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KEY DRIVERS OF BRAND EQUITY IN FAST FOOD BUSINESSES. A CASE OF KITWE DISTRICT

***Bravo Muchuu*[1]**

[1] *Ph.D. Student, Department of Business Economics, Mendel University, Brno, Czechia, E-mail address: xmuchuu@mendelu.cz*

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Abstract
This study aims to identify and investigate the factors that influence brand equity in the fast-food business in Kitwe district of Zambia. Unlike other studies, a holistic approach that examined all the Consumer Based Brand Equity (CBBE) drivers of Brand equity (BE) was used.
This study used cross-sectional data with a survey approach to collect appropriate data from a randomly selected sample of 400 respondents through online forms. The results showed that among the five determinants of BE, brand awareness, brand loyalty, and perceived quality were found to have a significant effect on BE in fast food businesses. Fast food businesses, especially those in the Kitwe district, should consider creating a loyal customer base by ensuring that their clientele base is kept informed, responding to their complaints, which in the long run enhances their relationships. The results are effective for fast food business firms in developing the necessary business functions that attract more consumers and ensure maximum utility.

Keywords: *Brand equity, perceived value, perceived quality, brand loyalty, brand awareness, brand association.*
JEL Codes: *D80, D41, D03, D12, M20, M30.*

Introduction

The economic environment in running a fast food business is becoming very challenging, especially with the high cost of food, shortage of labour supply, a highly competitive market, and the continued increase in rental cost are the adverse factors that erode the profit margin of fast food business (Margaret and Mei 2018). Modern markets happen to be operating by a lot of diverse market players including premium restaurants in 5-star hotels, casual dining restaurants offering international cuisine as well as traditional restaurants, and other fast-food stores (Hooley, Piercy and Nicolaud 2008). Previous researchers have identified many determinants influencing brand equity, including brand awareness (Bogart and Lehman, 1973; Aaker, 1991; Kotler and Keller, 2006), brand association (Aaker, 1991; Yoo, 2000; Kotler and Keller, 2006), perceived value (Patterson & Spreng, 1997; Armstrong & Kotler, 2006) and perceived quality (Zeithaml, 1988; Aaker, 1991; Yoo, 2000: Chaudhuri & Holbrook, 2001).

In facing the fierce competition of the catering industry, there are fewer noticeable and tangible differences in consumer products and services offered among competitors. Many companies have come to believe that one of their most valuable assets is their brands (Kotler and Keller 2006). However, the brand may also be the most vulnerable asset. Whenever something goes wrong, such as corrupted top management, unethical working practices, social and environmental damages, the brand reputation will become a victim and be destroyed easily (Margaret and Mei 2015).

Conveniently, brand equity has been described as the general utility that the consumer associates with the use and consumption of the brand, including associations expressing both functional and symbolic attributes (Vazquez, Del Rio, and Iglesias, 2002). Therefore, the observed growth of the fast-food industry in Zambia serves as an opportunity that fast food businesses can exploit to thrive and expand their businesses.

Therefore, this study seeks to identify elements among the determinants of brand equity that have been outlined by Aaker (1991) to identify what consumers prefer the most when making decisions about which fast food restaurant they would go for, so that fast food businesses may be able to use that information to maximise the overall consumer utility of their products and services in Kitwe. This study used cross-sectional data with an online survey approach to collect appropriate data from randomly selected sample of 400 respondents in the second and third quarter of the year 2023.

Investing in activities that improve the brand equity of a company will help it improve its products and services according to the preferences of consumers. This research can be effective in helping the company develop the necessary business functions that would attract more consumers and ensure maximum utility. Brand equity will provide a foundation for expansion in that when investors understand the value of a good brand, they will be more willing to invest due to the power of the brand. In this study, microeconomic research has revealed that when consumers make decisions, they often look at the necessary utility that they are going to obtain from their use or experience with the particular product or service. Furthermore, (Bovi, 2009) study had used data from 10 European countries for 22 years and confirmed that consumer utility is a psychological concept. That is, psychological factors are the key factors that distort consumer choice and behaviour. Concluding that utility depends on psychological factors and judgments, that affect consumer choices and behaviours that reasonably requires this study to solve such a problem.

Literature Review

Theoretical framework. Consumer culture theory

Consumer culture theory studies how consumer choices and behaviours are viewed from a cultural and social point of view, as opposed to a psychological or economic point of view. Brands are components of consumer discourse. Marketers create them as devices to sell their products or services. However, once brands are marketed, they belong to consumers, because they can be easily identified. One of the primary objectives of consumer culture theory is to address the dynamic relationship between consumer actions, cultural meaning, and the marketplace. Customer brand equity is related to how customers behave towards your brand and influences the success of your business overall. If customers recognize and connect with your brand, performance goes up and the business becomes successful.

(Anould and Thompson 2006) defined consumer culture theory as a social arrangement in which the relations between lived culture and social resources, between meaningful ways of life and the brands and material resources on which they depend, are mediated through markets. This makes the consumer part of an interconnected system of commercially produced products and brands that they use to build their identity and orient their relationships with others. According to consumer culture theory, people understand brands for their meanings as components within the greater behavioural system of using a specific brand. Every brand has a meaning that drives consumers to be loyal to certain brands. Therefore, the success of the brand depends on the consumers who choose that brand in the market. The theory of consumer culture also asserts that brands are the media through which consumers establish, maintain, reinforce, or revise their relationships with their social environment.

Brand culture theory

This theory explains that value-based brands are intended to build long-term customer value. Success depends on the value that the brand delivers to customers. Brand culture theory offers a new model of branding. It suggests that a brand can operate much like a culture, in the anthropological sense of the word. According to brand culture theory, a brand is a pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms, whose messages are communicated to people through advertising, perpetuate and develop their knowledge and attitudes towards life (Storme, et al. 2019). This theory also states that consumers today are very concerned with supporting brands that agree with their personal values. People no longer just try to figure out which product is good. They

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now want to know which product is built by compensated workers using a sustainable process and by a corporation that does not also harm the environment. This is because people are hungry for meaning. People are using different symbols and meaning systems to construct their ever-evolving sense of self. Some of the meanings used come from brands. Therefore, a brand should not just produce products and services. One of the most important things a brand should produce today is meaning. This shows up in a multitude of brand experiences which today are replacing the old advertising campaign. This meaning must arise from a set of deeply held values that live at the core of the brand (Holt 2004).

A brand culture cannot be faked. Brand values must be real. Consumers are fed up and tired of advertising campaigns and slogans that are completely incongruent with how a brand operates. Building a brand culture usually requires an internal process to articulate the brand values in a way that can be fully embraced by the leadership and employees within the organization. Brand culture does not just involve the marketing department; it involves the entire organization. Companies can strategically use this theory as a foundation for their growth (Hatch and Schultz 2003).

Empirical Literature Review

The research by Tan, Ismail and Devinaga (2015) attempted to develop an empirical research model that would present a clearer understanding of successive relations among the dimensions of brand equity in the Malaysian fast-food industry. The findings specified that perceived quality (PQ), as well as brand awareness (BW), were important aspects to consider first when building a brand. Furthermore, it was found that brand image, brand trust, and brand familiarity play a vital role in understanding the relationships between PQ, BA, and attitudinal brand loyalty (ABL). This ABL was found to be a key variable in explaining the associations among other dimensions and total brand equity. Future research was suggested to discover the likelihood of a longitudinal study on repeated observations, as well as tests on diverse samples, to determine the workings of the measurement model. In this study, a CBBE dimension was not selected, which is brand loyalty. However, this study in question includes this dimension to have a broader assessment of brand equity in fast food businesses.

Singh conducted a study in India (Singh and Pattanayak 2016) on the relationship between brand equity factors. It aimed to evaluate the realism and applicability of the customer-based brand equity model, which was founded on Aaker's renowned conceptual foundation of brand equity. The research used structural equation modelling (SEM) to inspect the association that prevails between the dimensions of brand equity and brand equity itself. It explicitly measured the way in which customers' insights on the dimensions of brand equity influence the general evaluation of brand equity. Data for the study had been obtained from Indian youth who were customers at Domino's restaurants (Dhanbad, Jharkhand). The results revealed that brand association (BA) is a vital dimension that positively affected the perception of brand equity in fast food brands. However, the study implied that managers connected to the fast-food industry should preserve or reinforce their energy on the BA dimension.

A look at a study on the relationship between brand experience and consumer-based brand equity in grocerants conducted by (Jeon and Yoo 2021). To perform the practical analysis, a survey was carried out among 384 consumers of food services who had prior experience with seven different grocers located in South Korea. This study proposes a model that applies brand experience and customer-based brand equity to verify the leading variables that can increase brand loyalty in the fast-growing food service sector of 'grocers'. The research reveals how the brand experience affects perceived value and brand loyalty by involving elements such as brand awareness, brand association / image, and perceived quality. It underscores the importance of developing a

comprehensive approach that integrates sensory, emotional, intellectual, and behavioural factors to improve customer brand loyalty in the grocery industry.

Kathuria & Gill (2013) conducted research on purchase of branded commodity food products: empirical evidence from India. In the investigation, they chose to examine branded rice and branded sugar. A sample of 200 people living in various parts of an Indian city. People learn primarily about branded rice and branded sugar through friends, family, reference groups, in-store displays, and retailer recommendations. Respondents view qualities such as being free from impurities, pesticides, harmful chemicals, and having a good social reputation as the most important aspects of these products. The main factors affecting the purchase of branded rice and branded sugar include their taste, fragrance, absence of pesticides, and lack of adulteration.

Zubair et al. (Customer equity of Pakistani fast food restaurant: A study of attitudinal customer equity 2017) conducted a study where both the Transaction/Sales-based and the Attitudinal approaches were used to assess customer equity, using a sample size of 393 respondents. The study considered value equity, brand equity, and relationship equity as explanatory variables. The findings of Zubair et al. (Customer equity of Pakistani fast food restaurant: A study of attitudinal customer equity 2017) showed a strong connection between attitudinal customer equity and transactional equity. Furthermore, brand equity, value equity, and relationship equity exhibited a positive relationship with attitudinal customer equity.

Methods and Materials

The econometric model that was used for this study is the Multinomial Logistic Regression model. This model is best suited for the study because the dependent variable (y=brand equity) is multifaceted. This is the most appropriate model to understand the level of association that the independent variables (i.e., brand awareness, brand association, brand loyalty, perceived value and perceived quality) have with the dependent variable, which is brand equity that has been tested to determine which among them has the most significant effect on the outcome variable.

The multiple logistic regression model takes the following general form:

$log_e\left[\frac{\pi_j(x)}{\pi_j(x)}\right] = \beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi}$;

For $j = 1,2,3,\ldots.,(k-1)$ *and* $i = 1,2,3,\ldots.,n$;

$log_e[\pi_j(x_i)] = \frac{exp\,(\beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi})}{1 + \sum_{j=1}^{k-1} exp(\beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi})}$;

$logit\,(y=1) = \log(\frac{p\,(y=1)}{1-p(y=1)}) = \beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi}$;

$logit\,(y=2) = \log(\frac{p\,(y=2)}{1-p(y=2)}) = \beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi}$;

$logit\,(y=3) = \log(\frac{p\,(y=3)}{1-p(y=3)}) = \beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi}$;

$logit\,(y=4) = \log(\frac{p\,(y=4)}{1-p(y=4)}) = \beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi}$;

$logit\,(y=5) = \log(\frac{p\,(y=5)}{1-p(y=5)}) = \beta_{0j} + \beta_{1j}x_{1i} + \beta_{2j}x_{2i} + \ldots. + \beta_{qj}x_{qi}$;

For $i = 1,2,3,\ldots.,n$;

Where n is the total number of responses.

P: probability of the respondent choosing the level of importance and agreeing.

P(y=1): probability of choosing ‘not important’

P(y=2): probability of choosing ‘somewhat important’

P(y=3): probability of choosing ‘moderately important’

P(y=4): probability of choosing ‘important’

P(y=5): probability of choosing ‘very important’

β_0 = constant,

β_i = estimated logistic regression coefficients of the explanatory variables.

X_{iq} = explanatory variables represented by (i), measured by a 1-5 scale of 'not important' to 'very important'

$e^{\beta}$is the odds ratio = $\frac{p2/(1-p2)}{p1/(1-p1)}$. It shows the change that occurs in Odds because of the change in the independent variable by one unit.

The parameters of the multifaceted logistic regression model are estimated using the maximum possible method (maximum likelihood estimation).

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Table 1. Measurement of variables

Dependent Variable	Statements for measuring brand equity	Measurement	Category
Brand equity	User satisfaction (customer impression after service encounter.)	1-5 scale of 'not important' to 'very important'	Ordinal
	Efficiency and effectiveness of the services offered	1-5 scale of 'not important' to 'very important'	Ordinal
	Prices/margins of the food being offered	1-5 scale of 'not important' to 'very important'	Ordinal
	Customer perception of brand ethics.	1-5 scale of 'not important' to 'very important'	Ordinal

Independent variable	Statements for measuring variables	Independent variable	Statements for measuring variables
Brand awareness	User satisfaction (customer impression after service encounter.)	**Perceived value**	When the benefits of the service outweigh the cost,
	Efficiency and effectiveness of the services offered		When the value of the food exceeds expectations
	Prices/margins of the food being offered		When the price of the food conveys good value
Perceived quality	High food quality	**Brand loyalty**	I am satisfied with the fast food I eat
	Reliable Food Safety Standard		I trust every fast food I eat
	Professional customer service quality		I usually recommend fast foods I eat to others
Brand association	The level of interaction between the customer and the restaurant personnel		
	Value-for-money products in the fast-food business (i.e. able to meet consumers' needs)		
	The fast-food business leaving you with a positive impression (thoughts, feelings, perceptions, images, experiences, beliefs, attitudes, and so on)		

Table 1 above shows the variables used in this study and the corresponding statements. All variables are measured on a 1-5 scale from 'not important' to 'very important' and are categorised as ordinal. All the statements under brand equity capture the overall utility that the consumer associates with the use and consumption of the brand, including associations expressing both functional and symbolic attributes. The statements that fall within brand awareness are in line with recalling, recognition, and being aware of a brand. As for brand association, the statements can be anything that connects the customer to the brand. Lastly but not the least, perceived value statements capture the difference between the prospective customer's evaluation of all the benefits and costs of an offering and the perceived alternatives. The statements under perceived quality capture the consumers' judgment of the superiority or excellence of a brand.

Study Area/Target population

The research study area is Kitwe in the Copperbelt province of Zambia. Kitwe is the third largest city in terms of infrastructure development and the second largest city in terms of size and population in Zambia. With a population of 517,543, Kitwe is one of the most developed commercial and industrial areas in the nation, along with Ndola and Lusaka. It has a complex of mines at its north-western and western edges. Therefore, the study population is 501,360 urban residents of Kitwe.

Sampling frame

To determine the sample size, the Yamane (1967) sample size formula was used with a margin of error of 0.05: Thus, the sample size that was used is 400 respondents.

$$n = \frac{N}{1+N(e)^2}$$

$$= \frac{501{,}360}{1 + 501{,}360\ (0.05)^2} = 400 \text{ consumers}$$

Where:
n = the sample size for the study
N = population size
e = the margin of error

Demographic profile of the respondents

Demographic information at any level, micro- or macro-level, is imperative for every business to thrive. Table 1 below shows the demographic characteristics of the respondents. The table vividly shows that a total of 400 respondents participated in this study at a 100% response rate, which was skewed toward female participants, with a count of 202, representing a percentage of 50.5%. Of the 400 respondents, 198 of them were male, with a percentage of 49.5%. We can see that most of the respondents were between 16 and 25 years old, representing 80.5% of the respondents. We can also see from the table that most of the respondents were single, representing 86.75%. We can also see that most of the respondents were students, representing 66.5% of the respondents. Most of the respondents also showed that they knew more than five restaurants, which represents a total of 42.75% of the respondents. The highest level of education for most of the respondents was the O-level certificate with a total of 60.50% of the respondents.

Table 2. Profile of respondents

Characteristics	Frequency	%
Sex		
Male	198	49.5
Female	202	50.5
Total	400	100
Age		
16-20	159	39.75
21-25	163	40.75
26-30	22	5.50
31-35	21	5.25
36-40	14	3.50
41-45	17	4.25
46-50	4	1.00
Total	400	100
Marital status		
Single	347	86.75
Married	43	10.75
Divorced/separated	4	1.00
Widowed	3	0.75
Co-habiting	3	0.75

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Total	400	100
Occupation		
Student	266	66.5
Home maker	1	0.25
Self-employed	61	15.25
Salaried	72	18
Total	400	100
# of fast-food businesses known		
1 to 2	122	30.5
3 to 5	107	26.75
>5	171	42.75
Total	400	100
Highest level of education		
O-level Certificate	242	60.50
Diploma	15	3.75
Bachelor's Degree	116	29.00
Master's Degree	25	6.25
PhD	2	0.50
Total	400	100

Data Collection Procedure

The primary data collection method was used using a well-structured closed-form questionnaire personally administered by the researcher. Questionnaires with pre-implied answers measured by the level of importance/agreement on a 5-point scale from (1- Not important to 5- Very important) were used for data collection. Additionally, brand equity was measured by the level of importance on a 5-point scale, from (1- Not important to 5- Very important). A closed -ended questionnaire was constructed with reference to a book by (Aaker, 1991). The questionnaire was categorised into six sections with the first section capturing the socio-economic and demographic profiles of the consumers and the other sections captured all the variables that determined brand equity.

Data Processing and Analysis

Data analysis was performed to respond to the study of research questions. Data collected from the questionnaires administered was monitored to ensure that they were correctly completed. The data were then assembled, classified, and tabulated, making them ready for analysis. The STATA computer software was used to assist in the data analysis. Analysis of the quantitative approaches applied to the data. Descriptive statistics (in the form of means, percentages, and dispersion measures) and inferential analysis was acquired in data analysis. To determine the weight of the association of the relationship between the dependent and independent variables, multinomial logistic regression was used.

Results and Discussion

Table 3 below shows the summary of descriptive statistics for all the variables in question. Statistics are outlined in the form of mean, standard deviation, standard error, skewness, and kurtosis. Furthermore, many scholars state that if skewness and kurtosis have values between +2 and -2, one can accept the normal distribution (George and Mallery, 2010; Trochim and Donnely, 2006; Field, 2009; Gravetter and Wallnow, 2012).

Table 3. Descriptive statistics of variables

Variable	Observation	Mean	Standard Dev	Skewness	Kurtosis
Brand awareness	400	3.573141	1.115712	-.4748778	2.046587
Brand association	400	3.623501	1.141964	-.4493684	2.019623
Brand loyalty	400	3.423571	1.134565	-.3340231	2.013013
Perceived value	400	3.486811	1.074718	-.2250372	1.893092
Perceived quality	400	3.788969	1.248602	-.6159242	1.930288
Brand equity	400	3.667266	1.095275	-.4678166	1.818988

Brand awareness

Concerning brand awareness for CBBE, the mean was found to be 3.573141, the standard deviation 1.115712, the skewness -.4748778, and the Kurtosis 2.046587. The skewness for this variable is within the range +/- 2 showing no deviation from normality and kurtosis was not within this acceptable normal range, indicating that the data was slightly peaked showing a slight deviation from normality (George and Mallery, 2010; Trochim and Donnely, 2006; Field, 2009; Gravetter and Wallnow, 2012).

Brand association

Concerning Brand association, the mean was found to be 3.623501, the standard deviation 1.141964, the skewness -.4493684, and the Kurtosis 2.019623. The skewness for this variable is within the range +/- 2 showing no deviation from normality and the kurtosis was not within this acceptable normal range indicating that the data was slightly peaked showing a slight deviation from normality (George and Mallery, 2010; Trochim and Donnely, 2006; Field, 2009; Gravetter and Wallnow, 2012).

Perceived value

Concerning the perceived value, the mean was found to be 3.486811, the standard deviation 1.074718, the skewness -.2250372, and the kurtosis 1.893092. Skewness and kurtosis for this variable are within the range +/- 2 showing no deviation from normality (George and Mallery, 2010; Trochim and Donnely, 2006; Field, 2009; Gravetter and Wallnow, 2012).

Perceived quality

Concerning perceived quality, the mean was found to be 3.788969, the standard deviation 1.248602, the skewness -.6159242, and the kurtosis 1.930288. Skewness and kurtosis for this variable are within the range +/- 2 showing no deviation from normality (George and Mallery, 2010; Trochim and Donnely, 2006; Field, 2009; Gravetter and Wallnow, 2012).

Brand loyalty

Concerning brand loyalty, the mean was found to be 3.423571, the standard deviation 1.134565, the skewness -.3340231, and the Kurtosis 2.013013. The skewness for this variable is within the range +/- 2 showing no deviation from normality and kurtosis was not within this acceptable normal range, indicating that the data was slightly peaked showing a slight deviation from normality (George and Mallery, 2010; Trochim and Donnely, 2006; Field, 2009; Gravetter and Wallnow, 2012).

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Table 4. Multinomial logistic regression

Iteration 0: log likelihood = -795.50903; Iteration 1: log likelihood = -740.28749; Iteration 2: log likelihood = -694.49474; Iteration 3: log likelihood = -686.99541; Iteration 4: log likelihood = -684.2265; Iteration 5: log likelihood = -683.09629; Iteration 6: log likelihood = -682.6658; Iteration 7: log likelihood = -682.58024; Iteration 8: log likelihood = -682.56026; Iteration 9: log likelihood = -682.55541; Iteration 10: log likelihood = -682.55443; Iteration 11: log likelihood = -682.55425; Iteration 12: log likelihood = -682.55423.

Multinomial logistic regression — Number of obs = 400
LR chi2(60) = 225.91
Prob > chi2 = 0.0000
Log likelihood = -682.55423 — Pseudo R2 = 0.1420

BE	Coefficient	Std. err.	z	P>|z|
1				
Baw	.8689635	.9964226	0.87	0.383
BA (The level of interaction between the customer and the restaurant personnel)*	-5.638206	2.053733	-2.75	0.006
PV	-.7339224	1.985192	-0.37	0.712
BL (I am satisfied with the fast food I eat)*	-3.514275	1.400405	-2.51	0.012
PQ	-.8335022	1.871232	-0.45	0.656
cons	28.43783	7.493887	3.79	0.000
1.33				
Baw	48.09338	5550.8	0.01	0.993
BA (Value-for-money products in the fast-food business (i.e. able to meet consumers' needs)*	11.12328	1836.854	0.01	0.045
PV	-1.648266	3578.867	-0.00	1.000
BL	-16.60679	2025.602	-0.01	0.993
PQ	-71.95284	3877.149	-0.02	0.985
cons	1.636946	11736.33	0.00	1.000
1.67				
Baw	-11.72943	5076.965	-0.00	0.998
BA (The fast-food business leaving you with a positive impression (thoughts, feelings, perceptions, images, experiences, beliefs, attitudes, and so on)*	10.24938	2294.664	0.00	0.046
PV	-18.50802	3269.723	-0.01	0.995
BL	-12.83923	4969.138	-0.00	0.998
PQ	-18.10319	3644.333	-0.00	0.996
_cons	106.0032	10977.44	0.01	0.992
2				
Baw	-.3813333	.6864189	-0.56	0.579
BA (The level of interaction between the customer and the restaurant personnel)*	-1.695936	.8064139	-2.10	0.035
PV	.2829947	1.048634	0.27	0.787
BL	-.9401261	.6787249	-1.39	0.166
PQ	-1.947964	1.029492	-1.89	0.058
cons	16.2379	4.103349	3.96	0.000
2.33				
Baw	-.3701413	.6957621	-0.53	0.595
BA (Value-for-money products in the fast-food business (i.e. able to meet consumers' needs)*	-2.709959	1.028672	-2.63	0.008
PV	-.4490257	1.026777	-0.44	0.662
BL (I trust every fast food I eat)*	-2.160283	.8493768	-2.54	0.011
PQ	-2.045326	1.054544	-1.94	0.052
cons	25.41944	4.516018	5.63	0.000
2.67				
Baw	-.1891497	.5706012	-0.33	0.740

BA (The fast-food business leaving you with a positive impression (thoughts, feelings, perceptions, images, experiences, beliefs, attitudes, and so on)*	-2.265153	.6676754	-3.39	0.001
PV	1.594125	1.060628	1.50	0.133
BL	-1.308396	-.5783552	-2.26	0.024
PQ (Professional customer service quality)*	-2.938979	.9409933	-3.12	0.002
_cons	18.06554	3.506462	5.15	0.000
3				
BAw (fast food brand recognition through familiarity and liking)*	-.7504027	.3234885	-2.32	0.020
BA (The level of interaction between the customer and the restaurant personnel)*	-1.563193	.4086364	-3.83	0.000
PV	.1130963	.4472477	0.25	0.800
BL	-.3604486	.2898492	-1.24	0.214
PQ (High food quality)*	-1.597844	.5180138	-3.08	0.002
_cons	16.53629	2.559277	6.46	0.000
3.33				
Baw	.3822357	.4460764	0.86	0.392
BA (Value-for-money products in the fast-food business (i.e. able to meet consumers' needs)*	-1.555022	.4971926	-3.13	0.002
PV (When the value of the food exceeds expectations)*	-1.377368	.4391346	-3.14	0.002
BL (I trust every fast food I eat)*	-.7727856	.3533373	-2.19	0.029
PQ (Reliable food safety standard)*	-.7526046	.6068456	-1.24	0.215
_cons	14.68651	2.993208	4.91	0.000
3.67				
Baw	.2961577	.3296636	0.90	0.369
BA (The fast-food business leaving you with a positive impression (thoughts, feelings, perceptions, images, experiences, beliefs, attitudes, and so on)*	-1.30955	.3958289	-3.31	0.001
PV	-.8157843	.3435348	-2.37	0.18
BL (I am satisfied with the fast food I eat)*	-.4956287	.2487497	-1.99	0.046
PQ (Professional customer service quality)*	-1.089543	.4820093	-2.26	0.024
_cons	13.48418	2.511646	5.37	0.000
4				
Baw	-.2645641	.2457717	-1.08	0.282
BA (The level of interaction between the customer and the restaurant personnel)*	-.6859797	.348158	-1.97	0.049
PV	-.1562438	.29021	-0.54	0.590
BL	-.0932423	.1886331	-0.49	0.621
PQ (High food quality)*	-.9892692	.4292024	-2.30	0.021
_cons	9.45079	2.264629	4.17	0.000
4.33				
Baw	.0983962	.2736419	0.36	0.719
BA	-.5287502	.3867599	-1.37	0.172
PV	-.222952	.3047975	-0.73	0.044
BL (I trust every fast food I eat)*	-.6266506	.2066317	-3.03	0.002
PQ (Reliable food safety standard)*	-.6433178	.4776663	-1.35	0.178
_cons	7.327646	2.534801	2.89	0.004
4.67				
Baw	-.0971037	.2598024	-0.37	0.709
BA (The fast-food business leaving you with a positive impression (thoughts, feelings, perceptions, images, experiences, beliefs, attitudes, and so on)*	-.7233087	.3635895	-1.99	0.047
PV	-.1605745	.2978363	-0.54	0.590
BL	-.302918	.1938299	-1.56	0.118
PQ	-.1087401	.4985069	-0.22	0.827
_cons	5.352323	2.561283	2.09	0.037
5	(base outcome)			

**Note: 2 observations completely determined. Standard errors questionable.*Significant at 5%.*

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In the iteration log output which indicates how quickly the model converged. It is clear that the first iteration of zero has a log likelihood of -795.50903. This is a null model which does not include any predictors in it. The iteration model has a total of 12 iterations that included predictors. From the iteration of 1 to 12, we can see that the difference between the successive iterations is very small. This simply means that the model converged and iterating stopped and displayed the results at iteration 12.

The likelihood ratio chi-square of 225.91 with a probability of p-value < 0.0000 simply gives us an indication that the model fits significantly better than the null model with no predictors. This also serves as a test to find out whether all the coefficients in the model are different than zero. The p-value is less than 5% level of significance making the whole model a good fit. The output has five parts where all the categories of the outcome variable, brand equity are labeled.

Apart from one statement *(fast food brand recognition through familiarity and liking)* under *moderately important* scale of measurement is significant (p-value of 0.020) with a negative effect (-.7504027) on brand equity, the rest of the categories under the brand awareness variable are not statistically significant at the 5% significant level. This is so because the p-values are all greater than 5%. Contrary to our expectations, the variable has little bearing on whether or not brand awareness will determine or affect brand equity in fast food businesses. We can therefore, conclude that brand awareness is less likely to affect BE at the level of *not important, somewhat important, moderately important,* and *important* compared to the level of *very important* which is the base.

The first category (*the level of interaction between the customer and the restaurant personnel*) under the brand association variable is statistically significant at the 5% significant level. This is so because the p-value (0.006) is not in excess of 5%. The second *(value-for-money products in the fast-food business (i.e. able to meet consumers' needs)* and third categories *(the fast-food business leaving you with a positive impression (thoughts, feelings, perceptions, images, experiences, beliefs, attitudes, and so on)* are also significant determinants of brand equity with coefficients of 48.09338 and 10.24938 respectively. In line with our expectations, the three categories of the variable have a bearing on brand equity in fast food businesses. However, judging by the positive coefficients at the level of *not important*, the categories are more likely to affect brand equity. We can therefore, conclude that brand association is more likely to affect BE at all the other levels other than that of *not important*, compared to the level of *very important* which is the base.

Most of the categories under the perceived value variable are not statistically significant at the 5% significant level. This is so because the p-values are greater than 5%. However, the two statements that are statistically significant have negative coefficients. The first statement *(when the value of the food exceeds expectations)* has coefficients of -1.377368, and -.222952 for scales of *moderately important* and *important*. The other statement, *(when the price of the food conveys good value)* with a negative coefficient of -.8157843,is significant at the scale of *moderately important*. Contrary to our expectations, the variable has little bearing on whether or not brand awareness will determine or affect brand equity in fast food businesses. We can therefore, conclude that perceived value is less likely to affect BE at the level of *not important, somewhat important, moderately important*, and *important* compared to the level of *very important* which is the base.

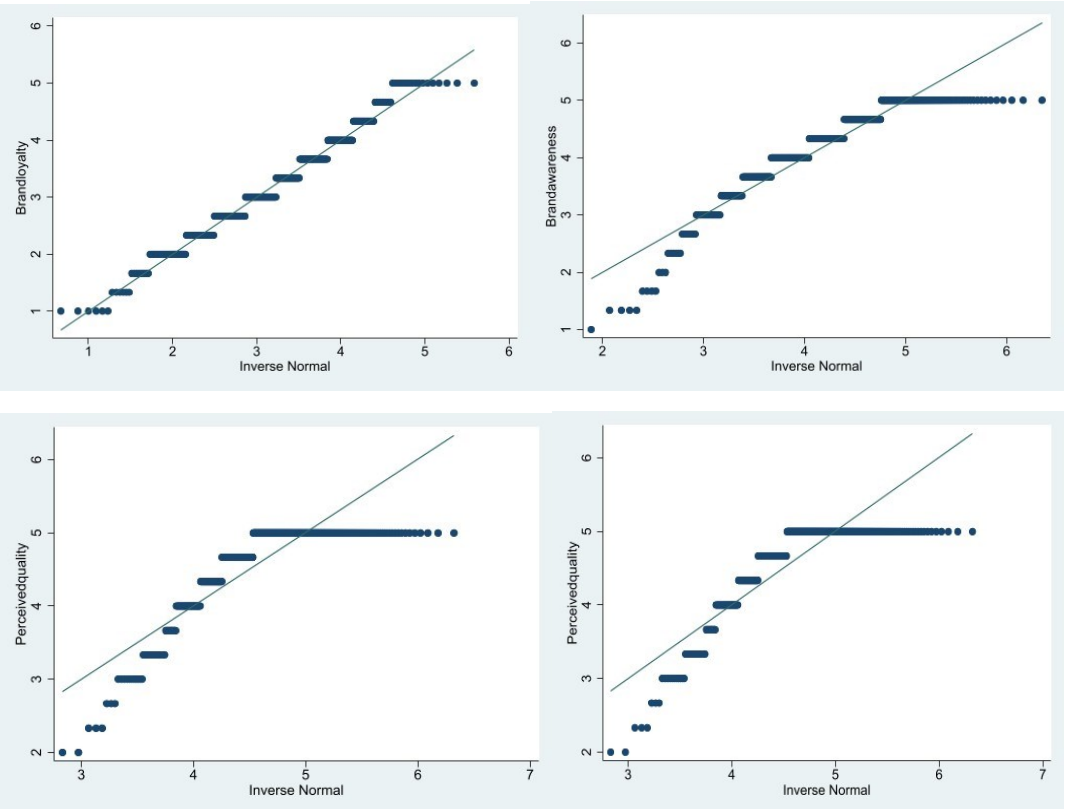
The first category *(I trust every fast food I eat)* under the brand loyalty variable is statistically significant at the 5% significant level which falls in the scale of *not important* and *important*. This is so because the p-values of (0.021/0.002) are not in excess of 5%. The second category *(I am satisfied with the fast food I eat)* is not significant at any scale of measurement whereas the third category *(I usually recommend fast foods I eat to others)* with p-values of 0.002 and 0.046 at scales of important and moderately important respectively

are significant determinants of brand equity with coefficients of -2.938979 and -.4956287 respectively. Contrary to our expectations, the two categories of the variable have a bearing on how brand loyalty determines or affects brand equity in fast food businesses. Judging by the positive coefficients at the level of *not important*, the two significant categories are also more likely to affect brand equity. We can therefore, conclude that brand loyalty is more likely to affect BE at all the other levels other than that of *not important*, compared to the level of *very important* which is the base.

The first category *(high food quality)* under the perceived quality variable is statistically significant at the 5% significant level which falls in the scale of *moderately important* and *important*. This is so because the p-values of (0.021/0.002) are not in excess of 5%. The second *(reliable food safety standard)* category is not significant at any scale of measurement whereas the third category *(professional customer service quality)* with p-values of 0.002 and 0.024 at scales of *somewhat important* and *moderately important* respectively are significant determinants of brand equity with coefficients of -2.938979 and -1.089543 respectively. Contrary to our expectations, the two categories of the variable have no bearing on whether or not brand association determines or affects brand equity in fast food businesses. However, judging by the negative coefficients at the level of *not important*, the two significant categories are also less likely to have a positive affect brand equity. We can therefore, conclude that perceived quality is more likely to affect BE at all the other levels other than that of *not important*, compared to the level of *very important* which is the base.

Checking Normality of Residuals

Sometimes pictorial graphs convey a great deal of information. The pnorm command graphs a standardized normal probability (P-P) whereas qnorm plots the quantiles of a variable against the quantiles of a normal distribution. pnorm is sensitive to non-normality in the middle range of data and qnorm is sensitive to non-normality near the tails. As seen in the figures below, the results show a slight deviation from normal at the upper tail, the middle range of data, and lower tail.



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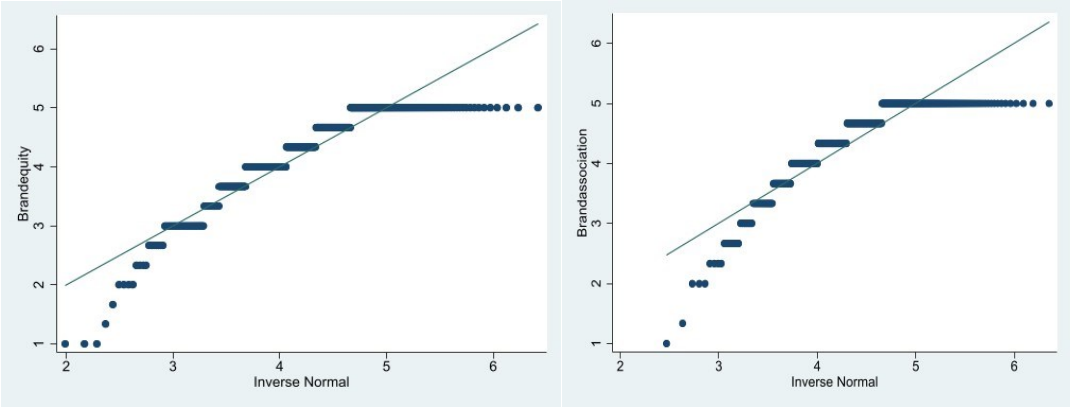

Figure 1. Normality of residuals

Discussion

The study found that brand awareness in general did not have a significant effect on Brand equity in the fast-food businesses in Kitwe. However, one statement *(fast food brand recognition through familiarity and liking)* had a significant effect (p-value < 0.05) and negative coefficient (-.7504027) on brand equity at the scale of *moderately important*. This was somewhat an unexpected outcome that implies that the more the customers are aware of the brand the less the fast-food business benefits from an increase in brand awareness in terms of brand equity from the customer's perspective and business owner's perspective at the base outcome scale of measurement. Also contrary to some research findings that found brand awareness to be significant, that the most imperative and critical dimension of brand equity is brand awareness (Macdonald and Sharp, 2000). Thus, from the customer's perspective, an increase in brand awareness creates an uplifting mentality towards the brand, and an increase in purchasing intent (Erdem et al., 2006). This in return is beneficial from the business owner's perspective as an increase in customer purchasing intent would increase sales.

When it comes to brand association, most of the statements for its measurement had a significant and high positive effect on brand equity. This made us conclude that brand association had high likelihood of affecting BE in fast food businesses in Kitwe district. Brand association has been described as anything that connects the customer to the brand and enables them to create a mental relationship with the brand (Fournier 1994). This good contribution that brand association can make to the overall brand equity was found to be significant in this study may be due to the nature of the fast-food businesses. As in many instances, customers of fast-food businesses mainly look forward to a quick and easily accessible meal at a good quality and create some sort of a relationship with the brand.

Concerning perceived value, the study found that perceived value did not have a significant effect (i.e. p-value > 0.05) on the overall brand equity of the fast-food businesses in Kitwe. All the statements pertaining to perceived value had negative coefficients. Perceived value is described as customer's perceptions of a product or service compared to the price they have already paid (Anderson et al., 1994). This description is in line with the only significant statement which is *(when the price of the food conveys good value)*. Perceived value in general was found to be an insignificant determinant of fast food businesses, mainly because their food often contains high quantities of unhealthy ingredients, including fat, salt, and sugar, which are associated with weight gain and a variety of negative health outcomes ((Jaworowska, Blackham and Stevenson 2012); (Duffey, et al. 2009); (Jaworowska, Blackham and Long, Nutritional composition of takeaway food in the UK 2014)).

Various statements under perceived value in this study were found to have a significant and mix of positive/negative effect on the overall brand equity of the fast-food businesses which implied that the higher the perceived value the higher the overall utility associated with brand equity in a fast-food business. This is in line with the findings by Meaning that the customers of fast-food businesses in Kitwe regard their view of the superiority or excellency of the brand of fast food business as an important attribute when accessing the overall brand equity.

Conclusions

In this study, the major determinants of brand equity have been identified in the fast-food business in Zambia. The outcome of the statistical analysis supports only three of the hypotheses and indicate that the three determinants or attributes that are tested are positively related to brand equity.

Because of the online distribution of the questionnaire, the study was only limited to respondents with internet access, this consisted mostly of youths. Therefore, this limited the target population. Also, because of it being online, it was easy for the respondent to ignore and not respond as there was no physical interaction to convince them to fill in the questionnaire. The research outcomes also show that brand awareness has an insignificant effect on brand equity. This explains that lower brand equity might be due to lower awareness of the company's logo, design, brand, products, and any other features. Facing the keen competition and challenging economic environment, the profit margin will reduce. Brand equity becomes one of the key competitive advantages that create tangible value for the sustainability and continued growth of the fast-food industry in Zambia.

The research also showed that brand association and perceived value did not have a significant effect on brand equity. This is probably due to the nature of fast-food businesses in Kitwe district. Most customers of fast-food businesses do not form a strong association with the brand because they are mainly looking for a fast and easily accessible meal to eat and after that, they go. When it comes to perceived value, most fast foods are considered unhealthy and thus this can cause the perceived value to be less.

The results of this research will enable practitioners to carry out effective customer-centered strategies and come up with a framework to integrate brand equity with the stakeholders' relationship. The research model can even be extended to test other determinants such as customer satisfaction, brand image, on brand equity, and the impact of brand equity on consumer purchase intentions. Despite this research being conducted only in the fast-food business in Zambia, a future extension of the study could be applied, and the research model can be extended to the other industries in Zambia.

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