A Philosophy on Design Quality Control : Increasing Brand Competitiveness with Designer and Their Intrapersonal Factors

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Abstract

The Research Article were objective 1)To study whether have causal relationship between DQC with brand competitiveness. 2)To study effect extent between two quality dimensions of design with each aspect of brand competitiveness, respectively. In order to find out how design can contribute to strong brand competitiveness for the emerging branding model, especially in firms where design is associated with the brand's core competitiveness. Multiple regression equation modeling is carried out in order to examine the feasibility of multiple-dimension control, to identify and analyze the causal relationships between the different design attribute that are required to increase competitiveness of goal brand. For this purpose, Design aesthetic and design technology in relation to innovation profitability, brand image consistency and customer experience were investigated, based on designers' standpoint. Since the overall quality and controlled attribute of the packaging design scale depended on the subjects on which the scale was based. Therefore, this is a sample consists of 400 designers with aged 21-55 years, a non-probability sampling is used. Except for 16 specially invited participants, all participants are working in Greater Bay Area where the design industry is the earliest, most advanced and largest in China. The empirical results show that the significant positive correlation between design aesthetic with innovation profitability, brand image consistency and customer experience. The resulting infers several associations within design aesthetic, the five important sub-factors found to potential influence on brand competitiveness were visual perception, design element, differentiation preference, creatively thinking and design expertise. Recent findings on live servers show that the causal relationship between DQC and brand competitiveness is related to the size, life cycle, and expertise of each company analyzed. Due to limited time This article therefore does not categorize these variables, which may serve as research guidelines for future researchers.

Keywords: quality control; design operation process; competitiveness.

Introduction

As we know it, Packaging plays a vital role in the brands competitiveness. Since 1953, some iconic packaging competition such as red dot, if and Pent awards are positioned internationally as the most important quality seals in the world and its special relevance for the brand preference and perceived product quality. In China, like very where else, though design quality control (DQC) has since many years ago been applied to for the product design. The general public, including, the professionals themselves think that such the measures of control is vague or unclear regarding the meaning in the implemented process of packaging design. Furthermore, as a result, it is difficult to identify key factors about DQC. And this highly adversely affect the fairness of competition.

Currently soft drinks are facing very high competition, though the market still expand in high curve. Most country's companies, including China's and Thailand's premium brand who are exactly losing their global cost advantage, this is why some soft drinks disappear from the market due to the conventional thinking. On the other hand, according to the investigate INTERBRAND, shows that 51% of 100 best global brands in USA. also, three nations the Germany, France, and Japan accounted for 27%, in 2019. Today, when it comes to the Chinese companies are already making headway among understand and learn the nature of competition at the global level, their focus has switched from quantity to quality and sustainable growth. In industries such as tea and soft drink, Whereas the number of Chinese manufacturers has become very large, and they even have a supporting Industries for international brands. However, they have few success brands that can compete in the world market. In the context of the emerging both brand building model and design thinking, the author focus on the academic issue which will need be developed, that is how designer's role is redefined today? what are the philosophy / measures to solve the quality control problems? And what factors in the process of implementation play a vital role increasing brand competitiveness.

The above positions are tested through two hypotheses in our study. H1: Design aesthetic has a striking positive influence on brand competitiveness. H2: Design technology has a striking positive influence on brand' competitiveness. As a result, the paper is organized as follows: Section 3 reviews the latest research in this area, Section 4 introduces the research methodology, Section 5 summarize and elaborates on the findings concerning the causal relationships between two groups of variables. Section 6 concludes the study and provides a discussion on the implications of this research. Limitations of the study and recommendations for future research directions are given in Section 7.

Research Objectives

According to the objective of this examination is to address these limitations by DQC concept between our company's competitiveness with the brand design especially design

visual communication in order to plays well into actively shape distinctive stronger brand with a local special. This research is conducted with the following:

1. To study whether have causal relationship between DQC with brand competitiveness.

2. To study effect extent between two quality dimensions of design with each aspect of brand competitiveness, respectively. In order to find out how design can contribute to strong brand competitiveness for the emerging branding model, especially in firms where design is associated with the brand's core competitiveness.

Literature Review

This section is dedicated to literature review inquiry into the key quality factor of packaging design and its control philosophy. Research commonalities and gaps are identified. Aim to understand and get to grips a various outcomes related to important and useful contributions on this subject. The relevant literature can be classified in two basic categories as following:

1.Design quality factors related to Brand competitiveness

The author uses the designing element as a clue to review publicly published academic achievements, and trying to identify competitive forces, and their underlying causes, to reveal the roots of an industry's current profitability. The previous literature revealed that the innovation is receiving more attention. Michael E. Porter (1979) highlights that enterprise's competitiveness depends on the capacity of its brand to innovate and upgrade, in his ground-breaking article, how competitive forces shape strategy. The implementation of an operations strategy, including the development of operations capabilities (see Phusavat et al.2007; Swamidass, 1987), related to how the firm seeks to create a sustained competitive advantage (Hilmola et al., 2015) Drake et al. (2013) consider innovation as a central operations capability for achieving competitive advantage and include innovation as an operations capability within the quality dimension. Based on the research of David Aaker, HAN Furong et al, (2008) mainly put forward the brand competitiveness evaluation system with 5 the first level indicators for brand competitiveness and 26 second-level indicators. Klepper (1992) emphasizes that innovative activity tends to be the greatest during the earliest phases of the life cycle. Nagasawa et al. (2014) explain that innovation was taking place in that process during both the start-up period and the regeneration period, and that innovation by type is categorized into sustaining innovation and disruptive innovation.

Juran and Godfrey (1999) has stated that quality means freedom from deficiencies, (Higher quality usually costs less), and which distinguishes a brand from its competitors. DQC aims to ensure that the design results meet the needs of human society, and to analyze,

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process, judge, make decisions and modify the entire technical operation process of design. Control activities start with a clear design task and complete the design process by drawing spout and technical documentation Yazhe C., et al ,(2017) As far as design quality is concerned, there are a number of innovative factor / attributes to be considered, including the brand preference, visual imagery \ aesthetics, sculpt / form, materail, and work Manship (see Steenis ND et al., 2017; Luwen Yu, 2018; Spence C. 2019; Hosam Al-amarraie,2019). Hine (1995) point out the components of packaging including graphic elements and structural elements. Rundh, B (2009) has outlined a influence both external and internal factors in design process of a package. Bou-Mitri, C. et al. (2021) further classified as visual stimuli, informational elements and functionality attributes Gomez et al., 2015, and provide an empirical support to interpret its influence on consumers' buying decision.

In practice, There are also important questions here about the brand aesthetic consistency (see Michael B. Beverland, 2005; Seifert C., et al, (2017). and how this can be constantly optimized by designers, are becoming more attention(see Christine Page,2012;). That is while consumer response to differing levels of deviations from brand aesthetics – a factor that may have a significant influence on brand' competitive advantage. Seifert C., et al, (2017). have stated that brand aesthetics is fundamental to maintaining a competitive advantage. They further explained the overall brand design inconsistency effect was more salient for non-luxury brands. Since luxury brands are able to leverage the halo effect, so that perceived brand design inconsistency does not impact consumers' purchase intentions as strongly.

2.Philosophy related to quality control

Inspired by Japan's success, this Kaizen philosophy has kindled considerable interest among researchers (see Hammer et al. 1993; Deming,1995;Womack and Jones 1996; Newitt 1996; Suárez-Barraza, Ramis-Pujol & Kerbache, 2011) because it increases competitive advantage of the company and helps to optimize process efficiencies with minimum waste, many managers have embraced the management philosophy of Kaizen. The first well-known and most frequently cited proponent of kaizen was Imai, who wrote KAIZEN

The Key to Japan's Competitive Success (1986). Kaizen is a continuous improvement process involving everyone. Imai (1997) describes that the improvement can be divided into Kaizen and innovation. Kaizen signifies small improvements as a result of ongoing efforts. Innovation involves a drastic improvement as a result of large investment of resources in new technology or equipment. Kaizen forms an umbrella that covers many techniques including Customer Orientation, six sigma, Total productive maintenance, Just-In-Time, Small Group Activities, Automation, suggestion system, Discipline and Poka-Yoke.

Hamel (2009) suggests that "for breakthrough performance, Kaizen is a most critical

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vehicle to achieve strategic imperatives and execute value stream/process improvement plans.” Research by Erez (2009) indicates that long-term (balanced vision) perspective on management is indispensable to KAIZEN practice (Brunet and New, 2003;Jehn & Weigelt, 2001). Chung (2018) developed the concept of Kaizen as total continuous improvement, signifies the importance of “Total” or “integration” ,It laid emphasis on continuous improvements as compared to one time improvement. Brian et al.(2019), has demonstrated the impact of frequent and systematic use of a Kaizen event on quality and delivery performance. The result indicates 87 percent in productivity by applying Kaizen events, with little or no capital investment.

In summary, The taproot of the DQC is implementation which are continuously improve and one time improvement. Design is a creative activity based on the value positioning, through balancing the relationship between art and commerce. Whereas packaging design is defined a whole systematic design process that continuously optimizes the preset target of the brand into as a holding device for visual and touchable through specific design skill packages, so as to satisfy the consistency of consumers' perceived results. It begins with an internal description of the meaning of a brand that is then transformed into something tangible that consumers perceive. The result is a design in the sense that it fulfills its intended purpose. The meaning can, of course, be expressed in many ways. It can be expressed verbally through verbal and visual devices / cues to convey the attractive of the brand. In turn, consumers will perceive these as cues collectively and use them to make inferences about the brand. In today’s fragmented media environment, packaging design has evolved into a science that seeks ways to capture consumers' cognitive, emotional, and physical attention (Hosam Al-Samarraie, et al. 2019) Within the previous literature, there has been much research surrounding finding of application potential of packaging, example include new technology, materials development, and the role of certain packaging elements (visual elements, verbal elements) in goods-dominant or service-dominant logic of marketing[Payne, A. et al, 2009]. But very few have concentrated on the efforts implemented by designers by their intrapersonal factors to makes a particular contribution for their brand.

Conceptual Framework

The conceptual framework is formed after sorting out some creative experience and various literature. The author has analyzed this information in an attempt to identify factor on topic that is relevant, see Figure 1:

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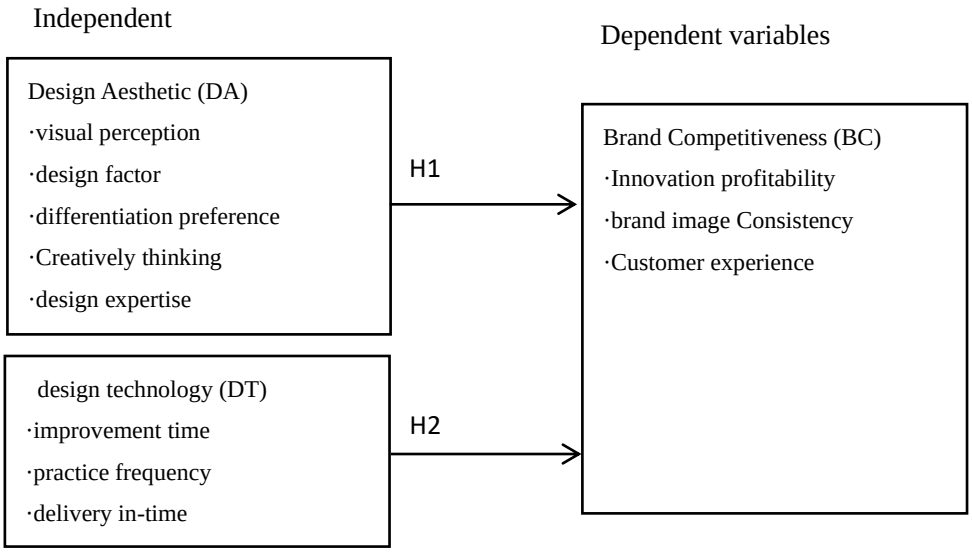

Figure 1. Research conceptual Framework.

A Design -quality Control framework could help stakeholders articulate their requirement by concept their discussion. The resulting negotiated quality level in turn would determine the assessment required of the competitiveness.

Research Methodology

1.Research design and sample.

In this quantitative research, the survey questionnaire have been used to collected primary data from the perceived value of designer and stakeholders as the respondents. The target population of this study are designers and brand managers who have been trained for at least one year of relevant professional training. Since the number of full-time designers in China is very large, and it is difficult to obtain support from authoritative design associations, and it is impossible to obtain a list of random selection. Therefore, a Non-probability sampling is being recognized as here a suitable alternative.

2.Questionnaire

This study referred to the mature scale in the relevant literature of experts and scholars at home and abroad, and combined the characteristics of the brand design of Oriental Leaf in China determined the measurement items of two variables in the conceptual framework, so as to form the initial questionnaire by a structured survey questionnaire. Divide the questionnaire into three parts, and details including respondent's intrapersonal factors (gender, age, income, cultural background, education and relevant work experience), relevant customer satisfaction, consumption motivation and relevant attribute of

both brand competitiveness and design quality.

3.Data Collection

The Guangdong-Hong Kong-Macao (GHM) Greater Bay Area has become one of the most important industrial design in China. The Greater Bay Area is the region with the most concentrated design resources, the most frequent design activities and the most significant design achievements in China. The technical support will be provided to issue a questionnaire by the network firm WJX. Benefits: it is useful for authors deliver quickly and streamlined to the respondent (aged between 25 years and 55 years) by WeChat, QQ and Email. Finally, 90 of the 490 questionnaires received were sorted out as incomplete, so they were excluded, and the remaining 400 were used as valid questionnaires to meet the sample size of empirical research. Therefore, the future analysis were based on 400 samples. The pilot test shows that the textual representation is properly used. In doing so, the author will learn whether an idea really is desirable, viable, and feasible, and what it might look like to do it at scale. Twenty pretested subjects should also be the relevant area practitioners. According to their feedback, the way of expressing the items in the questionnaire was revised to form the final questionnaire.

Research Results

According to the nature of this study, the author uses SPSS program to compute for various results. mainly including five aspects.

1 Descriptive analysis

This is a sample consists of 400 designers, most of whom were directors, or entrepreneurs in the design area. Although every good designer has had its own particular experiences, specific knowledge and philosophy, the underlying mode of operation in packaging design—the character and trajectory of all premium projects —is fundamentally the same. Above all, both types of participants were analogously trained: the objective to see how people from different scientific expertise are likely to judge in order to produce something new and worthwhile.

2 One-way ANOVA analysis

In term of two design quality dimension, there are designer’ six intrapersonal factors, including educational attainment (EA), delivery in-time (DIt), improvement time (IT), age groups(AG), practice frequency(PF) and salary groups(SG). In order to study whether there are significant differences among above factor with the brand competitiveness. One-way ANOVA analysis of variance was performed. Results indicate that each P value (0.000) of all intrapersonal factors were less than significance level (alpha=0.05), so it was considered that

people from different intrapersonal factors have significant differences. (Table 6.2)

Table 1 ANOVA analysis results: Mean Square

		Mean Square					
		EA	DIt	IT	AG	PF	SG
Innovation profitability	Between Groups	24.228	7.042	6.524	6.484	4.154	6.765
	Within Groups	.115	.289	.294	.294	.318	.291
brand image Consistency	Between Groups	4.630	1.249	1.459	1.397	.877	1.508
	Within Groups	.104	.138	.136	.136	.142	.135
Customer experience	Between Groups	14.885	26.846	21.576	27.654	25.532	25.919
	Within Groups	1.960	1.838	1.892	1.830	1.852	1.848
		***	***	***	***	***	***

*p<0.05, **p<0.01, ***p=0.000

3 Reliability and Factor Analysis

Overall reliability analysis. First of all, the Cronbach's a coefficient applied to test the overall reliability of the scale. The results was 0.806 and greater than reliability level (0.7). And than, before factor analysis, KMO test and Bartlett spherical test were carried out on Quality attribute of design, the KMO value was 0.887, a significance level of 0.000 and less than 0.01, the data is spherical distribution, both of which were suitable for factor analysis. And than, principal component analysis is used for Factor extraction, the results showed that there are 2 factors whose feature root was greater than 1, which explained 81.114% of the cumulative variance. In terms of two extraction factors, the condition is satisfied for performing the “VARIMAX” method. The load values of each indicator of the factor were greater than 0.5, indicating that the two common factors could well explain each measurement item.

4 Correlation analysis

Pearson correlation test (1980) was used to test the correlation between quality attributes and brand competitiveness. In this output, one-tailed test were used to analyse the relationship between design aesthetic, design technology with brand competitiveness, out of the Pearson correlation coefficients of two component factor were 0.399, 0.351, respectively, both of coefficients have reached the significant level of 1%. Results indicate that the quality attribute of design have significant positive correlation with brand competitiveness.

5 Multiple Regression analysis

After the previous correlation analysis, it has been found that two quality dimensions have significant correlations with three aspects of brand competitiveness, which was recorded

as X1-X3 as independent variables; innovation profitability (IP), brand image consistency (BIC) and customer experience (CE) as dependent variable, respectively, and recorded as Y, for regression analysis. The selected equation form was a multiple linear regression equation, which was set to:

Y=b0+b1*X1+b2*X2+u

Perform regression analysis. The following analysis results were obtained.

Table 2 Regression Result: IP is recorded as Y.

	Model	Unstandardized Coefficients B	Standardized Coefficients Std.Error	Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
	Constant	-.997	.214		-4.656	.000		
1	DA Total	.950	.063	.614	15.201	.000	.496	2.015
2	DT Total	.342	.052	.265	6.549	.000	.496	2.015
R^2=0.678, Adjusted R^2=0.677, F=718.403 (P<0.05)								

We learned through SPSS analysis that the maximum VIF (Variance Inflation) of the variance expansion factor was 2.015, which was in accordance with the standard of 0~10. From Table 2, it could be founded that the regression coefficient of the design aesthetic (DA) and design technology (DT) was significantly different from zero (Sig<0.05) by the significance test, and The regression coefficient of the "DT" was 0.342, the regression coefficient of the "DA" was 0.95. which indicated that the design aesthetic had a significant positive impact on innovation profitability. Therefore, the multiple regression equation between the DA and DT to innovation profitability could be summarized as: Y=-0.997+0.95*X1+0.342*X2.

Table 3 Regression Result: BIC is recorded as Y.

	Model	Unstandardized Coefficients B	Standardized Coefficients Std.Error	Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
	Constant	3.542	.106		33.501	.000		
1	DA Total	.231	.014	.658	16.677	.000	.794	1.259
2	DT Total	.073	.027	.108	2.744	.000	.794	1.259
R^2=0.509, Adjusted R^2=0.507, F=397.820 (P<0.05)								

From Table 3, it could be found that the regression coefficient of the design aesthetic and design technology pass the significance test. The regression coefficient of the "DA" was 0.650, which indicates that the DA has a significant positive impact on the structure capital; The total regression coefficient of the "DT" did not pass the significance test. Therefore, the multiple regression equation between the DA and DT to BIC could be

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summarized as: Y=3.542+0.234*X1. The regression equation showed that under the condition of constant condition, the brand image consistency increases by 0.234 units for each unit of design aesthetic increase. It showed that enterprises attach importance to the design aesthetic, assuming Hlb was established. The design technology have no significant impact on brand image consistency, assuming that H2b has not been verified.

Table 4 Regression Result: CE is recorded as Y.

		Unstandardized Coefficients	Standardized Coefficients				Collinearity Statistics	
	Model	B	Std.Error	Beta	t	Sig.	Tolerance	VIF
	Constant	1.074	.076		14.075	.000		
1	DA Total	.515	.029	.548	17.535	.000	.325	3.076
2	DT Total	.290	.021	.431	13.798	.000	.325	3.076
R^2=0.874, Adjusted R^2=0.873, F=1736.975 (P<0.05)								

It could be founded from Table 3 that the regression coefficients of the DA and DT have passed the significance test and were significantly different from zero (Sig<0.05). Therefore, the multiple regression equation between the DA and DT to the customer experience could be summarized as: Y=1.074+0.515*X1+0.29*X2. The regression equation showed, all else being equal, the design aesthetic was increased by one unit, the CE was increased by 0.515 units; the design technology was increased by one unit, and the CE was increased by 0.29 units. The results showed that assuming H1b and hypothesis H2b were established.

Discussions

Objective 1. The outcome of the design process is to a large extent dependent on the interaction between the main actors in this process (Rundh, B 2009.) In the design development process of packaging, The quality control depends comparatively on one's comprehensive ability than other segments, like product design or brand design. The greater the designer's comprehensive ability is, the greater the control level for overall design quality, but not only for aesthetic factor. In other words, when packaging design plays a positive effects in improving the brand competitiveness, the designer in charge of this project is already sufficiently excellent in both design aesthetic and design technology. Ultimately, the comprehensive ability is considered to be a key factor to determine design quality whether has a positive effects on the brand competitiveness. The descriptive analysis show that designer's recognition different is influenced by internal factors, e.g. design expertise, practice experience. The smaller the standard deviation is, the more likely the consensus will be consistent. For example, the standard deviation of question 6 and question 15 are 0.597,

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0.386, respectively, indicating that a high consistency is emerging among each designer in their consensus regarding overall quality of packaging design. Meanwhile, A well-designed package is considered to promote the brand competitiveness over others, but when it comes to soft drink, that effect is amplified.

Prior packaging design studies have suggested influences on the design process of a package from external and internal factors (Rundh, B 2009), and indicated that Packaging design comprises two kinds of elements: verbal and visual, both can influence consumer purchase decisions (Mohebbi 2014.) Based on these findings, the present research divided the design quality attribute into two types controlled: design aesthetic and design technology. Exploratory factor analysis indicate that the sub-factors of the design aesthetic include creatively thinking, design expertise, design factor and visual perception. The sub-factors of design technology include practice frequency and delivery in-time.

Based on the above empirical results and the interaction mechanism analysis of two different types of Attribute control of design quality, the mechanism of the influence of attribute control of design quality on brand competitiveness was obtained (Figure.2).

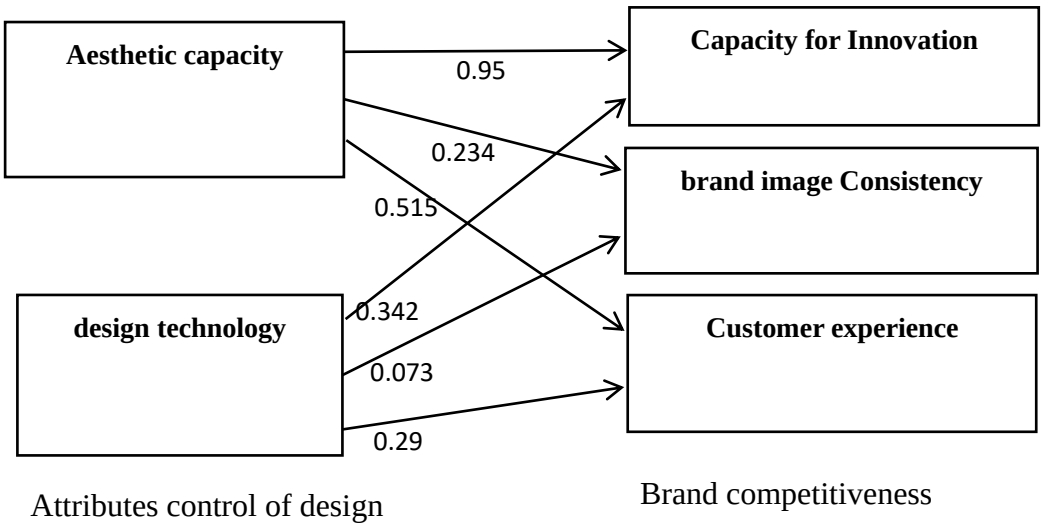

Figure 2. Mechanism of the attributes of design quality on Brand competitiveness
Source: author developed from test result.

Objective 2. According to Regression analysis, There was a significant positive correlation between design aesthetic with innovation profitability, brand image consistency and customer experience, its regression coefficient is 0.95, 0.234, 0.515, respectively, which is to assuming H1 was established. Hence the regression coefficient have further found that design aesthetic are considered as of one of the crucial constitution element which relates to DQC in packaging. One's design aesthetic is not single attributes, it's basing on one's their trajectory and dependent on the integrate within the five sub-factors. It must be emphasized that all sub-factors of the design aesthetic belong to one's thinking system and that only balance of all sub-factors can bring positive effect, then effect that able to have contributed to

increasing brand competitiveness.

Objective 3. Why is there no significant positive impact between H2? One of the most important reasons is the different concern perspective between designer and stakeholders involved. Einwiller & Will (2002) defined Corporate branding as “a systematically planned and implemented process of creating and maintaining a favourable image and consequently a favourable reputation for the company as a whole by sending signals to all stakeholders and by managing behaviour, communication, and symbolism”. The brand image consistency is being recognized as a result which comes to design philosophy and co-creation or market orientation. Experienced or inexperienced, the designer is the specialist who able to fully conversant with the 'design technology', with the various tools that can solve his problems. On the other hand, packaging design is subject to a complex set of influences from the business environment. The importance of the different variables varies among the actors through the supply chain, but is also linked with consumer concerns. Whereas very few topic have focus on designing customer or consumer response to differing extent of deviations from design technology perspective. The regression coefficient of the assuming H2 also confirms this view.

Knowledge from Research

The research brings together concepts of Kaizen, concepts of brand driving by design in order to shed new light on quality-controlled factors of design. This contribution first provides local brand marketers with decision-making techniques on how to trigger roots of quality problem, to reduce the cost and potential risk in a development processes, and efficiently create better packages that markets receive in order to market and enhance their brand competitiveness in today’s economic system.

Conclusion

The empirical analysis conducted shows that these controlled attributes of packaging design can effectively brand competitiveness. Within the previous packaging-related research literature which focused on consumer-oriented view (Mert Topoyan 2008; Pragya Srivastava, et al. 2022) or visual packaging features (Mensonen & Hakola, 2012) and topics related to this subject. Though the present research focus attention on the designer's perspective to concretely explore several controlled attributes of design quality. Michael B. Beverland (2005) notes that designs are created and the innovation that comes from individuals or groups of designers. And at the same time, some prevailing thinking (Life Cycle, Positioning, Continuous Improvement et al.) is assimilated extensively to testing in questionnaire design. Results indicate that the design model (Figure.2) which can find out the usability problems in order to propose a solutions efficiently for design worker and their customer. That is, when

brand competitiveness is needed to increase by packaging design, the brand producers should be prioritize designer's comprehensive ability including visual perception, differentiation preference, creatively thinking and design expertise, particularly in aesthetic related.

Second, in order to enhance competitiveness, an increasing number of producers are committed to maximize design quality during the past 10 year, especially in firms where design is associated with the brand's core competitiveness. During which Several prevailing view such as design 3.0 (Cai Jun, 2016) and brand driving by design (Tong Huiming, 2022) are setting in academic discussions, and share its common ground mainly in two aspects: One being that design is expanding its position as the bodies of knowledge - from aesthetics, technology, and materials expertise to interdisciplinary. The other being that a model of brand driving by design is emerging through integrate design, technology with business practical field, and that model can be able to maximize the value of design. This research further demonstrates that design must be part of a firm's business strategy to it's during both the start-up period and the regeneration period. Because the very core of brand competitiveness depends on overall design quality, whereas that overall design quality come from a result of sustaining innovation and continuous improvement processes, but not simply capture the value of aesthetic or technology. Therefore, only when brand advantage has gained added cohesive and appealing, that can turn well into your competitiveness of goal brand. In conclusion, that model shows that various regression coefficient mirrors their effect extent between individual dimensions. In practical, it must be highlighted that the design and its strategy decisions preferably be made at the highest hierarchical level, and to consider all cohesive factors serve as a controlled holistic.

Despite the substantial quantity of research on competitiveness issues. however, very few studies have been done to study factors contributing to stimulate upgrading of competitiveness and challenges related to DQC especially in the context of Chinese firms. Some implications come from Prior theoretical contribution, such as M.E. Porter's (1997) Competitive strategy and Five Forces model. The research reported two dimensions into DQC, but also because involving the ultimate aim of a model for quality control that the authors extend to encompass three dimensions on brand competitiveness. Based on this analysis, one of the regression coefficients is 0.95, to illustrate firms in China prioritize generally communication their own need for originality to designer. But comparatively the designer or staff design manager, for all but a few companies, would obviously not think carefully to incorporate more dimensions into brand competitiveness, since it would be important for him to be alert to all the aesthetic trends and consumer feedback that could conceivably affect his firm's business. This means that the wisdom is emerged in long-standing. In this sense, designers cannot respond only to a few dimensions of brand competitiveness, but focuses on design whether accurately suit to establishing brand image

consistency. This is the important reasons for the packaging design can be continuous development, as well as the ultimate goal of DQC. In conclusion, the root of wisdom above lies in the practical experience of designers, which will influence their decisions on how to apply the multi-dimensional of brand competitiveness, since they have less opportunity to further enhance their expertise through a approach both more systematic and pioneer frontier.

Suggestions

Around the China, packaging that have achieved competitive advantage employ strategies that differ from each other in every respect. But while every good packaging will employ its own particular strategy, the underlying mode of operation—the character and trajectory of all good packaging—is fundamentally the same. the data obtained by this research are mainly concentrated in the packaging design associates close with soft drink industry. From scientific research leading to technological development, there are emerging forces which affect design, future research can consider joining multidisciplinary data, conduct a more comprehensive study.

According to server most recent finding in practice, the Cause-and-effect relationship of DQC and brand competitiveness associates with size, Life Cycle, and specialization between each of the analyzed firms. Since the limited time, this paper does not classify these variables, which can be used as the research direction of later researchers.

References.

Bou-Mitri, C., et al (2021), "Food packaging design and consumer perception of the product quality, safety, healthiness and preference", Nutrition & Food Science, 51(1), 71-86.

Chen J C, Dugger J & Hammer B. (2000). “A Kaizen Based Approach for Cellular Manufacturing Design: A Case Study”, The Journal of Technology Studies, 27(2)19-27.

Seifert C., et al, (2017). How Much Can Brands Deviate from their Brand Aesthetic? The Moderating Role of Brand’s Luxury Statu [J].

HAN Fu-rong, et al, (2008).Research on the Indicator System for Brand Competitiveness [J],Journal of Beijing University of Technology, 34(6)

Hammer M, Champy J & Tathan R L (1993). Reengineering the Corporation:A Manifesto for Business Revolution, Harper Collins, New York.

Hosam Al-amarraie, et al. (2019). Packaging design elements and consumers' decision to buy from the Web: A cause and effect decision‐making model[J]. Color Research & Application.

Nimitmai Review
Pacific Institute of Management Science
(Humanities and Social Sciences)

Imai, M. (1986). Kaizen-the key to Japan's competitive success. New York, NY: Random House.

Michael B. Beverl (2005), Managing the Design Innovation–Brand Marketing Interface: Resolving the Tension between Artistic Creation and Commercial Imperatives,

Michael B.Beverl, (2005). managing the design innovation-brand marketing interface:Resolving the tension between artistic creation and commercial imperatives [J], 22:193-207

Porter, M. . (1979). How competitive forces shape strategy [J]. Harvard Business Review, 57.

Page Christine, et al (2002). An investigation of the processes by which product design and brand strength interact to determine initial affect and quality judgments. Journal of Consumer Psychology.12(2), 133-147.

Payne, A. , Storbacka, et al(2009). Co-creating brands: diagnosing and designing the relationship experience. Journal of Business Research, 62(3), 379-389.

Rundh, B.(2009). Packaging design:creating competitive advantage with product packaging [J].*British Food Journal*.111, (9)

Steenis ND, et al. 2017.Consumer reponse to packaging design: The role of packaging materials and graphics in sustainability perceptions and product evaluations [J]. Cleaner Production.

Seifert, Christin; et al, (2017). "How Much Can Brands Deviate from their Brand Aesthetic? The Moderating Role of Brand's Luxury Statu" (2017). International Textile and Apparel Association (ITAA) Annual Conference Proceedings. 86.

Shin'ya Nagasawa, Teruhiko Fukunaga,(2014) Strategic Brand Management of the LuxuryBrand GUCCI [J], Waseda Business & Economic Studies,

Yazhe C., et al ,(2017) Study on the product quality control based on the systematic design process [J], CHINESE JOURNAL OF CONSTRUCTION MACHINERY, 15(6)