How price, quality and risk create customer-perceived value: The moderating role of COO label effect

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Abstract

This study compares how the conditional effect of the Country-of-Origin (COO, thereafter) label moderates the relationship between price, quality, risk and customer-perceived value between Japan and Taiwan. The conceptual model is proposed and tested by SPSS PROCESS Macro V4.3. This study distributed a self-administered questionnaire that employed the convenient sampling method and obtained a total number of 125 cases. The results suggest that, in the Taiwanese sample, the COO label moderates the relationship between price and customer-perceived value. The COO label is positively related to quality and risk in purchasing a high-tech hybrid mobile device in both countries. In addition, this study finds out the COO label effects are significant on different groups in both countries which, in turn, influence customer-perceived value.

1. Introduction

Smartphones have become a necessity in today's world. Smartphones have gradually entered people's lives and have successfully transformed from luxury goods (Dubey, Sharma & Sheth, 2023) to economic necessities (Chan, 2018). A smartphone is not just a device for making a phone call or sending a text message. It provides several functional values to consumers, including communication, entertainment, shopping, wallet, learning and education, sharing information, transferring data and images, camera, internet access and so on. It seems that smartphones have revolutionized the whole world; from youths to the elderly, everyone has been impacted.

The average selling price for a 5G smartphone was \$643 in the U.S. in 2021 (Hamblen, 2021). Some premium smartphones even reached \$1,000 and above in 2022 (Mishra, 2022), indicating that consumers will spend more money acquiring a smartphone. For example, the average price of a smartphone made by Apple, Samsung or Huawei has increased by 52% since 2016. Although the purchase costs have become a heavy financial burden for some of consumers in different regions, smartphones have

nonetheless become one of humanity's basic needs in the contemporary world. In particular, consumers rely on their smartphone daily to deal with both work and personal matters. Regardless the brand, a smartphone's life cycle has been extended from 22.7 to 24.7 months in the U.S. and from 23.4 to 27.7 months in Great Britain (Ng, 2019). It indicates that the advancements in information technology and the price of a smartphone make consumers delay their desire to upgrade their devices. The purchase decision of a smartphone seems to be highly involved and consumers have to carefully evaluate all the benefits and drawbacks. Therefore, this paper considers how consumers price, quality and risk create customer-perceived value and compares how COO label effect impacts consumers' purchase decision in Japan and Taiwan. The main research objectives are (1) to understand and identify the major factors that are likely to influence customer-perceived value in Japan and Taiwan and (2) to compare the similarities and differences in terms of their choices and provide an appropriate explanation of the phenomenon.

2. Background, theoretical development, and research hypotheses

2.1 Culture and background

Historically, Taiwan was a colony of the Dutch from 1624 to 1668 (Andrade, 2006), Spain in 1626 (Andrade, 2005), and Japan from 1895 to 1945 (Reuters, 2015). Each country influenced the developments of Taiwan in the field of culture, economics, environment and so on. These developments were gradually integrated into local societies and people's everyday lives, whereas others faded. To be specific, these colonial effects remain influential and recognizable. For example, public education (e.g. compulsory education), reservoirs, military service and transportation systems (e.g. railways and highways) are a legacy of the period of under Japanese rule (Reuters, 2015). Both countries are alike in various ways.

The first phase deals with the similarities between two countries. Both Japan and Taiwan are island nations with limited natural resources (Yang, Panjaitan, Ujiie, Wann & Chen, 2021) and lands and they occasionally suffer natural disasters (e.g. typhoon, earthquake and flooding). These similarities are evident in Hofstede's cultural dimension for uncertainty avoidance which expresses the degree to which the members of a society feel uncomfortable with uncertainties and ambiguity (Hofstede, 1980). For example, both countries dispatched search and rescue teams to aid Turkey after the Turkey-Syria quake in February (The Asahi Shimbun, 2023; Wu & Shih, 2023). Specific social and economic characteristics between the two countries are shared. People in both societies experience very strong and close group affiliations and ties and are likely to maintain long-term relationships with each other. Both societies have

relatively large, densely populated urban areas and place a heavy weight on in-group harmony, namely, avoid letting someone lose their face in public. Thus, people tend to express their opinions indirectly or vaguely.

The second phase addresses the differences between the two countries. Both Japan and Taiwan seem to be similar; however, they are also different. The noticeable differences lie in economics (see Table 2.1), social structure, the environment and cultural factors. For example, Japan is considerably more economically advanced than Taiwan, and Japan's population is five times as large as Taiwan's. This results in a difference in market size. This inequality, combined with differences in per capita GDP, indicates that GDP and expenditure in Japan are many times larger than in Taiwan.

Table 2.1 Country characteristics, 2023

Japan	Taiwan
124.621	23.932
4.94	1.277
39,312.7	32,811.0
1.04	1.4
29.2	37.8
69.47	60.8
	124.621 4.94 39,312.7 1.04 29.2

(Sources: IMF, n.d.; World Bank, n.d.; Statistics Bureau, n.d.)

According to Hofstede (1980), Japan and Taiwan show differences in the individualism and masculinity dimensions. Firstly, Taiwan scores significantly lower (17 points) than Japan (46 points). Both societies consider loyalty to their companies or extended family members necessary; however, it seems more influential in Taiwan. People actively take responsibility for following members of their family or neighborhood. For example, the Taiwanese government asked all passengers arriving at the airport to use "epidemic-prevention taxis" to their quarantine hotels (Sui, 2020) and stay there for 15 days. People who failed to comply with this new rule and were fined up to one million NTD, and felt shame or loss of face. Everyone does their part to avoid being the black goat in the group, and the country and people's daily life suffers the most negligible economic impact.

Next, people in highly masculine societies such as Japan (95 points) pursue excellent quality in manufacturing products and providing services and packaging (Hofstede

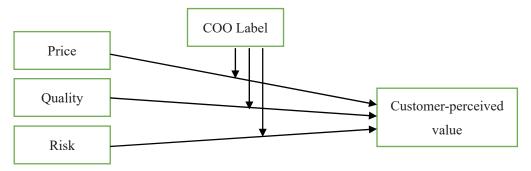
Insights, n.d.) rather than emphasizing assertiveness, strength or independence. On the other hand, some consider Taiwan as a slightly Feminine society (45 points). People in Taiwan highly value equality, supportiveness, warmth and quality in their working lives. For example, regardless age, nationality, gender, occupation or income, people in Taiwan had an equal opportunity to buy face masks once a week during pandemic by showing their national health card (Yuan, Hsu, Lee, Chen, Chou & Hwang, 2020). Moreover, male health officials launched a pink mask campaign challenging gender stereotypes in response to the bullying of male students (see Tu, 2020). After this campaign, various colors and designs of face masks emerged. Face masks are now viewed not only as personal protective equipment but also for fashion or marketing purposes. For example, people choose different face masks to match their outfits or support their favorable team.

2.2 Theory and model

The proposed causal framework (see Figure 2.2) describes the relationship between price, quality, risk, customer-perceived value and COO label effect. This framework is grounded in several bodies of knowledge, including Brady & Cronin (2001), Brady & Robertson, (1999), Chen & Dubinsky, (2003), Oliver, (1999), Roselius, (1971), and Zeithaml, (1988). Scholars have tested in different settings and countries. Moreover, Wang and Yang (2008) identify that the COO will likely moderate customers' attitude toward a product evaluation and purchase intention. It can be further assumed that the COO will probably influence other marketing variables such as *price*, *quality*, *risk*, and *brand image* when customers make their purchase decisions.

Although COO seems to be the most studied topic in management and marketing literature (Peterson & Jolibert, 1995; Pharr, 2005; Tan & Farley, 1987), Damanpour (1993) suggests the concept of COO may change over time in many cases. Multiple marketing variables and their interactions may cause it, so a consumer's idea may vary across time, situations and purposes. In addition, Amine, Chao & Arnold (2005, page 118) point out that "the point in history at which perceptions are measured" is critical, leading to occasional attitude changes. In addition, country familiarity and consumer adaptation to social media may accelerate customers' perception of a product or brand. Finally, customers may be misled when making a purchase decision due to the lack of COO information and misuse of the COO label on the package. These indicate that more extensive research is needed and that one will likely encountered significant challenges in COO research.

Figure 2.2 The proposed framework



2.3 Hypotheses

Several studies examine the relationships between *quality*, *risk* and *customer-perceived value* (Cronin et al, 2000; Oliver, 1999), indicating that quality and customer-perceived value are highly correlated. In addition, Cronin et al. (2000) suggest that risk affects customer-perceived value. In this study, the risk construct refers to performance, psychological, and social risk, whereas financial and time risks are excluded and subsequently being categorized in the price construct. This description of risk is in line with Monroe (2003), who proposes the price-quality-value relationship. In his research, the price construct contains both monetary and non-monetary costs.

Furthermore, Dodds et al. (1991) observed that increasing price negatively affects product value for money and perceived product quality. Price seems to have a dual role in customers' decision-making process. In the same study, Dodds et al. (1991) also suggest perceived quality significantly affects customer-perceived value. Therefore, the hypotheses are:

H₁: The effect of price on customer-perceived value depends on COO label does not exist.

H₂: The effect of quality on customer-perceived value depends on COO label does not exist.

H₃: The effect of risk on customer-perceived value depends on COO label does not exist.

3. Research methods

3.1 Sampling and data collection

The sample was collected through a convenient sampling method. Respondents who were 18 years old, and above, of Taiwanese nationality, had purchased a smartphone at least once were invited. A questionnaire link and a short message were distributed

through companies' internal mail lists and received 125 responses within approximately three weeks. There was no missing data, as all the questions were required to be filled out. After data screening and cleaning, a total 125 cases were ready for data analysis. The Cronbach's Alpha value is .923 (N=35) which exceeded the threshold of 0.7 (Hair, Black, Babin & Anderson, 2019), indicating a good internal consistency of the variables in the scale. The results of descriptive statistics is shown in Table 3.1. There were 72 male and 50 female respondents, and three respondents chose not to reveal their gender identity, indicating more options are needed to express their gender identity. The results reflect the specific characteristics of feminine society in the Hofstede study.

Table 3.1 Descriptive statistics of demographic variables (n=125).

Demographi	c variable			Percent	age (n)	
Gender	Male		Fei	Female		ot to say
	57.69	√o (72)	40%	(50)	2.4%	% (3)
Age	30-39 years		40-49	40-49 years		years
	36.8% (46)		44% (55)		15.2% (19)	
Education	Junior high	school or less	Underg	graduate	Post-graduate	
attainment	4%	5 (5)	70.49	% (88)	25.6%	% (32)
Monthly	20k-40k	40k-60k	60k-80k	80k-100k	100k-200k	200k+
income	9.6% (12)	24.8% (31)	8% (10)	18.4% (23)	17.6% (22)	12.8% (16)

3.2 Analysis

The hypothesized relationships were estimated using SPSS PROCESS V4.3. SPSS PROCESS has become a popular analytical software to test mediation and moderation effects in the field of psychology and management (Hayes, 2018). The preprogrammed moderation model (Model 1) tests the effect of focal antecedents on customer-perceived value moderated by the COO label effect.

3.3 Study 1-Japanese sample

The Japanese data were conducted in 2021 (n=121), and the results were reported in Chang (2021). The same measurement scale was applied. The only difference was the models of the mobile device - the iPhone 13 (launched in 2021) versus the iPhone 14 (launched in 2022). The iPhone 13 series, including iPhone 13, iPhone 13 mini, iPhone 13 Pro and iPhone 13 Pro max were all assembled in China. In contrast, the iPhone 14 and iPhone 14 Plus have been assembled in India since 2022, while the iPhone 14 Pro and iPhone 14 Pro max have remained in China (Cheng, 2022). This study cannot control the country-of-assembling (COA) effect. In this section, the results are

summarized in short. The study found that effect of *price* on customer-perceived value depends on COO label does not exist. However, the effect of quality and risk on customer-perceived value depends on COO label exists. Firstly, the COO label is positively related to quality among those relatively low, relatively moderate and relatively high in COO label. By employing the Johnson-Neyman technique, it is about 5.8th percentile of the distribution of the COO label and above is significant (p-value < .05). Next, the COO label effect is positively related to risk among relatively moderate and relatively high COO label. About the 37th percentile of the distribution of the COO label and above is significant. Therefore, the effect of risk on customer-perceived value depends on the COO label exists.

3.4 Study 2-Taiwanese sample

The Taiwan data was conducted from December 31st, 2022 to January 13th, 2023 through an online questionnaire. A total number of 125 cases were received.

3.4.1 H₁: The effect of price on customer-perceived value depends on COO label does not exist.

Table 3.4.1 summarizes the results of using PROCESS.

R	R-sq	MSE	F	df1	df2	p
.7723	.5965	.6677	35.1814	5.0000	119.0000	.0000

Table 3.4.1.1 Model

	coeff	se	t	p	LLCI	ULCI
Constant	-4.1704	2.6802	-1.5560	.1224	-9.4774	1.1367
Price	.8263	.3372	2.4504	.0157	.1586	1.4940
COO	.6803	.3517	1.9343	.0554	0161	1.3767
Int_1	0694	.0439	-1.5801	.1165	1562	.0175
Quality	.1998	.0756	2.6443	.0093	.0502	.3494
Risk	.4154	.0731	5.6813	.0000	.2706	.5602

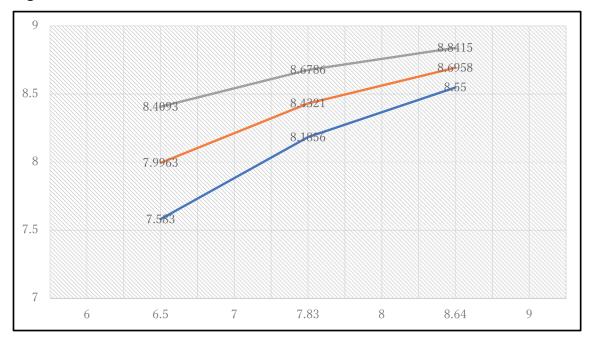
The model can be written as \hat{y} =-4.1704+0.8263X+0.6803W-0.0694XW, where X=Price, W=COO, XW=the effect of price on customer-perceived value depends on COO label.

Table 3.4.1.2 Test of highest order unconditional interaction

	R2-chng	F	df1	df2	р
X*W	.0085	2.4997	1.0000	119.0000	.1165

According to Table 3.4.1.2, the p-value (p=.1165, LLCI=-.1562, ULCI=.0175) is greater than 0.05 and the confidence interval contains zero, indicating it is not significant. Therefore, the null hypothesis is accepted. That is, the effect of price on customer-perceived value depends on COO label does not exist.

Figure 3.4. Moderation Chart



To further probe the moderation effect, a pick-a-point statistical test approach was employed to investigate the interaction (Hayes, 2018). The program selected three values of the moderator to estimate the conditional effect, and they are the 16^{th} (value=5.4), 50^{th} (value=7.2) and 84^{th} (value=9.0) percentiles of the distribution of the COO label. Price is related to customer-perceived value among relatively low in the COO label ($\theta_{x \to ylw=5.4}$ =.4517, p=.0002), relatively moderate in the COO label ($\theta_{x \to ylw=7.2}$ =.3268, p=.0000) and relatively high in COO label ($\theta_{x \to ylw=9.0}$ =.2020, p=.0482). There is statistically significant association between price and customer-perceived value. Moreover, the Johnson-Neyman significance region is between 13.6th (value=2.78) to 86.4th (value=9.0129) percentile of the distribution of COO label (see Table 3.4.1.3).

COO	effect	se	t	p	LLCI	ULCI
	6508					CLCI
2.400	.0336	.2358	2.7977	.0060	.1928	1.1268
2.780	.6334	.2201	2.8776	.0048	.1976	1.0693
3.160	.6071	.2046	2.9675	.0036	.2020	1.0122
3.540	.5807	.1892	3.0692	.0027	.2061	.9554
3.920	.5544	.1741	3.1845	.0019	.2097	.8991
8.8600	.2117	.0973	2.1766	.0315	.0191	.4043
9.0129	.2011	.1016	1.9801	.0500	.0000	.4022

Table 3.4.1.3 Conditional effect of focal predictor at values of the moderator

3.4.2 H₂: The effect of quality on customer-perceived value depends on COO label does not exist.

Table 3.4.2 summarizes the results of using PROCESS.

R	R-sq	MSE	F	df1	df2	p
.7689	.5912	.6764	34.4252	5.0000	119.0000	.0000

Table 3.4.2.1 Model

	coeff	se	t	p	LLCI	ULCI
Constant	2.6189	2.9102	.8999	.3700	-3.1436	8.3815
Quality	1079	.3086	3498	.7271	7190	.5031
COO	2627	.4076	6445	.5205	-1.0699	.5445
Int_1	.0419	.0432	.9705	.3338	0436	.1275
Price	.2960	.0776	3.8129	.0002	.1423	.4498
Risk	.4441	.0730	6.0813	.0000	.2995	.5886

The model can be shown as $\hat{y}=2.6189-.1079X-.2627W+.0419XW$, where X=Quality, W=COO, XW=the effect of quality on customer-perceived value depends on COO label.

Table 3.4.2.2 Test of highest order unconditional interaction

	R2-chng	F	df1	df2	p
X*W	.0032	.9419	1.0000	119.0000	.1275

According to Table 3.4.2.2, the p-value (p=.3338, LLCI=-.0436, ULCI=0.1880) is greater than 0.05, and the confidence interval contains zero, indicating it is not significant.

When further probing the interaction effect, the results show quality is related to customer-perceived value only among relatively moderate in COO label ($\theta_{x \to ylw=7.2}=.1940$, p=.0121) and relatively high in COO label ($\theta_{x \to ylw=9.0}=.2695$, p=.0230). Among relatively low in COO label ($\theta_{x \to ylw=5.4}=.1185$, p=.2385), there is no statistically significant association between quality and customer-perceived value. Moreover, the Johnson-Neyman significance region is below 32nd (value=6.264) and above 68th (value=8.0) percentile of the distribution of COO label (see Table 3.4.2.3).

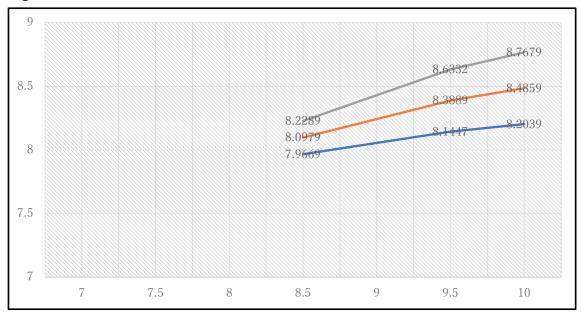


Figure 3.4.2 Moderation Chart

Table 3.4.2.3 Conditional effect of focal predictor at values of the moderator

COO	effect	se	t	p	LLCI	ULCI
6.2000	.1521	.0815	1.8655	.0646	0093	.3135
6.3292	.1575	.0795	1.9801	.0500	.0000	.3150
6.5800	.1680	.0767	2.1901	.0305	.0161	.3199
6.9600	.1839	.0753	2.4441	.0160	.0349	.3330
7.3400	.1999	.0773	2.5842	.0110	.0467	.3530
7.7200	.2158	.0827	2.6094	.0102	.0520	.3796
8.1000	.2318	.0908	2.5534	.0119	.0520	.4115

3.4.3 H₃: The effect of risk on customer-perceived value depends on COO label does not exist.

Table 3.4.3 summarizes the results of using PROCESS.

R	R-sq	MSE	F	df1	df2	p
.7773	.6043	.6549	36.3410	5.0000	119.0000	.0000

Table 3.4.3.1 Model

	coeff	se	t	p	LLCI	ULCI
Constant	-4.6454	2.1863	-2.1248	.0357	-8.9745	3163
Risk	.9379	.2382	3.9376	.0001	.4662	1.4095
COO	.7980	.3062	2.6026	.0103	.1917	1.4042
Int_1	0821	.0371	-2.2109	.0290	1556	0086
Price	.3492	.0780	4.4796	.0000	.1949	.5036
Quality	.2052	.0747	2.7447	.0070	.0571	.3532

The model can be explained as \hat{y} =-4.6454+.9379X+.7980W-.0821XW, where X=Risk, W=COO, XW=the effect of risk on customer-perceived value depends on COO label. According to Table 3.4.3.2, the p-value (p=.0290, LLCI=-.1556, ULCI=-.0086) is less than 0.05, and the confidence interval does not contain zero, indicating it is significant. The null hypothesis is rejected. Moreover, risk is related to customer-perceived value only among relatively low in COO label ($\theta_{x \to ylw=5.4}$ =.4947, p=.0000) and relatively moderate in COO label ($\theta_{x \to ylw=7.2}$ =.3469, p=.0000), among relatively high in COO label ($\theta_{x \to ylw=9.0}$ =.1992, p=.1236), there is no statistically significant association between risk and customer-perceived value. In addition, Table 3.4.3.3 shows that the Johnson-Neyman significance regions are between 23.2nd (value=5.8) to 76.8th (value=8.7536) percentile of the distribution of COO label.

Table 3.4.3.2 Test of highest order unconditional interaction

	R2-chng	F	df1	df2	p
X*W	.0163	4.8883	1.0000	119.0000	.0290

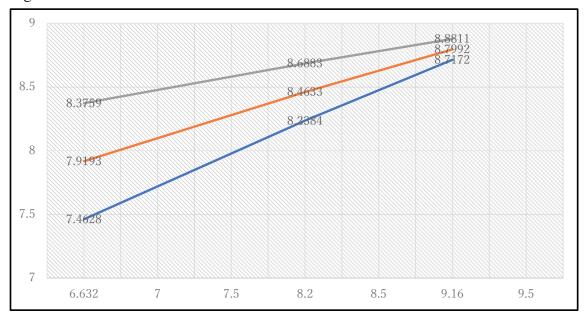


Figure 3.4.3 Moderation Chart

Table 3.4.3.3 Conditional effect of focal predictor at values of the moderator

COO	effect	se	t	p	LLCI	ULCI
6.9600	.3666	.0778	4.7124	.0000	.2126	.5207
7.3400	.3354	.0844	3.9726	.0001	.1682	.5026
7.7200	.3043	.0928	3.2800	.0014	.1206	.4879
8.1000	.2731	.1024	2.6678	.0087	.0704	.4757
8.4800	.2419	.1129	2.1423	.0342	.0183	.4654
8.6111	.2311	.1167	1.9801	.0500	.0000	.4622
8.8600	.2107	.1242	1.6969	.0923	0352	.4565

4. Discussion

The results of study 2 (Taiwanese data) support H₁, H₂ and H₃. Firstly, the moderation analysis with the SPSS PROCESS Macro reveals the effect of price on customer-perceived value depends on the COO label exists. The results suggest that the COO label moderates the relationship between price and customer-perceived value. Since the market price of an iPhone 14 model has increased by 3,000 NTD (approximately 12,000 JPY), it seems to be additional financial burden for consumers, especially since some workers were vulnerable during the pandemic. Moreover, the average lifespan for an iPhone mobile has been extended from 4 year and three months (Dediu, 2018) to 6 years and more (Chouffani, 2023; Cohen, 2022). Technological advancement not only makes consumers rely on a mobile device more, but also makes consumers want to get their money's worth in terms of lifespan when they purchase a new device. In addition, this

study found out that price is related to customer-perceived value among relatively low in the COO label and relatively moderate in the COO label. When a lower or moderate amount of information displays on the COO label, it influences *price* the most. Customers become price sensitive when purchasing a new smartphone as they may not have adequate information to determine whether it is value for money or it is worth 200,000 JYP or 49,400 NTD for an identical iPhone 14 Pro Max in Japan or Taiwan. Those consumers must make the right decision and hope the gadget they chose will last longer.

There are slight differences between Japanese and Taiwanese consumers regarding their price perception. To begin with, it takes the Taiwanese 17.2 working days of their average monthly income to get an iPhone 14 Pro, whereas it takes the Japanese only 11.9 to afford one, according to the iPhone Index 2022 (Picodi, 2022). Taiwanese consumers must work an additional 5.3 working days compared to their counterparts, indicating the high price cost. Thus, consumers are likely to get more information to determine the value for money.

The second findings of this study are the effect of quality on customer-perceived value depends on the COO label exists in both the Japanese and Taiwanese samples. In both countries, consumers are influenced by the COO label when determining product and service quality. One reason is that in both nations, local companies are leading suppliers to Apple, including Sony, TSMC, Fujikura, Hitachi, Japan Display Inc., Kinsus, etc. Customers are more familiar with these companies, strengthening their perception of product quality. In addition, Apple publishes its global supplier list on its website and emphasizes the latest innovation technology in its products. Disclosing this kind of information enhances customer-perceived value. The only discrepancy between two nations is that quality is related to customer-perceived value only among relatively moderate and relatively high in COO label in Taiwan. It seems that the stronger the COO label effect, the higher value consumers hold.

Most importantly, this study suggests the effect of risk on customer-perceived value depends on COO label exists in the Taiwanese sample. In contrast, this effect only exists among relatively moderate and relatively high in COO label in the Japanese sample. Both countries score high in the uncertainty avoidance dimension (Hofstede, 1980), suggesting consumers are likely to minimize any risks that may occur in their decision-making process. They may search for more information (e.g. expert reviews), try the product at an Apple store or consult friends or family members. Moreover, consumers

do not want to lose face among friends or colleagues if they make a terrible choice. For example, consumers would feel regret if (1) their new phone malfunctioned quickly or (2) they did not choose to increase the storage capacity, which may shorten their phone's lifespan. Therefore, presenting more COO information would minimize customers' risk perception and increase customer-perceived value.

5. Conclusions

This study compares how consumers price, quality and risk create customer-perceived value and how the COO label affects consumers' purchase decision between Japanese and Taiwanese consumers. Since both countries have similar traits, this study identifies differences between Japan and Taiwan. The COO label effect significantly moderates the relationship between price and customer-perceived value only in Taiwan. It suggests that consumers utilize the information displayed on the label/packaging to determine its value for money. However, the iPhone price is identical in each country. It is not only on the purchase price but also on the maximum efficiency and effectiveness of the purchase. Next, the COO label is positive relative to quality and risk in both countries. This study finds that the COO label effects are significant for different groups in both countries. For example, the COO label effects on the relationship between quality and customer-perceived value are significant among Taiwan's relatively moderate and high COO label groups.

The first theoretical contribution of this study is to compare behavioral differences between Japan and Taiwan. Due to globalization, culture, and social media effects, Taiwan and Japan are similar; however, this study identified some different aspects. For example, both Japan and Taiwan are categorized in the collectivism dimension. However, consumers in both societies behave differently on specific occasions. It suggests that more comparative studies are needed to probe convergence and divergence in both societies. Next, this study further improves the pricing and COO literature by supporting the COO label effect moderates the relationship between price and customer-perceived value. Although Wang and Yang (2008) identify that the COO is likely to be a moderator, this study takes things a step further by investigating how the COO influences price, quality and risk on customer-perceived value. Finally, this study cross-validates the model in a different cultural and economically developed environment.

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customer-perceived value)

References

- 1. Amine, L. S., Chao, M. C. H., & Arnold, Exploring the practical effects of country of origin, animosity, and price-quality issues: Two case studies of Taiwan and Acer in China, *Journal of International Marketing*, 13(2), 114-150.
- 2. Andrade, T, (2005). How Taiwan became Chinese: Dutch, Spanish and Han colonization in the seventeenth century. Columbia University Press,
- 3. Andrade, T. (2006). The rise and fall of Dutch Taiwan, 1624-1662: Cooperative colonization and the statist model of European expansion. *Journal of World History*, 17(4), 429-450.
- 4. Brady, M. K., & Cronin, J. J. Jr. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65 (3), 34-50.
- 5. Brady, M. K., & Robertson, C. J. (1999). An exploratory study of service value in the USA and Ecuador. *International Journal of Service Industry Management*, 10 (5), 469-486.
- 6. Chan, M. (2018). Mobile-mediated multimodal communications, relationship quality and subjective well-being: An analysis of smartphone use from a life course perspective. *Computer Human Behavior*, 87(1), 254–262.
- 7. Chang, C. (2021). Does the coo label effect matter? How Japanese consumers respond to the effect on a mobile device? *Journal of Musashino University Creating Happiness Incubation*, 5(1), 18-48.
- 8. Chen, Z. & Dubinsky, A. J. (2003). A Conceptual Model of Perceived Customer Value in e-Commerce: A Preliminary Investigation. *Psychology & Marketing*, 20 (4), 323-346.
- 9. Cheng, T. (2022, September 26). Apple already building latest iPhone 14 in India moving a sign south Asian country is gaining importance in supply chain. Nikkei Asia. https://asia.nikkei.com/Spotlight/Supply-Chain/Apple-already-building-latest-iPhone-14-in-India
- 10. Chouffani, R. (2023, January 31st). Understanding how long iPhones can last in the enterprise. TechTarget.
 https://www.techtarget.com/searchmobilecomputing/tip/Understanding-how-long-iPhones-can-last-in-the-enterprise
- 11. Cohen, B. (2022, December 4th). *How long does an iPhone last?* Devicetests. https://devicetests.com/how-long-does-an-iphone-last
- 12. Damanpour, F. (1993). Temporal shifts of developed country images: A 20-year view.

- In N. Papadopoulos & L. A. Heslop (Eds), *Product-country images: Impact and role in international marketing* (pp. 357-378). International Business Press.
- 13. Dediu, H. (2018, March 1st). *Determining the average Apple device lifespan*. Asymco. http://www.asymco.com/2018/03/01/determining-the-average-apple-device-lifespan/
- 14. Dubey, T., Sharma, S. & Sheth, A. (2023). A study to understand the usage of premium smartphones in India with special reference to Samsung v/s oneplus. *International Research Journal of Modernization in Engineering Technology and Science*, 5(2), 1620-1624.
- 15. Hair, J. F. Jr., Black, W. C., Babin, B. J. & Anderson, R. E. (2019). *Multivariate Data Analysis*. (8th ed.). Cengage International.
- 16. Hamblen, M. (2021, December 3). *Smartphone tally up 5% for year despite supply chain woes*. https://www.fierceelectronics.com/electronics/smartphone-tally-up-5-for-year-despite-supply-chain-woes
- 17. Hofstede, G. (1908). Culture's consequence. Sage.
- 18. Hofstede Insights. (n.d.). *Country comparison*. Retrieved March 15, 2023, from https://www.hofstede-insights.com/country-comparison/japan,taiwan/
- 19. IMF. (n.d.). Retrieved March 15, 2023, from https://www.imf.org/en/Countries/JPN
- 20. IMF. (n.d.). Retrieved March 15, 2023, from https://www.imf.org/external/datamapper/profile/TWN
- 21. Mishra, V. (2022, September 1). *Premium smartphone average selling price reaches record Q2 high*. https://www.counterpointresearch.com/premium-smartphone-aspreaches-record-q2-high/
- 22. Ng, A. (2019, May 16). Smartphone users are waiting longer before upgrading-here's why. CNBC. https://www.cnbc.com/2019/05/17/smartphone-users-are-waiting-longer-before-upgrading-heres-why.html
- 23. Oliver, R. L. (1999). Value as excellence in the consumption experience. In M. B. Holbrook (Ed.), *Consumer behavior: A framework for analysis and research* (pp. 43-62). Routledge.
- 24. Peterson, R. A., & Jolibert, A. J. (1995). A meta-analysis of country-of-origin effects. *Journal of International Business Studies*, 26(4), 883-900.
- 25. Pharr, J. M. (2005). Synthesizing country-of-origin research from the last decade: Is the concept still salient in an ear of global brands? *Journal of Marketing Theory and Practice*, 13(4), 34-45.
- 26. Picodi (2022, September 8). iPhone index 2022: How many days do we need to afford Apple's newest flagship? Picodi. https://www.picodi.com/my/bargain-hunting/iphone-index-2022
- 27. Reuters (2015, October 25). Taiwan president says should remember good things

- Japan did. Reuters. https://www.reuters.com/article/us-taiwan-china-idUSKCN0SJ03Y20151025
- 28. Roselius, T. (1971). Consumer rankings of risk reduction methods. *Journal of Marketing*, 35 (1), 56-61.
- 29. Sui, C. (2020, April 24). In Taiwan, the coronavirus pandemic is playing out very differently. What does life without a lockdown look like? NBC News. https://www.nbcnews.com/news/world/taiwanese-authorities-stay-vigilant-virus-crisis-eases-n1188781
- 30. Tan, C. T., & Farley, J. U. (1987). The impact of cultural patterns on cognition and intention. *Journal of Consumer Research*, 13(4), 540-544.
- 31. The Asahi Shimbun. (2023, February 8). Japan, charities sending rescuers, aid to quake-hit Turkey, Syria. The Asahi Shimbun. https://www.asahi.com/ajw/articles/14834800
- 32. Tu, J. (2020, April 16). Taiwan challenges gender stereotypes with pink mask campaign. Women's Agenda. https://womensagenda.com.au/latest/taiwan-challenges-gender-stereotype-with-pink-mask-campaign/
- 33. Wang, X., & Yang, Z. (2008). Does country-of-origin matter in the relationship between brand personality and purchase intention in emerging economies? Evidence from China's auto industry. *International Marketing Review*, 25(4), 458-474.
- 34. World Bank. (n.d.). Retrieved March 15, 2023, from https://data.worldbank.org/country/japan?view=chart
- 35. Wu, J. & Shih, H. (2023, February 7). 2nd Taiwan search and rescue team Turkey bound following earthquake. Focus Taiwan. https://focustaiwan.tw/society/202302070028
- 36. Yang, S., Panjaitan, B. P., Ujiie, K., Wann, J. and Chen, D. (2021). Comparing of food values for consumers' preferences on imported fruits and vegetables within Japan, Taiwan and Indonesia. *Food Quality and Preference*, 87, 1-10.
- 37. Yuan, E. J., Hsu, C., Lee, W., Chen, T., Chou, L. & Hwang, S. (2020). Where to buy face masks? Survey of applications using Taiwan's open data in the time of coronavirus disease 2019, *Journal of the Chinese Medical Association*, 83(6), 557-560.
- 38. Zeithaml, V. A. (1988). Consumer perceptions of price, quality and value: A meansend model and synthesis of evidence. *Journal of Marketing*, 52 (3), 2-22.