moreover, the reason that Thai consumers intend to purchase eco cars without considering COB and COC was that the majority of eco cars in Thailand have the same brands and owned by Japan causing Thai consumers to indifferently intention to purchase eco cars. As a result, Thai consumers do not consider COB and COC as the important factors.

Considering the hypothesis 4, the result of the hypothesis testing indicated that the product quality assessment had an effect on purchase intention. The result was supported by the findings of Parameswaran and Pisharodi (2002) which revealed that product quality assessments significantly affected purchase intentions. This shows that Thai consumers intend to purchase eco cars relying on an assessment of eco car's quality and efficiency in terms of energy-saving, eco-friendly, and world-class standard.

Due to hypothesis 5, it revealed that the perception of product value had an effect on purchase intention, supported by the research of Pharr (2005) indicating that the dimensions of country of origin were directed through the perceived product values which, in turn, influenced purchase intention. In addition, Hui and Zhou (2002) concluded that country of origin affected the perception of product value, which drove purchase intention. This indicates that Thai consumers intend to purchase eco cars by perceiving the product value of eco cars since the prices of eco cars are high, so they would consider an eco car in terms of the value for money comparing to its quality.

Consequently, the five research questions including "Which dimensions of country of origin have the effects on product quality assessment of eco car?," "Which dimensions of country of origin have the effects on perception of product value of eco car?," "Which dimensions of country of origin have the effects on purchase intention of eco car?," "To what extent the dimensions of country of origin have the effects on purchase intention through product quality assessment of eco car?," and "To what extent the dimensions of country of origin have the effects on purchase intention through the perception of product value of eco car?" could be answered. The answers were as follows: COM, COP, COB, and COC affected purchase intention through the product quality assessment while COM and COP directly affected purchase intentions and purchase intention through perception of product value. In contrast, COA and COD did not have the direct effects on purchase intention and purchase intentions through the product quality assessment and the perception of product value. In other words, Thai consumers intend to purchase eco cars by considering COM, COP, COB, and COC which had the effects on purchase intention through product quality assessment of eco cars. They also intend to purchase eco cars by considering COM and COP which had the effects on purchase intention through perception of product value of eco cars. In addition, purchase intention of Thai consumers is based on COP and COM.

6. Implication for Practice

The study could be utilized in the automotive industry level since country of origin is one of the factors taken into consideration when choosing countries to manufacture the products, especially hybrid products of important country of origin. The results presented that COM and COP are the important factors for perception of product value leading to purchase intention. However, COM, COP, COB, and COC are the important factors for purchase intention as a result. Therefore, eco car manufacturers shall consider the importance of the dimensions

of country of origin comprising COM, COP, COB, and COC, which Thai consumers consider as the important factors influencing perception of product value and purchase intention. Moreover international marketers could use the model of country of origin dimensions to study the consumer incentives in other countries which have the same level of economic development and in a similar industry so that the marketers could select the appropriate country of origin dimensions in the international markets.

7. Future Study

Other factors such as country of e-commerce and other information cues such as price, brand name, product familiarity, and so on could be used as independent variables in further studies. This could be done by studying the direct and indirect relationships between these independent variables and the dependent variables such perception of product quality/reliability, perceived value, perceived risk, and purchase decision-making and then test by focusing on the products which are representatives of low involvement product. Consequently, this future study could clearly and accurately explain that the dimensions of country of origin together with other information cues affecting purchase intention of consumers.

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