



CUSTOMIZATION THROUGH O2O BUSINESS MODEL COULD ENHANCE CUSTOMER SATISFACTION A CASE OF APPAREL INDUSTRY IN TAIWAN

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Abstract:

This research purpose is to investigate Customization through Online-to-Offline business model could enhance Customer satisfaction for Apparel industry in Taiwan. With four specific objectives and seven hypotheses were developed. The sample was drawn from the population of Taiwan. Date collected from 221 customers of online store in Taiwan.

The results indicate that factor of customization (information, product, service customization) and online-to-offline (order convenient, service quality, total price) could enhance the perceived value and contributed the customer satisfaction. In addition, customization can be influence positively to online-to-offline business model.

Key word: *Customization, Online-to-Offline, Perceived value, Customer satisfaction*

1. INTRODUCTION

Customization refers in the context of international marketing to a country-tailored product strategy which focuses on cross-border differences in the needs and wants of target customers, appropriately changing products in order for them to match local market conditions. Therein, customization follows a market-driven orientation (as opposed to a product-driven orientation) and aims at increasing customer satisfaction by adapting the company's products to local needs (Kotabe.M, Helsen, 2007). When the customer conversion rate reaches this critical point under the traditional model, E-commerce Company shall consider applying customized C2B model.

O2O is rapidly becoming a business model with huge market potential. The O2O model encourages customers online to buy in the offline world, in-store. Customers complete the payment online and then get the services offline. Online-to-Offline (O2O), a brand-new business model that drives online visitors to purchase in-store by offering services online, has

received a great deal of attention (Shari S.C. Shang& Abby S.T.Yang, 2015). According to Weng, X.G. & Zhang, L.Y (2015) on the one hand, consumers can enjoy the goods store experience and human services; on the other hand, they can be able to use mobile client to surf the Internet anytime and anywhere to pick a variety of products, or they choose goods and place an order in the stores, and then pick up by customer themselves. This model is called O2O (from Online to Offline). This concept came from America at the first and it has increased rapidly in China. O2O is a trend of the commercial platforms and some brands such as Uniqlo, Gap, Zara and Shiatzy Chen already launched an O2O platform.

1.1 Research purpose

This study is to investigate Customization through O2O Business Model could enhance Customer Satisfaction for Apparel Industry in Taiwan.

1.2 Research Objectives

This study has four main objectives:



1. To investigate the influence of customization (information, product and service customization) to the customer satisfaction for apparel industry in Taiwan.
2. To release the impact of online-to-offline business model (order convenient, service quality and total price) to the customer satisfaction for apparel industry in Taiwan.
3. To identify the effect of customization to online-to-offline business model.
4. To illustrate the relation mediating role of perceived value in the relationship between customization through online-to-offline business model and customer satisfaction for apparel industry in Taiwan.

2. LITERATURE REVIEW

This chapter was reviewed existing literatures relating to Customization, O2O Business Models and investigates Customer Satisfaction with related two. It also presents the theoretical background for the study and created with the literature review relating to Customization and O2O Business model.

2.1 E-commerce

In the 1970s, the term electronic commerce, referred to electronic data exchange for sending business documents such as purchase orders and voices electronically. Later, with the development of this industry the term of electronic commerce is used to business of goods and services via the web. In this context, Vladimir Zwass (2003) Electronic commerce is sharing business information, maintaining business relationships and conducting business transactions by means of telecommunications networks. According to Vacca & Loshin (2002) Electronic commerce is doing business on Internet. It is about using the power of digital information to understand the needs and preferences of each customer and each partner to customize products and services for them, and then to deliver the products and services as quickly as possible.

Business to Business (B2B)

In B2B e-commerce involves businesses focusing on selling to other businesses. Two primary business models within B2B:

- Net marketplaces (includes e-distributors, e-procurement companies, exchanges and industry consortia)
- Private industrial networks (includes single firm networks and industry-wide networks) (Laudon & Traver, 2004).

The business application of B2B e-commerce can be utilized to facilitate almost all facets of interactions among organizations, such as inventory management, channel management, distribution management, order fulfillment and delivery, and payment management (Bharat, 2006).

Business to Consumer (B2C)

Stephen (2004) explained that B2C is short for business to customer, meaning the exchange of services, information and products from a business to a consumer. This benefit of B2C can greatly reduce the cost and broaden the range of customers. While for customers, with the rapid development of information technology as well as the Internet, online shopping increases its popularity; e-commerce is changing the way people are living.

Consumer to Business (C2B)

According to Dai (2013) pointed out that the concept of C2B e-commerce, business model and evolution path, and put forward the real C2B model was consumer demand first and enterprise production second. Chen (2013) discussed the C2B model running mechanism and characteristics from the angle of consumer demand, and provided the reference for e-commerce model innovation (Yan Zhu, 2015).

Consumer to Consumer (C2C)

C2C is e-commerce model in which consumers sell directly to other consumers (Laudon & Traver 2010). According to Rajaraman (2000) C2C is one kind of e-commerce that focuses on the business between consumer to consumer, which is two individual consumers who want to buy and sell goods. The seller shows the description of the goods with his expected price on one website like eBay, the role of which is like a broker. The main advantage of C2C is that the Internet enables the consumers who are geographically distant, to have a deal by using the same intermediary's website.



2.2 Customer Satisfaction

There is growing managerial interest in customer satisfaction as a means of evaluating quality. High customer satisfaction ratings are widely believed to be the best indicator of a company's future profits (Kotler 1991). Customer satisfactions defined as an overall evaluation based on the customer's total purchase and consumption experience with a good or service over time. The firm's future profitability depends on satisfying customers in the present. If consistently providing high satisfaction leads to higher repurchase intentions, then the expected number of times a buyer will repurchase should rise accordingly (Anderson and Sullivan, 1993).

2.3 Perceived value

Almost three decades ago it was noted by Porter (1985) that a competitive advantage of a firm comes from its capability to create value for its customers that exceeds the company's costs of creating it. This perception has not changed up to now as superior customer value delivery is still seen as a key to achieve and maintain competitive advantage (Landroquez, Castro & Cepeda Carrión, 2011). This had led to an increased interest of researchers to analyze customer value creation process and how customers perceive value. Kotler and Keller (2012) define customer perceived value as "the difference between customer's evaluation of all the benefits and all the costs of an offering and the perceived alternatives".

2.4 Customization

Customization is a strategic tool to provide additional benefits to customers. Information gathered by the e-retailer in the customization process can be saved and used by the customer for the next online visit, which provides a convenient shopping experience and a feeling of personal service and care. Standardized products are becoming unappealing to those who dwell in the information society. These customers are knowledgeable and confident in their purchases and customized products meet their individual needs (Moynagh and Worsley, 2002).

2.4.1 Customization Strategies

Thirumalai, S. and Sinha, K.K. (2009) classified customization into three domains: transaction customization, information customization and product customization. According to Maes, P., Guttman, R.H. and Moukas, A.G. (1999) extended customization on the service domain and is founded by the process of merchant brokering involving the evaluation of a product based on its features, possible options in choosing product attributes, price, warranty, availability, delivery time, payment options, and sales' services. We look into customization over four different aspects: 1) product and promotional information, 2) payment and logistic options, 3) product attribute options, and 4) service levels. The followings highlight their current developments.

Information customization- With the assistance from business intelligence and data mining tools, customer databases are analyzed to extract customer preferences. Customized information, which would arouse the interest of a customer towards some new products, is pushed to the customer according to his/her shopping behavior (V. Cho, C. Lau, 2014).

Product customization- Customized products are co-created with customers via mixing and matching product components from a list of options. (Duray, R., et al, 2000) Upon satisfying individual needs, co-created products are more valuable than traditional and standardized products (Berger, C. and Piller, F 2003). Furthermore, a company can understand consumers' preferences based on their selections (Simonson, I 2005).

Logistic customization- Close relationships with the suppliers and logistic partners facilitate a company to arrange the production and delivery of a product. This is related to the flexibility of a company in handling build-to-order production and allows a company to offer different payment and logistic options to its customers. (V. Cho and C. Lau, 2014).

Service customization- Nowadays, companies are no longer holding up the preferential treatment to their VIP customers, instead, customized service is being served for an individual customer based on their needs and preferences. This would help build up the customer satisfaction and loyalty. Compared with traditional business, customization in the online



business depends much on the information technologies, which would be essential to provide customized information, to allow customers to specify their product, to offer customized payment and delivery arrangement, and to service the customers preferentially and differently.

2.5 Online to Offline (O2O)

The basic business logic of O2O model is that users in the online platform to pay in advance, and then to consume offline. It uses the "electronic market + to shop" mode, rather than "electronic market and logistics distribution" mode. This concept came from America at the first and Alex Rampell was put forward in August 2010. Now O2O model is mainly developing in some developed countries and China.

Alex Rampell (2011) defined the core business of O2O, which means companies seek consumers through the Internet, and then bring them to a real store. It is a combination of payment mode and store traffic to achieve a service offline. For customers, O2O is also a "discovery mechanism" offline. O2O e-commerce essentially can be measured and recorded, because every transaction or reservation happens online. It is significantly different with directory models (such as Yelp, CitySearch), because the payment will help quantify the performance and completion of the transactions.

Wang Liyang (2013) as an e-commerce researcher in China said there is still some difficulty to explain the phenomenon of O2O. There is no uniform definition of the O2O industry that literally is the "combination of online and offline." The concept could be very broad, as long as the industry chain can relate to online, and also relate to offline activity, you can called it O2O.

2.6 Implementation of Customization and O2O in Apparel industry

So strong has it become that, today, many popular brands rest their entire business strategy on their ability to customize. The [NikeiD website](http://NikeiD.com), for example, offers customers the ability to customize their shoes. They can pick the color of the bottom and top of their new shoes, the pattern and shoe lace color, and even have an inspirational

message sewn into the tongue of the shoes and the option to share their designs online. In recent years, In Taiwan online customization apparel market, the popular items include company's uniform, handcraft, shoes, men's suits, women's dress, inner wears, traditional customs, professional dancers' dresses, and costumes.

Many Apparel Company has finding for efficiency business model which is suitable own business concept and some professional market O2O model is selected in order to better carry out online and offline interaction, mutual benefit and win-win. In online store model to the line diversion, mainly used strong brand appeal, while sales in the store experience and service-based clothing brand pull, so the main functions of the phone APP that diversion to the line stores, concrete modes are: Find the store, coupons, branding, etc., also has a cell phone store, user-friendly direct orders. Uniqlo and Zara are some prominent apparel retailers that have implemented O2O initiatives in various aspects. Also, successful Apparel enterprises for O2O are GAP and Bestseller Fashion brand.

3. THEORITICAL FRAMEWORK

This chapter discusses the conceptual gaps identified in the literature review presented in Chapter Two. This is followed by a review of the three research objectives identified in the Chapter One. In the following sections, the 7 hypotheses are proposed and outline the research methodology used to test the hypotheses.

3.1 The Conceptual Framework

The purpose of Conceptual framework is to investigate the relationship between Customization and the Online-to-Offline business model that influence Customer Satisfaction. Therefore, this study proposed three factors in order to define that Customization

1. Information customization
2. Product customization
3. Service customization

Also this study suggests there is relation O2O business model of:

1. Order convenient
2. Service quality
3. Total price

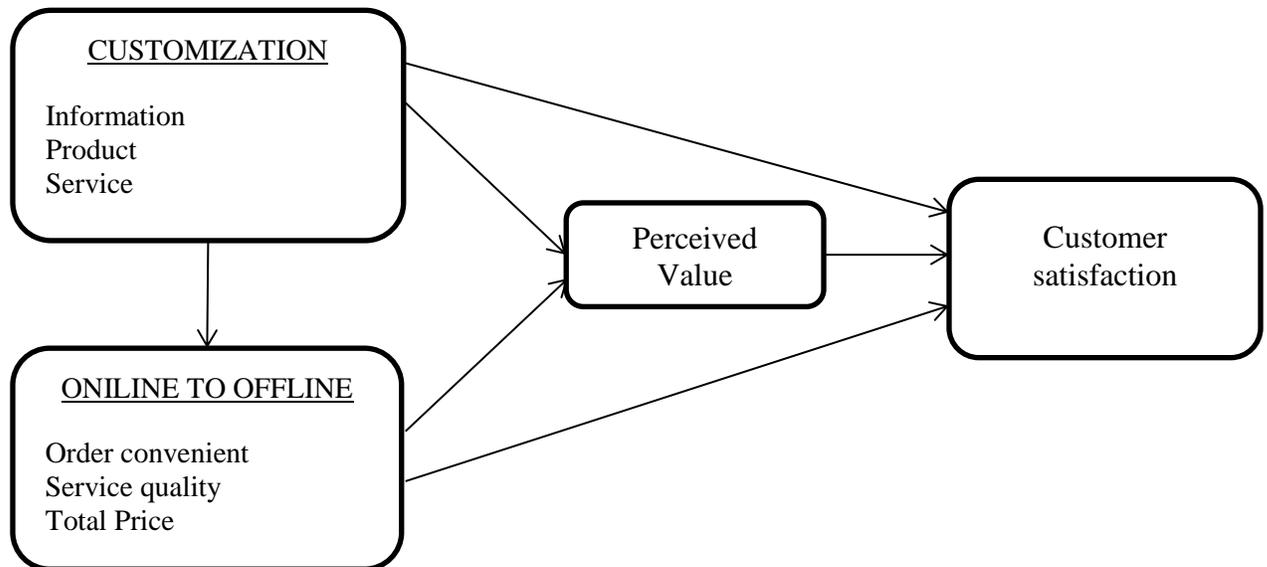


Figure 1: Research Framework

3.2 Summary of Hypotheses

As mentioned in the framework, there are six dimensions used to construct this research framework. The hypotheses are proposed as follow:

H1: Customization with regard to apparel products has a positively associated to the satisfaction

H1.1 Information customization positively associated to the customer satisfaction

H1.2: Product customization positively associated to the customer satisfaction

H1.3: Service customization positively associated to the customer satisfaction

H2: Online-to-Offline with regard to apparel products has a positively associated to the satisfaction

H2.1: Order convenient is positively associated to the customer satisfaction

H2.2: Service quality is positively associated to the customer satisfaction

H2.3: Total price is positively associated to the customer satisfaction

H3: Customization is positively associated to Online-to-Offline

H4: Customization with regard to apparel products positively associated to the perceived value.

H5: Online-to-Offline with regard to apparel products are positively related to the perceived value.

H6: Perceived value with regard to apparel products are positively related to customer satisfaction

H7: Customization through Online-to-Offline has a positive effect on perceived value and contribution to customer satisfaction

4. RESEARCH FINDING AND DATA ANALYSIS

In this chapter the collected data will be analyzed on the basis. The descriptive, reliability, factor analysis and multiple regression analysis are applied



for analysing data. The analysis of the data was generated by SPSS version 20.0.

4.1 Data collection

The primary data collected through a questionnaire survey. The sample was drawn from the population of Taiwan. Real data collection is handled through two ways. First, it is put on the internet and respondents are invited to response questions through social networks as well as 55 completed responses are collected on the internet. In another way, 200 hardcopy questionnaires are handed to employees and 166 of them are returned. The questionnaires were distributed and compiled within over 1 month, from 15th of February to 1st of April 2016. Data collected from 221 customers of online store in Taiwan. Data analysis included demographic profile of respondents, descriptive statistics on key variables, reliability test, and factor analysis, correlation and regression analysis.

4.2 Demographic Profile of Respondents

Descriptive analysis used to analyze the research result coming from characteristics and information of the sample respondents. The 237 questionnaires were collected but 221 questionnaire usable, with an overall response rate of 97%. A number of demographic characteristics were collected from participants that included age, gender, education level and occupation.

4.2.1 Gender

The first number that stands out in the demographics is the percentage of woman who participated in the survey. This percentage (55.7%) is higher than the amount of male respondents (44.3%) males.

4.2.2 Age

The average of the participants is 26.3; this is no surprise since the largest group of respondents belongs to the age categories 18-25 and 25-32 representing 70.1% of the sample.

4.2.3 Education level

The result showed that illustrates respondent's education in 5 categories plus other option. Most respondents have obtained a professional, bachelor and master's degree representing 84.1% of the sample.

4.2.4 Occupation

In the result illustrates respondent's education in 6 categories plus other option. As expected, largest group of the respondent was students (35%). The second most achieved occupation of the respondent was professional employees with 27%. The self-employed were 18% of the total respondents.

4.2.5 Experience of Online Purchase

Experiences with online purchase were surveyed with the questions. The question asked respondents to indicate their previous experience with exploring a website. A total of 157 of 221 (71%) had experience in online purchase in the past time, but the 64 respondents answered that they don't have any experience right now but would like to try on the future. For the respondents who answered this question, the type of brands explored was surveyed. Most respondents answered several mentioned more than two brands and this question offered four online stores. Such as, Uniqlo from Japan, Zara from Spain, Gap from the USA, Lativ from Taiwan. In addition, answer included that choice as other brands. Total of all online purchase frequencies were 202, thereof the most respondents (37%) purchased from Uniqlo's online shop. Uniqlo was the brand that was most frequently listed. The 73 respondents (19%) of all respondent purchased from Zara and the 38 respondents (18%) purchased from Lativ's online shop. Moreover the 34 respondents (17%) of all respondents selected to other online shop and the 18 respondents (9%) bought clothes from Gap's online shop.

4.2.6 Would you like to buy custom-made clothes by online shopping?

This question focused to find out respondent's wants for custom-made clothes by online shopping. Therefore question suggested three options such as "I would like to buy custom-made", "I wouldn't like to buy ready-to-wear" and "It depends / Uncertainty". The more than half of the all customers (63%) would prefer custom-made clothes. But the 17% customers (37 respondents) would prefer buy ready-to-wear more than custom-made clothes, while 20% (44 respondents) answered that will depend on situation.

4.3 Descriptive Statistics



The descriptive statistics shows the minimum mean and standard deviation among items and in section Information customization, Product customization, Service customization, Order convenient, Service quality, Total price, Perceived value and Customer satisfaction. A broad picture on the variable score all variables scored higher than neutral point of *3* in all table. All scores have been rescaled to vary between 1 (minimum) and 5 (maximum).

4.4 Reliability Test

Cronbach’s alpha values were computed to test the internal consistency aspect of reliability of the multi-item scales measuring customization, online-to-offline, perceived value and customer satisfaction. Each of the four variables had alpha values greater than 0.60. The result shows that all variables acceptable.

Table 1: Summary of Reliability test

Variables	Cronbach's alpha	Number of item
Information customization	.779	3
Product customization	.829	3
Service customization	.732	3
Order convenient	.783	3
Service quality	.648	3
Total price	.689	3
Perceived value	.839	3
Customer satisfaction	.839	6

4.5 Factor Analysis

As discussed in Section 4.5, a series of statistical assumptions to test the data matrix include Examination of the Total Variance Explained, Rotated Component Matrix, Component Transformation Matrix, Bartlett’s Test of Sphericity,

and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy.

4.5.1 The Kaiser-Meyer-Olkin Measure of Sampling Adequacy

The Kaiser-Meyer-Olkin Index ranges from 0 to 1.0, reaching 1.0 when each variable is perfectly predicted without error by the other variables (Hair et al., 2010). In this study, the test result (see table 4.4) was 0.898. According to Kaiser and Rice (1974), the value is “meritorious”, which implies that the variables belong together and are appropriate for factor analysis.

4.5.2 Bartlett’s Test of Sphericity

Bartlett’s Test of Sphericity was performed in order to assess whether the correlation matrix came from a population of variables that were independent. The test value was high (3082.640) and the level of significance was low (0.000). Thus, the null hypothesis was rejected, indicating that the data was appropriate for factor analysis (Stewart, 1981).

Table 2: KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.898
Bartlett's Test of Sphericity	Approx. Chi-Square	3082.640
	df	351
	Sig.	.000

The results of mention above tests revealed that the data set was appropriate for factor analysis. Thus, principal component factor analysis was conducted on all of the items that were identified from the literature review. The results are summarized in the following sections.



4.5.3 The Latent Roots Criterion

The results of the latent root criterion demonstrated that the 27 items submitted for factor analysis should be extracted to form six variables. These six variables explained 64.495% of the variation in the data.

4.5.4 The Scree Test

The figure illustrates that by laying a straight edge across the bottom portion of the roots, there are 6 factors before the curve becomes approximately a straight line. This indicates that the extraction of six factors is appropriate for this analysis.

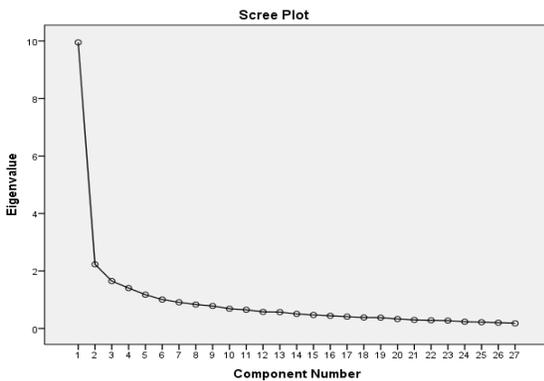


Figure 2: The scree test

Factor Interpretation

Hair et al. (2010) maintain that values greater than ±0.05 are generally necessary for practical significance. Therefore, ±0.05 was used as a cut-off point as factor loadings of ±0.05 produced a clearer structure and helped increase the robustness of the factor rotation. In this study, the results (see table 4.18 and 4.19) showed that all of the factors had significant loadings above ±0.05 using the varimax method.

A principle component analysis was run 27 items that measured on 221 participants. PCA revealed six components that had eigenvalues greater than 1 and which explained 36.8%, 8.2%, 6.1%, 5.1%, 4.3% and 3.7% of the total variance, respectively. The Rotated Component Matrix revealed that six components have appropriate loading on certain variables (coefficient>0.3). The questionnaire was designed to measure, with strong loadings of perceived value

item on Component 1, item of customer satisfaction on Component 2, item of product customization on Component 3, order convenient item on Component 4, service quality item on Component 5 and total price item on Component 6.

Table 3: Component matrix

	Component					
	1	2	3	4	5	6
PV2	.786					
CS1	.674					
PV3	.597					
PV1	.578					
CS3	.516					
IC3	.466					
TP1	.435					
CS4		.690				
SC3		.647				
CS5		.636				
CS6		.608				
SC1		.592				
PC1			.845			
PC3			.833			
PC2			.806			
CS2			.552			
OC3				.794		
OC1				.782		
OC2				.753		
SQ2				.503		
SQ3					.765	
TP2					.597	
SC2					.570	
SQ1					.564	
TP3						.633
IC2						.619
IC1						.515

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

4.6 Correlation

This study used Pearson’s statistic for examining the correlation between all variables.



Table 4: Correlation for Key study variables

Construct	Construct			
	1	2	3	4
Customization	1	.608**	.600**	.707**
O2O		1	.592**	.666**
Perceived Value			1	.708**
Customer Satisfaction				1

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis an analytical used to measure the relationship between independent variables and dependent variables, which it is measured by correlation coefficient. If the result if coefficients are positive, meaning that their relationship as positive. Table 4 show that four variables have strongly positive correlated with each other. To dwell, Customization and O2O are positively related to each other with correlation coefficient 0.608** and these two variables also positively related to Perceived value with acceptable correlation coefficient 0.600** and 0.592**. Customer satisfaction is positive correlated to Customization, Online-to-Offline and Perceived value with acceptable correlation coefficient 0.707**, 0.666** and 0.708** separately. In addition, there is a statistically significant correlation between Customer satisfaction and other three variables at the 0.01 level (2 tailed).

4.7 Multiple regression

Multiple regressions analysis will be used to analyze the relationships between a single dependent variable and several independent variables to understand of the relationships between all the variables and to test mediator and mediator roles in this study.

Hypothesis-H1: Customization with regard to apparel products has a positively associated to the customer satisfaction

H1-1: Information customization positively associated to the customer satisfaction

H1-2: Product customization positively associated to the customer satisfaction

H1-3: Service customization positively associated to the customer satisfaction

Table 5: Multiple regression analysis on Customization to Customer Satisfaction

Independent Variable	Customer satisfaction				
	F Ratio	R ²	Adj-R ²	Beta (β)	Sig.
(Constant)	95.58	.569	.563		.001
Information customization				.342	.000
Product customization				.092	.066
Service customization				.486	.000

This section shows the P-value (sig for significance) of the predictor’s effect on the criterion variable. In this table showed that significant between dependent variable and each independent variable. The p value of t-test for each regression coefficients (Order convenient, Service quality and Total price) are 0.00, 0.66 and 0.00 separately. Product Customization was 0.066 which is higher than 0.05. This predictor was not proved with significant, it is concluded that significant linear relationship does not exist between independent predictor and the dependent outcome. Therefore, H1-1, H1-3 hypothesis has confirmed and H1-2 hypothesis has rejected. From the results, Information Customization (β=0.342), Product Customization (β=0.092) and Service Customization (β=0.486) are all positively related to Customer Satisfaction.



Hypothesis-H2: Online to offline service with regard to apparel products are positively related to customer satisfaction

H2-1 Order convenient is positively associated to the Perceived value

H2-2 Service quality is positively associated to the Perceived value

H2-3 Total price is positively associated to the Perceived value

Table 6: Multiple regression analysis on O2O to Customer Satisfaction

Independent Variable	Customer satisfaction				
	F Ratio	R ²	Adj-R ²	Beta (β)	Sig.
(Constant)	66.111	.478	.470		.000
Order convenient				.077	.187
Service quality				.424	.000
Total price				.287	.000

The ANOVA result presented the F statistic=66.111, degree of freedom=220, and the P value=0.000. This section shows the P-value (sig for significance) of the predictor's effect on the criterion variable. The linear regression coefficient between three variables of Online-to-Offline and Customer satisfaction which is 0.00 and coefficient of Determination is R²=0.478 and adjusted R² value is 0.470, refers that 47% of the variance in Customer satisfaction can be predicted from Online-to-Offline. The p value of t-test for each regression coefficients (Order convenient, Service quality and Total price) are 0.187, 0.00 and 0.00 separately, the p values of the three independent variables are less than the alpha of 0.05. All the hypothesis (H2-1, H2-2, H2-3) proposed previously are supported. Order convenient is 0.187 which is higher than 0.05. This predictor was not proved with significant, it is concluded that significant linear relationship does not exist between independent predictor and the dependent outcome. Therefore, H2-1 hypothesis has rejected.

In overall, Order convenient (β=0.077), Service quality (β=0.424) and Total price (β=0.287) are all positively related to Customer Satisfaction. The results showed that all the three independent variables are positively related to Customer satisfaction.

Hypothesis-H3: Customization is positively associated to the O2O

Table 7: Multiple regression analysis on Customization to O2O

Independent Variable	O2O				
	F Ratio	R ²	Adj-R ²	Beta (β)	Sig.
Customization	66.133	.370	.367	.608	.000

According to table 7 the linear regression coefficient between variables of Customization and O2O which is 0.00 and coefficient of Determination is R²=0.370 and adjusted R² value is 0.367, refers that 37% of the variance in O2O can be predicted from Customization. The p value of t-test for each regression coefficients was 0.00 to O2O; the p values of the independent variables are less than the alpha of 0.05. Therefore, the hypothesis H3 proposed previously are supported. Beta of Customization (β=0.608) is positively related to O2O. The results showed that Customization is positively related to O2O.

Hypothesis-H4: Customization with regard to apparel products positively associated to the perceived value.

Table 8: Multiple regression analysis on Customization to Perceived value

Independent Variable	Perceived value				
	F Ratio	R ²	Adj-R ²	Beta (β)	Sig.
Customization	68.113	.360	.357	.600	.000

The table 8 expresses the linear regression coefficient between Customization and Perceived value which is 0.00 and coefficient of adjusted R²



value is 0.357, refers that 36% of the variance in Perceived value can be predicted from Customization. The p value of t-test for two variables is 0.00 and it was higher than 0.05. Therefore, H4 hypothesis has confirmed. From the results, beta is 0.600 ($\beta=0.600$), refer is positively related to Perceived value.

Hypothesis-H5: Online-to-Offline with regard to apparel products is positively associated to the perceived value.

Table 9: Multiple regression analysis on O2O to Perceived value

Independent Variable	Perceived value				
	F Ratio	R ²	Adj-R ²	Beta (β)	Sig
O2O	67.231	.351	.348	.592	.000

The result showed that the linear regression coefficient between Online-to-Offline and Perceived value which is 0.00 and coefficient of adjusted R² value is 0.351, refers that 35% of the variance in Perceived value can be predicted from Online-to-Offline. The p value of t-test for two variables is 0.00 and it was higher than 0.05. Therefore, H5 hypothesis has confirmed. From the results, beta is 0.592 ($\beta=0.592$), refer is positively related to Perceived value

Hypothesis-H6: Perceived value with regard to apparel products are positively related to customer satisfaction

Table 10: Multiple regression analysis on Perceived value to Customer satisfaction

Independent Variable	Customer satisfaction				
	F Ratio	R ²	Adj-R ²	Beta (β)	Sig
Perceived value	60.287	.501	.499	.708	.000

According to table 10 the linear regression coefficient between Perceived value and Customer satisfaction which is 0.00 and coefficient of Determination is R²=0.501 and adjusted R² value is

0.499, refers that 49% of the variance in Customer satisfaction can be predicted from Perceived value. The p value of t-test for Perceived value is 0.00 which is less than 0.05. This predictor was proved with significant, it is concluded that significant linear relationship does exist between independent predictor and the dependent outcome. Therefore, H3 hypothesis has confirmed. Beta value (β) is 0.708, that means this variable positively related to Customer Satisfaction.

Hypothesis-H7: Customization through Online-to-Offline has a positive effect on perceived value and contribution to customer satisfaction

Table 11: Multiple regression analysis on all of the variables

Independent Variable	Customer satisfaction				
	F Ratio	R ²	Adj-R ²	Beta (β)	Sig.
Customization	219.226	.500	.498	.344	.000
O2O	155.775	.588	.585	.245	.000
Perceived value	139.944	.659	.655	.356	.000

As shown in Table 11, first result indicates that the Customization has a significantly positive influence on the Customer satisfaction ($\beta=0.344$), $p=0.000$. The result 2 in table refers relationship between O2O and Customer satisfaction. Furthermore, regression coefficient (β) is 0.245 between those 2 constructs and coefficient of determination is ($R^2 = 0.588$) and the adjusted R² is 0.585, meaning that 58% of the variance in Customer satisfaction can be presumed caused from O2O. In addition, $F=155.775$ and that is significant ($p=0.000^c$). Thus, the relationship between those two variables is significant and positive. The result 3 in the table 4.14 depicts regression between Perceived value and Customer satisfaction. The regression coefficient (β) is 0.356, $F=139.944$ and that is significant ($p=0.000^d$). As well as the result and conclusion are in tandem with the table 4.13. It is resolved that the regression between those two constructs is positive and significant. Three results between each variable are positive relation and hypothesis 7 is supported.



4.8 Summary of Hypothesis

Table 4.12: Summary of Hypothesis

No	Hypothesis statement	Result
H1	Customization with regard to apparel products has a positively associated to the satisfaction	Supported
H1-1	Information customization positively associated to the customer satisfaction	Supported
H1-2	Product customization positively associated to the customer satisfaction	Rejected
H1-3	Service customization positively associated to the customer satisfaction	Supported
H2	Online-to-Offline with regard to apparel products has a positively associated to the satisfaction	Supported
H2-1	Order convenient is positively associated to the customer satisfaction	Rejected
H2-2	Service quality is positively associated to the customer satisfaction	Supported
H2-3	Total price is positively associated to the customer satisfaction	Supported
H3	Customization is positively associated to Online-to-Offline to the perceived value.	Supported
H4	Customization with regard to apparel products positively associated to the perceived value.	Supported
H5	Online-to-Offline with regard to apparel products are positively related to the perceived value.	Supported
H6	Perceived value with regard to apparel products are positively related to customer satisfaction	Supported
H7	Customization through Online-to-Offline has a positive effect on perceived value and contribution to customer satisfaction	Supported

5. DISCUSSION AND CONCLUSIONS

This chapter reviews the research findings and conclusions based on the results of the statistical analyses and discussion presented in Chapter Four. With four specific objectives and seven hypotheses were developed.

Research Objective 1: To investigate the influence of customization (information, product and service customization) to the customer satisfaction for apparel industry in Taiwan.

The results suggest that information customization has a positive relation on customer satisfaction. This conclusion represented that customer will be higher satisfaction when online store regularly update for latest customized information on product and promotions. Online store have to provide customized information such as highlight product, best-selling area and more information for product by website or mobile application. Consequently, this online store can obtain opportunity more than competitors. As customers are pleased with the customized information provided by the company, it is reasonable that they are satisfied.

But Multiple regression analysis result for relationship between product customization and customer satisfaction illustrated that not significant ($p=0.066$). Product customization questionnaire focus on special order service in companies are operating O2O business model. As well as customer appraised poor score to product customization because companies are operating O2O business model doesn't offer alternative service and they could not provide customer's requirement. So, customer satisfaction was lower for product customization. Otherwise, result of background question illustrated that customer want to have their own customized products and they would like to buy custom-made. With an interactive interface, a customer would select clothes according to its style, color, size and material etc. Hence, product customization is no impact to customer satisfaction due to customer expectation and company fulfillments are insufficiency and situation was different.



From our analysis, service customization has a positive impact on the satisfaction. Online shoppers gave good answer for service customization in online store. They received that customized treatments according to their needs and requests. In order to consolidate one's position, online store should suggest more flexible service. According to the result, these variables have positive relation each other. In other word, Customization with regard to apparel products impacted positively on customer satisfaction. H1 and H1.1, H1.3 sub-hypothesis tested were significant, but H1.2 sub-hypothesis was not significant.

This study empirically supports the theoretical model for Customization strategies for an online business. The current research confirms the effect of the customization strategy on satisfaction. The findings suggest that customers prefer customization service more than traditional service. They are seeking for fresh information, customized product and special service. Most important strategy for O2O companies they should offer alternative service. And they have to give opportunity to customer that customer choose suitable clothes yourself. This study represents an important step toward developing a theoretical understanding of the impact of customization strategy. The results also provide insights for online stores need to transfer to C2B business strategy.

Research Objective 2: To release the impact of online-to-offline business model (order convenient, service quality and total price) to the customer satisfaction for apparel industry in Taiwan.

One major implication of these results is the positive association between service quality, total price and customer satisfaction, although the order convenient customer satisfaction has not a significant association.

Convenience is important factor to drive online shopping. The online shopping platform encourages customer to explore more on the website, which is much quicker than walk or drive. Unfortunately, in my research Order convenient has not positive relation to customer satisfaction through enhance perceived value. The reason for this, the order functions of website and application similar and all of the online stores don't have any distinctive. Online

store not seems like convenient for customer because all of the online stores function is simple.

Service quality was found to impact to the satisfaction positively as their relationship coefficient was significant (0.00**). The question included that online and offline service both such as quality of online shop, individualized attention during shopping, and after-sale service.

Total price has positive relation to customer satisfaction through enhance perceived value. Total price comprised that all of the cost such as product price, shipping fee and service fee. According to the result, Online-to-Offline with regard to apparel products impacted positively on customer satisfaction. The results highlighted that, although two factors of O2O had an impact on customer satisfaction, the factor service quality had the greatest influence on customer satisfaction. But order convenient was not influenced to customer satisfaction in this context. The H2 and H2.2, H2.3 sub-hypothesis tested were significant, but H2.1 sub-hypothesis was rejected.

Within this objective, the theoretical and empirical study was undertaken to measure the attributes of O2O and customer satisfaction in order to better understand the apparel industry in Taiwan. Customer satisfaction still depends on service quality and total price. But customer unsatisfied for order convenient. This result showed that companies should give attention to order function. They need to offer novelty and special order system in order to be different from other.

Research Objective 3: To identify customization how to influence to Online-to-Offline business model.

The results suggest that Customization including three factors has a positive relation on Online-to-Offline business model. The finding suggested that three factor of customization as an information, product and service customization influence to Online-to-Offline business model positively. Therefore, online apparel businesses need to develop by coordinate two business strategies as a customization and O2O. In both situation that online and offline, could be improve customer satisfaction through implement customization strategy.



Research Objective 4: To illustrate what relation customization through O2O how to effect on higher perceived value and contribution to satisfaction. These four variables had positive relationship each other.

Overall, this study revealed some new ways of identifying and improving proper Customization and Online-to-Offline factors that can maximize perceived value and subsequently increase customer satisfaction in the apparel industry. Accordingly, Apparel Company should apply that customization factors to Online-to-Offline business to meet with success. They should strive to improve the quality of their services to ensure they remain competitive in a global market environment. This objective included all of the variables and this section will explain that results of H4-H6. In the table 4.15 show that the summary of hypothesis H4-H6.

Relationship	Significant
Customization → O2O	0.00
O2O → Perceived value	0.00
Perceived value → Customer satisfaction	0.00

According to table, hypotheses H4-H6 are confirmed. In addition, hypothesis H7 proposed relationship between four variables. As a result, Customization contributed through O2O and O2O business model effect positively to Perceived value. Hence Perceived value influence to increase Customer satisfaction.

6. IMPLEMENTATIONS AND SUGGESTION FOR FUTURE STUDY

The purpose of this study was to investigate customization through Online-to-Offline business model could enhance customer satisfaction in Apparel Industry of Taiwan. The chapter will present the conclusion of the finding from empirical study and provide implications to apparel company. Several limitations are addressed as well as suggestions for future studies.

6.1 Implementation

The purpose of this study was to investigate customization through Online-to-Offline business model could enhance customer satisfaction in Apparel Industry of Taiwan. The chapter will present the conclusion of the finding from empirical study and provide implications to apparel company. Several limitations are addressed as well as suggestions for future studies.

Online customization: These findings suggest that online customization will be powerful strategy for apparel industry. In order to obtain more customer loyalty, online store must keep a close eye on information customization and service customization. Thereto, they should provide more specific information of the products that is including the bestseller, new products based on past purchases of a customer and latest product. And they need to serve based on their needs and preferences. In addition, product customization does not contribute much to customer satisfaction. Because customer involvement impact in apparel industry is still very limited. Edvardsson, Gustafsson, Kristensson, Magnusson and Matthing (2006) suggest that customer involvement gives companies the potential to be more professional and successful in fulfilling customers' expectations, latent needs and service value. If companies were to offer customized apparel, consumers would likely be interested in ordering and purchasing made-to-measure clothes. Therefore, online companies should improve customer involvement for expand product customization and they should offer alternative service. And they have to give opportunity to customer that customer choose suitable clothes yourself. In order to be successful in the online business, companies need useful and easily operated websites for apparel customization. Customization is based on providing information from individuals, and apparel customization often requires some sensitive personal information. As well as, the final design of a product reflects the customer's individual taste; the self-selection of features, style, material, size, color etc. all work to provide a glance of the customer's inner world.

Offline customization: Many companies in apparel industry have finding for efficiency business model which is online and offline interaction. In previous part discussed about online customization and this part will explain that offline customization.



Information and product customization conduct by online. But service customization is referring offline customization. Offline customization allows customers to specify their product, to offer customized payment and delivery arrangement, repair and maintenance array and to service the customers preferentially and differently. In this study, we approved that customer satisfaction still depends on service quality and total price. This result declared that need to enhance the service quality to increase satisfaction. And numerous researchers have concluded that people feel better when they perceive themselves to be served differently and preferentially. Thereof, Apparel Company need to become that more flexible and they should move toward customize service.

6.2 Limitation and Suggestion for Future Research

While this study contributes to both literature and practices, there are several limitations that should be addressed for future research. The first limitation is the relatively narrow group of product categories examined in the study. This study does not control such differences product categories. As a mention in chapter two, Online-to-Offline business model is operating at the various industries, but we focused on only apparel industry. Future research can study within kind of industry such as food and beverage, travel and tourism, hospitality industry so on. Such a study may offer insight as to the influence of customization on the value of customized product as well as insight on appropriate channels to target customized offers to different product category.

Second, the research was carried out in two cities (Changhua and Taichung) in Taiwan yet the findings obtained may not be representative of the whole country. The sample size was 221 participants. The findings may not be generalizable for the entire apparel industry. Future possibilities for study may arise as a consequence of these limitations. The survey undertaken in the research involved only local respondents. Both local and international customers should be taken into consideration in company's strategy to increase the business performance in a global environment.

Third, this research examined that only one direction of relationship between customization and Online-to-Offline business model. We discuss the importance of linking of customization with Online-to-Offline and Customer satisfaction and this study contributed to the influence of customization to Online-to-Offline. Based on this study, further researcher can determine clever and advanced framework. Accordingly, they need choose primary factors and it can increase understanding of how online-to-offline impact to customization.

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