International Journal of Multicultural and Multireligious Understanding

http://ijmmu.com
editor@ijmmu.com
ISSN 2364-5369
Volume 7, Issue 11
December, 2020
Pages: 361-372

The Influence of Country of Origin and Brand Image towards Perceived Quality of Online Games

Arum Prasasti; Cesya Rizkika Parahiyanti; Yana Respati Dewi; Handri Dian Wahyudi; Ita Prihatining Wilujeng

Department of Management, Faculty of Economic, Universitas Negeri Malang, Indonesia

http://dx.doi.org/10.18415/ijmmu.v7i11.2213

Abstract

Gaming is one of the promising industries that continuously increase in both the number of users and revenue. This study aims to find out the influence of country of origin and brand image to the perceived quality of online games. The research is conducted using quantitative research using questionnaires as a data collection method. There are 289 undergraduate students being studied which can be divided into 71% male and 29% female. Most of the respondents fall into the freshman year at the age of 18 to 22 years old. The data collected then being analyzed using the PLS method with WarpPLS software. The result of this study found out that country of origin significantly influences brand image and perceived quality of the game amongst students. We also found out that brand image is successfully mediating country of origin and perceived quality of online game. This study is limited to university students; therefore, it does not take into account the financial factors or other influencing factors for older gamers. The findings on this study are in relevance to the previous research. This research can be a basis for further research in similar topics and for a better understanding of Indonesian gaming landscape.

Keywords: *Brand Image; Country of Origin; Perceived Quality; Online Gaming*

I. Introduction

Gaming is one of the promising industries that continuously increase in both the number of users and revenue. With technological developments, users could play games from various platforms such as mobile games, PC games, tablet games, browser PC games, smartphone games, downloaded PC games, and console games. Based on data released by Newzoo, in 2019, the total revenue earned by this industry globally reached 152.1 billion USD. 100 billion USD of which was obtained from online games both accessed via mobile and PC ("Newzoo Global Games Market Report", 2019).

During a pandemic covid-19, online gaming activity also shows signs of a 75% increase globally in users compared to the total users before the pandemic. This increase could be a good sign for investors which plan to invest in this industry. While many industries have experienced a downturn, the gaming

industry has survived relatively well in the market. Investors believe that people are playing more during the pandemic ("*Pengguna Gim Online Meningkat 75 Persen Kala Corona*", 2020).

Indonesia is one of the targeted markets for game online developers. In 2017, Newzoo released data that this country ranks 16th worldwide in terms of game revenues with total users reaching 43.7 million and total spending of 880 million USD. 45% of the total users play on 3 platforms which are through console, PC or laptop, and mobile ("The Indonesian Gamer", 2017). This data shows that Indonesia is one of the most attractive target markets for online game development companies in this respected industry.

Seeing the promising revenue, many practitioners and academicians are doing research related to the development of online games including strategies to retain old users and attract new users (Yang et al., 2019). The success achieved by companies in this industry has attracted the attention of researchers to examine the dimensions as key success factors of an online game. (Balestrini, 2006) state that the determining dimensions of perceived quality include country of origin (COO) and brand image. However, the application of these two factors can differ from country to country. For example, the brand image of an online game in Korea is more influential than in China. Online game users in China also expect other product information along with highlighted COO (Kim et al., 2015).

Research on the effect of COO and brand image on perceived quality of online games in Indonesia is needed because of the prospects of online games development in this country. The number of researches on online game consumer behavior in Indonesia is still insufficient. Most research focuses on the positive and negative impacts that arise from the side of online game players themselves. The results of this study could be used by local and international online game developers. Therefore, they could determine the appropriate product development strategy when entering the online game market in Indonesia.

II. Theoretical Foundations

Country of Origin on Online Game Perceived Quality

The study of the origin where the product is made and its impact on the perceived consumer has long been studied in the last decade. Country of origin (COO) referred to a stereotypical perception of "made in" towards products from a particular country, this is the basis for information sign from a product (Pisharodi and Parameswaran, 1992; Martin et al., 2011; Elliott & Cameron, 1994). According to Elliott & Cameron (1994), information sign was divided into two groups, namely intrinsic information sign (internal information) and extrinsic information sign (external information). COO is one of the extrinsic information signals mentioned in this research. Consumers would have a tendency towards extrinsic information initially, when they received little information about the product. The existence of this tendency, enacting COO to be a relevant relationship that linked to the perceived quality and value of the product (Elliott & Cameron, 1994; Zeithaml, 2012).

Gaming has been embedded in the vast majority of children activities in the world. Video games to be exact, has been one of the most frequently played by them. From time to time, the gaming industry has evolved into more sophisticated online game with most played game globally in 2020 are League of Legends, Tom Clancy, and Among Us. Published reports from (Newzoo, 2020) showcase that the country with the most revenue from gaming is China, followed by the United States, and Japan. While this ranking only emphasizes on the gaming revenue, it is representative of how massive the industry is. Since the development of the internet made the latest revolution in the gaming development, the term online gaming had become its own market (Kim et al., 2015). Looking at the popularity of gaming, there are

cities that become a hot spot of gaming development. These cities are London, San Fransisco, and Tokyo (Game Designing, 2020). Research has shown that within this city, gaming developers are hardwired to create a new game.

The quality of online games referred to the 'term' of product quality, the perceived product quality is a consumer perception to the quality of product (Zeithaml, 2012). In summary, the perceived quality of online games is a perception of the quality in the system features. Previous study stated that there was an effect between COO and perceived of online game (Kim et al., 2015), it indicated the correlation between a tendency from origin country towards perceived quality of the product (Elliott & Cameron, 1994; Kim et al., 2015). By arguing with that, we propose the hypotheses:

H1: Country of origin (COO) positively influence toward Perceived quality of online game

Brand Image and Perceived Quality of Online Game

It cannot be undeniable that the research concerned with brand image is research which occupies a new chapter in the world of marketing. According to Kotler (2001) brand image is belief, idea, and image from a customer to a product. Brand image can also define a consumer perception that has relation with a brand in consumer's mind (Anselmsson, Vestman Bondesson, & Johansson, 2014; Sudhir & Unnithan, 2014; Bruhn et al, 2014). Brand image is a very important component in building consumer behavior and attitude towards a particular product (Turley and Moore, 1995). Consumer behavior is strongly influenced by external information (e.g. Brand name) so that consumers tend to use this information as a signal in assessing the quality of a brand (Brucks et al., 2000; Tsao et al., 2011). According to Kim et al., (2015) stated that brand image affected perceived quality especially perceived quality of online games. Consumers would associate the brand with positive or negative in the product according to the perception of the quality of a product (Kim et al., 2015; Brucks et al., 2000). With All argue, we hypothesize:

H3: Brand image positively influence toward Perceived quality of game online

Country of origin and Brand Image

Country of origin (COO) and perceived quality stereotypes are closely related. Image is one of the product attributes, while country of origin is a construct (Torres, 2014). Thus, brand image and COO were related to one another. Consumers with low levels of information on products tend to evaluate based on the country of manufacture (Elliott & Cameron, 1994). The product has a different perception picture in terms of the COO of the product. So that they will develop the image of the country and its products (Kim et al., 2015). These perceptions build a separate image of a product. This perception is a biased perception. According (Kim et al., 2015) consumers from developing countries tend to think that product brands from foreign countries were in a good quality in terms of materials and used of materials. Thus, it became the basis that COO has an important role in increasing the brand image in a particular product. This relationship might be one of the considerations in marketing strategy choices so that it could minimize the tendency and perceived quality of a particular country. Earlier research found that COO had a significant effect on brand image (Ahmed and d'Astous, 1996; Kim et al., 2015; Diamantopoulos et al., 2011)). In addition, COO also has an influence on product attitude (Knight and Calantone, 2000). Arguing into these, we purpose the hypotheses H2: COO positively influence toward brand image.

III. Research Methodology

This research became more significant due to the recent trends caused by technology development and also Covid-19 pandemic that push into 75%. This study used a survey to achieve its research objectives. The measurement items were derived from an extensive review of the literature relating to resident perception of country of origin and brand image on online games. This approach gains a deeper understanding of how country of origin and brand image affect online game's perceived value (see Figure 1). The project employed a convenience sample of 289 respondents from 18 to 22 years old, and 71% of them are men who spend 1-5 hours playing online games a day.

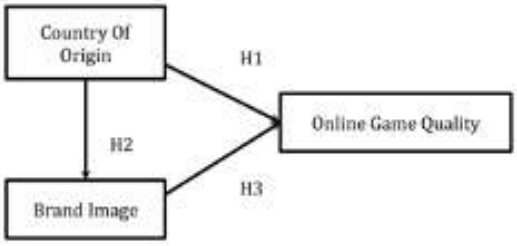

Figure 1. Research Framework

This research model analyzed using the Partial Least Square method and assisted by WarpPLS software that solve relationship issues among very complex variables even though the data size is small and has non-parametric assumptions that the data doesn't refer to one particular distribution.

IV. Findings and Discussion

This section will be explaining about the findings and data analysis that has been collected through questionnaire in the year of 2020. This study is analyzing the data according to the research problem. The result of this data is a set of information that showing whether the proposed hypothesis is accepted or not.

Respondent Characteristic Analysis

Gender, Age, and Allocated Time Spending for Video Game

Table 4.1. Respondent Characteristic

Karakteristik Responden	Jumlah	Persentase
Jenis Kelamin		
Laki-laki	178	71%
Perempuan	71	29%
	249	100%
Usia Responden		
18-22 tahun	137	55%
23-27 tahun	112	45%
	249	100%
Waktu Bermain Game dalam Satu Hari		
< 1 jam	45	18%
1-3 jam	78	31%
>3-5 jam	103	41%
>5 jam	23	9%
	249	100%

The table above shows an overview of the respondent characteristic. It is apparent that according to the data, the biggest gender in this research are men accounted for 71% while according to the age, it is dominated by 18 to 22 years old. Whereas the time allocated to play game most of the time are between 1 to 5 hours per day.

Outer Model Testing (Measurement)

All research data were carried out using Partial Least Square (PLS) model. Statistical analysis was performed using SmartPLS 3.0 software. PLS is one of the alternative methodologies for Structural Equation Modeling (SEM) in which can be done to solve problems between variables that are complex even though with a small size of sample (30-100 sample). Also, this model has a non-parametric assumption which means that the data is not prominent in one or particular distribution. (Yamin and Kurniawan, 2009). For the outer model testing, researcher used convergent validity, discriminant validity,
Convergent Validity

Convergent Validity is analyzed by looking at the reliability item (validity indicators) which shown by the loading factor value. Loading factor value can be defined as number that shows a correlation between one grade of questionnaire item with the grade of variable that measure the variable itself. The loading factor value that greater than 0.7 is then named as valid. However, according to Hair et.al (1998) for the preliminary check from the matrix, loading factor with 0.3 is considered sufficient at the minimum, and for the loading factor at 0.4 is considered better. Whereas for loading factor 0.5 or more, generally it is significant. In this study, the borderline is set at 0.7. Once finished conducting the data analysis using SmartPLS 3.0, the result of these loading factor can be seen at Table 4.2.

From the data analysis result with WarpPLS in Table 4.2, researcher found out that the majority of the indicator in each variable has a loading factor value greater than 0.60. As such, the result is considered valid.

Table 4.2. Loading Factor Value

Variable	Indicator	Outer Loading
Country of Origin	CA1	0.812
	CA2	0.824
	CA3	0.797
	PA1	0.786
	PA2	0.809
	PA3	0.794
Brand Image	BI1	0.859
	BI2	0.827
	BI3	0.717
Online Game Quality	S1	0.763
	S2	0.773
	S3	0.825
	P1	0.797
	P2	0.837
	P3	0.714
	G1	0.730
	G2	0.611

Discriminant Validity

Discriminant Validity is assessed by reflecting on the cross loading at the variable measurement. Cross loading value shows a measurement of the variable. The value of cross loading shows the greater number between each variable with each indicator and indicator from others variable block. measurement model has a good discriminant variable if the correlation between each variable with its indicator is higher than the other block variable. After analyzing the data using WarpPLS 3.0, the result of cross loading can be seen on Table 4.3.

Table 4.3. Cross Loading Result

	COO	IMAGE	GameQua
CA1	**0.812**	0.089	-0.001
CA2	**0.824**	0.026	-0.002
CA3	**0.797**	0.119	0.025
PA1	**0.786**	-0.066	0.068
PA2	**0.809**	-0.114	-0.107
PA3	**0.794**	-0.056	0.020
BI1	0.061	**0.859**	0.000
BI2	-0.028	**0.827**	0.006
BI3	-0.040	**0.717**	-0.007
S1	0.009	0.002	**0.763**
S2	0.024	0.059	**0.773**
S3	-0.011	-0.024	**0.825**
P1	-0.043	-0.010	**0.797**
P2	-0.039	-0.102	**0.837**
P3	0.028	-0.123	**0.714**
G1	-0.038	0.100	**0.730**
G2	0.094	0.132	**0.611**

Reflecting on the cross-loading result at Table 4.3, it is apparent that that the value of correlation on each variable is higher than the correlation with other variables. As such it can be said that each of the latent variable possess a discriminate validity that is measured good, where the indicator of that variable, is better than the indicator in another block.

Another measurement to check on convergent validity aside from loading factor is through Average Variance Extracted (AVE). An instrument is sufficient and adequate, if their validity convergent with AVE scored above 0.5. The result of using convergent validity using AVE is illustrated in Table 4.4 below.

Tabel 4.4 Convergent Validity (with *Average Variance Extracted* (AVE) method)

Variable	AVE
Country of Origin	0,646
Brand Image	0,645
Game Quality	0,577

According to the Table 4.4, all variables demonstrates an AVE score that is greater than 0.5. The score of 0.5 is already fulfill the requirements according to the minimum score of AVE which is designed of 0.5. When the square root of AVE for each variable, the next step is to compare the square root of AVE with the correlation between variables within the model. In this study, the result of the correlation in each variable with the square root of AVE is provided in Table 4.5 below:

Tabel 4.5 Comparison of Square Root AVE with Correlation Score

	Country of Origin	Brand Image	Game Quality
Country of Origin	**0,804**		
Brand Image	0,521	**0,803**	
Game Quality	0,591	0,459	**0,759**

The Table 4.5 above shows that the value of square root AVE for each variable is greater than the correlation value, as such the variable in this research model can be considered having a good discriminant validity.

Composite Reliability

Another measurement to measure outer model is measured by composite reliability. This measurement is done by measure reliability variable or latent variable using composite reliability. The variable is called reliable if the composite reliability has a score of greater than 0.7. The output of SmartPLS for the composite reliability is presented on the Table 4.6 below:

Tabel 4.6. Composite Reliability Value

	Composite Reliability
Country of Origin	**0,916**
Brand Image	**0,844**
Game Quality	**0,915**

As can be seen from the table 4.6 above, each of the variables scored above the 0.7. Country of Origin scored 0.9, followed by Game Quality with the score of 0.9, and Brand Image with 0.8. From this data, we can see that the study is resulted in a good reliability that in line with the minimum score requirements.

Inner Model Measurement (Structural Modelling)

Once the outer model is fulfilled, the next assessment is inner model (structural model). Inner model is evaluated by reflecting on the r-square (reliability indicator) for dependent construct and the value of t-statistic from the assessment of path coefficient. The higher the r-square value the more predictable the research model being appointed. The path coefficients demonstrate the significant level of the hypothesis testing.

Variant Analysis ($R^{2)}$ or Determinant Test

Variant analysis or determinant test aim to understand how big the independent variable is compared with the dependent variable. The value of determinant coefficient is provided at the Table 4.7 below:

Table 4.7. R-Square Value

Variable	R Square
Brand Image	0,275
Game Quality	0,402

Based on the r-square score on the Table 4.7 above, it indicates that country of origin is able to explain the reliability of brand image which accounted for 27.5%, and the remaining of 72.5% is explained by another variable excluded from this study. On the other hand, country of origin and brand image found to have variability of 40.2% and the remaining 59.8% is explained by other variable excluded from this research.

Hypothesis Testing

1) Direct Hypothesis Testing

Direct hypothesis testing is used to measure the influence of exogen variable towards endogen variable directly. The testing criteria stated that if path coefficient scored positive and p value < level of significance (*Alpha* (α=5%)), then it can be inferred that there are significant and positive influence from exogen variable towards endogen variable. The result of direct hypothesis testing is presented on the table below:

Tabel 4.8 Direct Influence Hypothesis Testing

Exogen	Endogen	Path Coefficient	SE	P Value
Country of Origin	Brand Image	0.524	0.058	<0.001
Country of Origin	Game Quality	0.504	0.058	<0.001
Brand Image	Game Quality	0.208	0.061	<0.001

(Source: Research Data)

The Structural Model of Brand Image Variable are as follows:

Brand Image* = 0.524 *Country of Origin

The influence of Country of Origin towards Brand Image resulted in a path coefficient accounted for 0.524 with the P Value of <0.001. The result of the test is that the path coefficient scored positive and p value < level of significance (Alpha(α<5%)). A positive and significant correlation from Country of Origin towards Brand Image is shown from the data above. This result is proving and accepting the first hypothesis (H_1 (There is a positive and significant influence between Country of Origin towards Brand Image). Moving forward, is the structural model of Game Quality variable. The Structural Model of Game Quality Variable are as follows:

Game Quality = 0.504 *Country of Origin* + 0.208 *Brand Image*

If we now turn to game quality variable, it is shown from the Table above that the influence of Country of Origin towards Game Quality resulted in a path coefficient of 0.504 with the P Value of 0.001. This testing result indicates that the path coefficient scored positive and the p value < *level of significance (Alpha (α<5%))*. Therefore, it revealed that there are positive and significant influence from Country of Origin towards Brand Image. This result is proving and accepting the second hypothesis of H_2 (There is a positive and significant influence between Country of Origin towards Game Quality).

The next section is the influence of Brand Image towards Game Quality. This correlation resulted in path coefficient of 0.208 with the P value of <0.001. Therefore, it indicates that the testing result in path coefficient is positive and p value < level of significance (Alpha(α<5%)). A positive correlation and significant influence are found between Brand Image to Game Quality. This result proving and accepting the third hypothesis H_3 (There are significant and positive influence between Brand Image to Game Quality).

Indirect Hypothesis Testing

The indirect hypothesis testing is being used to assess the influence of exogen variable towards endogen variable thorough mediating variable. The testing criteria stated that if p value < level of significance (Alpha (α<5%)), it can be said that there is significant influence from exogen variable towards endogen variable through mediating variable, in other words, mediating variable can mediates it significantly. The result of the indirect hypothesis testing provides on the Table 4.9 below:

Table 4.9 Indirect Hypothesis Testing

Exogen	Mediation	Endogen	Indirect Coefficient	SE	P Value
Contry of Origin	Brand Image	Game Quality	0.109	0.044	<0.007

(Source: Research Data)

The table above illustrates the influence of Country of Origin towards Game Quality through Brand Image. It is resulted in the P Value of <0.007. This testing result indicates that the path coefficient scored positive and the p value < level of significance (Alpha (α<5%)). Therefore, there is a significant influence from Country of Origin towards Game Quality through Brand Image. The indirect coefficient from Country of Origin to Game Quality through Brand Image is accounted for 0.109. Reflecting on this result, there is a strong evidence that Country of Origin influencing Game Quality through Brand Image. As such, Brand Image variable mediating the Country of Origin to Game Quality. Thus, this revealed that the fourth hypothesis H_4(Brand Image is mediating Country of Origin towards Game Quality) is accepted. The summary of the hypothesis testing and research model after being analyzed is presented in Table 4.10 and Figure 4.1 below:

Table 4.10. Summary of Hypothesis Testing

Hypothesis		Remarks
H1	There are positive and significant influence between Country of Origin towards Brand Image	Accepted
H2	There are significant and positive influence between Brand Image to Game Quality	Accepted
H3	There are significant and positive influence between Brand Image towards Game Quality	Accepted
H4	Brand Image is mediating Country of Origin towards Game Quality	Accepted

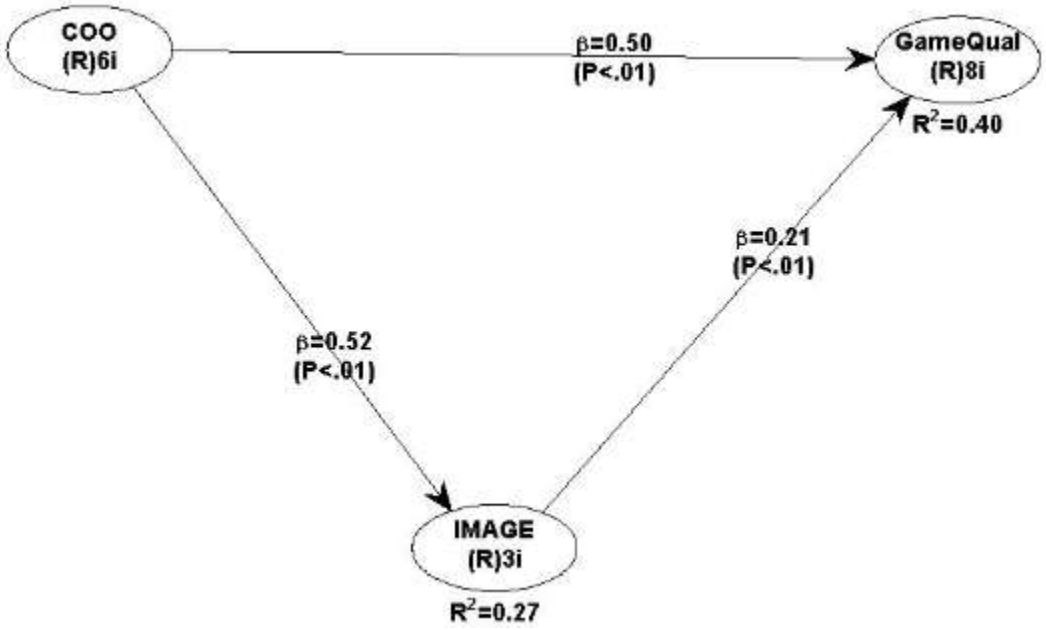

Figure 4.1 Research Model

V. Discussion

This research examines the relationship between COO (Country of Origin), Brand Image, and the Game Quality in Indonesia. This study revealed that Country of Origin positively influence Brand Image. This result is aligning with the previous research (Kim,et.al, 2015) which states that COO influence brand image of a product. This indicates that consumer attracted to a product based on their country of origin. This condition is valid when consumers has a limited knowledge on the product, therefore, having a such belief in the country of origin is helping when choosing a product. Furthermore, in regards with Brand Imagae, the Brand Image in this study is defined as a product image that is embedded in the consumer's mind. The image itself considered that as owning a prestigious label when it comes for certain country.

This study also discover that COO has a positive relationship towards the perceived quality of game online. This indicates that country of origin has critical role in perceived quality from a product. In this study, the perceived quality refers to a game online product. The perceived quality commonly refers to the game feature that has been developed. This has long become a stereotype from consumers about the quality of the product. For instance, a stereotype that online game from Japan has the best quality compares to online game from the USA. While in reality, this can't be all true. This stereotype emerges because of the low information received by consumers. As such, COO has become a consumer's consideration when talking about the game online quality. According to Al Sualiti & Baker (1998) stated that citizen from developing countries has a certain perception about quality. They tend to love a product from a country that well-known for its specialty.

Furthermore, this research demonstrates that Brand Image influence positively to a perception of a product. The result shows that Brand Image can influence consumers perception in a product. Brand Image is interrelated with the shaping of consumer behavior. The consumer behavior is influenced by external information that they give. This finding is consistent with previous research (Kim et al., 2015; Jacoby et al., 1971). Then, several more research that in line with this finding, states that brand image is a consumer perception on a product Chakraborty & Bhat, 2018; Anselmsson, Vestman Bondesson, & Johansson, 2014; Sudhir & Unnithan, 2014). This can be said that perception is significantly correlated

towards a quality that consumers receive in using a product. Similary, when using game online, consumers will chooose a product with a good image because they had a belief on quality and durability of such product. The research findings corroborated with these studies.

This research contributes to the widening marketing literature, especially topic in regards with brand image, COO and perceived quality of game online. In addition, this research also confirming that there is a relationship from a quality improvement that is seen from a country of origin perspective, as well as a product image.

Conclusion

Gaming is one of the promising industries that continuously increase in both the number of users and revenue. Country of origin (COO) referred to a stereotypical perception of "made in" towards products from a particular country, this is the basis for information sign from a product (Pisharodi and Parameswaran, 1992; Martin et al., 2011; Elliott & Cameron, 1994). The study of the origin where the product is made and its impact on the perceived consumer has long been studied in the last decade. Country of origin (COO) and perceived quality stereotypes are closely related. Image is one of the product attributes, while country of origin is a construct (Torres, 2014). Thus, brand image and COO were related to one another. In this study, we aim to prove four hypothesis using structural equation modelling. The result of this study found out that country of origin significantly influences brand image and perceived quality of the game amongst students. We also found out that brand image is successfully mediating country of origin and perceived quality of online game**.** However, this study is conducted on undergraduate students only which can't be a representative of Indonesian gamers in general. Further research may be developed in order to understand the holistic picture of Indonesian gaming nuance and Indonesian gamers patterns.

References

Ahmed SA, d'Astous A. 1996. Country-of-origin and brand effects: a multi-dimensional and multi-attribute study. Journal of Inter- National Consumer Marketing 9(2): 93–115.

Al-Sulaiti KI, Baker MJ. 1998. Country of Origin Effects: A Literature Review. *Marketing Intelligence & Planning*, (Online), 16 (3): 150–199

Anselmsson, J., Vestman Bondesson, N., & Johansson, U. (2014). Brand image and customers' willingness to pay a price premium for food brands. Journal of Product & Brand Management, 23(2), 90–102.

Balestrini P, Gamble P. (2006). Country-of-origin effects on Chinese wine consumers. *British Food Journal* 108(5): 396–412.

Brucks M, Zeithaml VA, Naylor G. 2000. Price and brand name as indicators of quality dimensions for consumer durables. Journal of the Academy of Marketing Science 28(3): 359–374.

Elliott, G. R., & Cameron, R. C. (1994). Consumer Perception of Product Quality and the Country-of-Origin Effect 1. *Journal of International Marketing*, *2*(2), 49–62. https://doi.org/10.1177/1069031x9400200204

Kim, S.J, Choi Y.K, Kim KH, Liu H. (2015). Country of origin and brand image influences on perceptions of online game quality. *Journal of Consumer Behaviour*, J. Consumer Behav.14: 389–398

Martin B, Lee M, Lacey C. 2011. Countering negative country of origin effects using imagery processing, Journal of Consumer Behaviour 10(2): 80–92.

Pisharodi RM, Parameswaran R. 1992. Confirmatory factor analysis of a country-of-origin scale: initial results, In Sherry JF, Jr., Sternthal B (eds). Advances in Consumer Research, Association for Consumer Research: Provo UT; 706–714

Sudhir, S., & Unnithan, A. B. (2014). Measuring consumer moti- vations to share rumors: Scale development. International Journal of Online Marketing, 4(3), 51–67.

Torres, A. (NUIG). (2014). Marketing Intelligence & Planning Article information: *Marketing Intelligence & Planning*, *32*(4), 413–435.

Newzoo global games market report 2019 (2019). Newzoo. https://newzoo.com/insights/trend-reports/newzoo-global-games-market-report-2019-light-version/

Pengguna gim online meningkat 75 persen kala corona. (2020, April 1st). *CNN Indonesia*. https://www.cnnindonesia.com/teknologi/20200331163816-185-488789/pengguna-gim-online-meningkat-75-persen-kala-corona

The Indonesian gamer (2017, June 1st). Newzoo. https://newzoo.com/insights/infographics/the-indonesian-gamer-2017/

Tsao HY, Berthon P, Pitt LF, Parent M. 2011. Brand signal quality of products in an asymmetric online information environment: an ex- perimental study, Journal ofConsumer Behaviour 10(4): 169–178

Yang HE, Wu CC, Wang KC. 2009. An empirical analysis of online game service satisfaction and loyalty. 36(2): 1816–1825.

Zeithaml, V. A. (2012). *of Consumer Perceptions a Means-End Value: Quality, and Model Synthesis of Evidence*. *52*(3), 2–22.

Copyrights