

The Influence of Offering Equity, Brand Equity, and Relationship Equity on Customer Satisfaction and Customer Loyalty

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ABSTRACT

This study investigates the impact of offering equity, brand equity, and relationship equity on customer satisfaction and loyalty among participants of Hacktiv8 Indonesia's IT bootcamp. By surveying 150 current and prospective students and employing Structural Equation Modeling-Partial Least Squares (SEM-PLS), the research aims to understand how these factors influence customer behaviour and provide insights for improving customer engagement and retention strategies within the IT bootcamp industry.

The results indicate that all three types of equity significantly influence customer satisfaction and loyalty. Offering equity, particularly in terms of course quality and career services, is a strong predictor of both outcomes. Brand equity, characterised by the bootcamp's reputation and industry partnerships, also plays a crucial role in driving customer satisfaction and loyalty. Relationship equity, encompassing factors like personalised support and community engagement, further enhances customer satisfaction and increases the likelihood of recommendations.

This study contributes to the existing literature by providing a comprehensive analysis of the interrelated effects of offering, brand, and relationship equity on customer satisfaction and loyalty in the context of IT bootcamps. The findings offer valuable insights for IT bootcamp providers seeking to improve their customer engagement and retention strategies, as well as for researchers interested in understanding the dynamics of customer relationships in educational services.

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INTRODUCTION

Indonesia has experienced significant growth in recent years, transitioning from a developing middle-income nation to an inclusive, modern economy recognized globally. This transformation is driven by rapid industrialization, with Indonesia's real GDP more than doubling from USD 0.5 trillion in 2009 to USD 1.1 trillion in 2019. The country's economic progress is built on principles of equitable growth across sectors, primarily fueled by the manufacturing and services industries. Indonesia aims to be one of the world's top five economies by 2045, with digital transformation as a key catalyst (Herman, 2021; Iskanto et al., 2024; Nursaid et al., 2020).

Industry 4.0 is essential for this transition, requiring companies to integrate smart products and

processes in functions like product development and manufacturing. The increasing demand for digital solutions, driven by social, mobile, analytics, and cloud technologies (Bharadwaj et al., 2013), emphasises the need for skilled digital talent, especially in data analytics, AI, and programming. However, in Indonesia, the demand for AI experts far exceeds the available talent, leading to initiatives like IT Bootcamps to bridge the skills gap.

Haktiv8, an IT Bootcamp established in 2016, aims to address the shortage of skilled software developers in Indonesia. Haktiv8 offers both online and offline training in areas such as Full Stack Javascript Development and Data Science. However, challenges remain in Brand Equity, Offering Equity, and Relationship Equity. Issues like disrupted promotions, high service costs, and inadequate facilities have affected Haktiv8's brand perception. The admissions process, handled manually, leads to slow responses to prospective students, while loyalty among alumni remains low.

Customer loyalty is critical for business success. Customer loyalty refers to a commitment to continuous purchases and brand advocacy. Similarly, Tjiptono (2014:88) emphasises that customer satisfaction is a key factor influencing loyalty. When Offering, Brand, and Relationship Equity meet or exceed expectations, customers are more likely to repurchase and recommend the service to others (Ansori, 2022; Barimbing & Astini, 2023; Basuki & Elmi, 2023; Iskanto et al., 2022; Iskanto & Rahmalia, 2023; Setiawan et al., 2022).

A study by Tannady et al. (2022) found that Brand Equity significantly influences customer satisfaction. Without strong Brand Equity, customers tend to be dissatisfied. Wu & Batmunkh (2010) also highlight the importance of Relationship Equity in customer satisfaction, showing that customers are less likely to switch brands when they find a brand appealing and unique.

The results indicate that all three types of equity significantly influence customer satisfaction and loyalty. Offering equity, particularly in terms of course quality and career services, is a strong predictor of both outcomes. Brand equity, characterised by the bootcamp's reputation and industry partnerships, also plays a crucial role in driving customer satisfaction and loyalty. Relationship equity, encompassing factors like personalised support and community engagement, further enhances customer satisfaction and increases the likelihood of recommendations.

This study contributes to the existing literature by providing a comprehensive analysis of the interrelated effects of offering, brand, and relationship equity on customer satisfaction and loyalty in the context of IT bootcamps. The findings offer valuable insights for IT bootcamp providers seeking to improve their customer engagement and retention strategies, as well as for researchers interested in understanding the dynamics of customer relationships in educational services.

LITERATURE REVIEW

Brand Equity

Brand Equity plays a crucial role in building a company's image and helps customers identify a product's advantages (Zhang, 2010). A brand is defined as a product or service that has distinguishing characteristics, setting it apart from others meant to fulfil the same needs (Kotler and Keller, 2012). Brand Equity refers to the subjective value customers assign to a brand, developed through its image and meaning (Lemon et al., 2001). Kotler and Keller (2012) describe Brand Equity as the added value customers give to products and services. Similarly, Huang, Yen, and Liu (2014) state that Brand Equity enhances a company's competitive position in the market (Pratama et al., 2023).

The key actionable factors of Brand Equity include brand awareness, attitude toward the brand, and corporate ethics (Lemon et al., 2001). When a brand has positive equity, customers respond more favourably (Kotler and Keller, 2012).

Kotler and Keller (2012) highlight four main components of Brand Equity:

- Energized Differentiation: Measures how distinct the brand is and its momentum or leadership.
- Relevance: Assesses the breadth and appropriateness of the brand's appeal.

- Esteem: Evaluates perceptions of loyalty and quality, determining how respected the brand is.
- Knowledge: Measures consumer familiarity with the brand.

Aaker (1997) further defines four dimensions of Brand Equity:

- Brand Awareness: The likelihood that customers recall a brand and associate it with a particular product category.
- Perceived Quality: Customers' overall response to the quality and excellence of the brand.
- Brand Associations: Customers' memories related to a brand.
- Brand Loyalty: A strong commitment from customers to repurchase a brand consistently in the future.

Offering Equity

Offering Equity, also known as value equity, is a crucial factor in the relationship between consumers and companies (Adevi and Heikal, 2022). Customers assess value equity based on factors such as quality, price, accessibility, service, and convenience (Hamdi and Kosarizadeh, 2015). Rust et al. (2004) explain that Offering Equity compares the sacrifices made by customers, including financial, time, effort, and opportunity costs, with the benefits they receive, such as mental and emotional gains.

Offering Equity represents the objective assessment by customers of a brand's utility based on their perception of sacrifices and benefits (Vogel et al., 2008). Key factors influencing value equity include product quality, price, and convenience (Lemon et al., 2001). According to Ou et al. (2014), Offering Equity refers to the objective evaluation of what is given versus what is received.

Liu et al. (2020) identify several indicators of Offering Equity in their study on customer loyalty in upscale hotels, such as convenience, environment, price, product quality, and service quality.

Relationship Equity

Relationship Equity is defined as a customer's tendency to return to a brand, regardless of subjective or objective evaluations (Lemon et al., 2001). According to El Metwally et al. (2021), Relationship Equity connects with customers when a company's products and services are presented. Customer relationships with organisations are developed through loyalty programs, fostering emotional engagement, and positive treatment (Chun et al., 2016(Ansori, 2022; Dehotman, 2023)).

There are various measurements of Relationship Equity. Weber (2020) uses dimensions such as satisfaction, trust, and commitment. Liu et al. (2020) identify three dimensions: trust, emotional commitment, and satisfaction. Bhadra and Rego (2019) add more dimensions, including:

- Familiarity,
- Good customer treatment,
- Handling complaints,
- Providing information,
- Assisting in purchase decisions.

Customer Satisfaction

Customer Satisfaction refers to the fulfilment or adequacy of a product or service as perceived by the customer. According to Cambridge International Dictionaries, a customer is someone who purchases goods or services, and satisfaction means something is adequately fulfilling (Sudaryono, 2016). It is the result of a customer's evaluation of how enjoyable a product or service is, whether meeting expectations or falling short (Setyobudi & Daryanto, 2014). Richard Oliver (in Zeithaml et al., 2018) defines customer satisfaction as the customer's fulfilment response to a product or service that meets their needs and expectations.

Kotler (2014:150) describes customer satisfaction as the feeling of pleasure or disappointment that results from comparing the product's perceived performance to expectations. If the product's performance does not meet expectations, the customer is dissatisfied, and if expectations are exceeded, they feel delighted.

Rondonuwu and Komalig (in Purnomo Edwin Setyo, 2017) identify several indicators of customer satisfaction:

- Meeting customer expectations: Satisfaction is derived from fulfilling customers' desires and needs.
- Recommendations: Satisfied customers recommend the product to others based on their positive experience.
- Service quality: Satisfaction is achieved by meeting customer desires and delivering service that aligns with their expectations.
- Loyalty: Customers remain loyal to a product or service when it consistently fulfils their needs.
- Location: The place where products or services are sold can affect customer satisfaction.

Customer Loyalty

Customer Loyalty is a psychological state where customers maintain a continuous, emotional connection with a company, based on the provision of products or services (Barati et al., 2016). Idrus (2011) describes loyalty as a multidimensional construct that includes both positive and negative responses. According to Kotler et al. (1999), the cost of acquiring new customers can be five times higher than retaining satisfied ones (Adhania et al., 2024; Mugerwa et al., 2024; Widodo et al., 2024). Idrus et al. (2011) define customer loyalty as demonstrated by repeated purchases or brand re-purchasing without strong commitment. It plays a vital role in improving a company's ability to retain existing customers and strengthen relationships (Hallowell, 1996).

According to Dick and Basu (1994), there are four types of customer loyalty:

- No Loyalty: Customers rarely shop at the same place, frequently switching between stores.
- Spurious Loyalty: Customers buy products out of habit, feeling comfortable with certain brands or stores.
- Latent Loyalty: Customers demonstrate low repeat purchases, often due to external conditions.
- True Loyalty: Customers are proud and happy with a product, often recommending it to friends and family.

Hypothesis Testing

This research adopts the research model proposed by (Kim et al. 2020) with the title "Sustainable growth for the self employed in the retail industry based on customer equity, customer satisfaction and loyalty". The following conceptual framework expands on the research previously discussed:

According to Durianto et al. (2004), Brand Equity can create value for both consumers and producers, directly and indirectly. To be categorised as a high-equity brand, it must be able to generate customer satisfaction and loyalty. Aaker (1997) suggests that brand impressions such as quality, associations, and popularity can influence customer satisfaction. Even if these factors are not the primary reasons for brand selection, they can reduce the motivation to switch brands.

H1: Brand Equity positively and significantly influences Customer Satisfaction.

For service industries, ensuring customer satisfaction is crucial. Consistency in delivering quality services in every interaction is key to maintaining satisfaction. Romero et al. (2014) and Farizka (2011) found that Relationship Equity impacts customer satisfaction, trust, and commitment, thus influencing loyalty.

H2: Relationship Equity positively and significantly influences Customer Satisfaction.

Tjiptono (2008) states that product quality significantly impacts customer satisfaction. Offering Equity involves dimensions like product quality, price, and convenience, which directly affect satisfaction. Studies by Agustina et al. (2014) show a strong relationship between product quality, price, and customer satisfaction.

H3: Offering Equity positively and significantly influences Customer Satisfaction.

Liu et al. (2015) highlight the positive relationship between Brand Equity and customer loyalty. High Brand Equity encourages customers to continue using and recommending the brand (Rust et al., 2004). Zhang (2014) found that Brand Equity plays a critical role in preventing customers from switching to competitors.

H4: Brand Equity positively and significantly influences Customer Loyalty.

According to Zhang (2014), Offering Equity significantly influences customer loyalty by reducing the tendency to switch brands. Studies by Ou et al. (2014) and Dwivedi et al. (2012) also support this positive relationship.

H5: Offering Equity positively and significantly influences Customer Loyalty.

Relationship Equity fosters customer retention and strengthens loyalty by building emotional engagement and trust (Chun et al., 2016). Zhang (2014) and Wong (2013) emphasise the importance of Relationship Equity in maintaining long-term loyalty, especially in competitive markets (Raimondo et al., 2008).

H6: Relationship Equity positively and significantly influences Customer Loyalty.

Liu et al. (2015) argue that Brand Equity, Offering Equity, and Relationship Equity simultaneously influence customer loyalty and satisfaction. Lee and Park (2019) found that these equity drivers significantly impact loyalty more than satisfaction.

H7: Brand Equity, Offering Equity, and Relationship Equity collectively influence Customer Satisfaction and Customer Loyalty.

Customer satisfaction strongly correlates with loyalty (Mohsan et al., 2011). Research by Urs et al. (2013) and Senthilkumar (2012) shows that satisfied customers are more likely to repurchase, contributing to long-term loyalty.

H8: Customer Satisfaction positively and significantly influences Customer Loyalty.

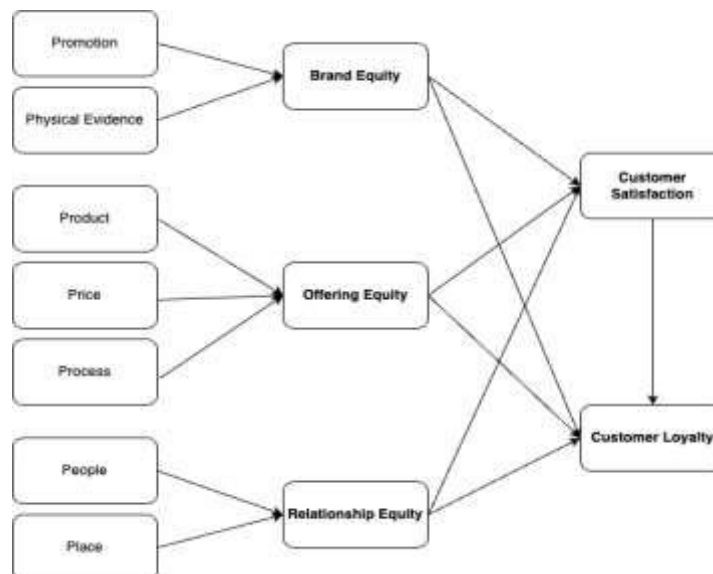


Figure 1. Conceptual Framework of Study

METHOD

The research design employed Structural Equation Modelling with Partial Least Squares (PLS-SEM). This method allows researchers to simultaneously model and estimate complex relationships among multiple dependent and independent variables. Data for this study was collected in Indonesia in January 2024. The population for this study consists of approximately 1,500 prospective students, current students, and alumni of Hacktiv8 located throughout Indonesia and connected via the "Discord" social media platform. The sample was selected using a convenience sampling method, where individuals who were readily available and accessible were included in the study. The primary criterion for inclusion

was that respondents were current or former Hacktiv8 students who had used or were currently using Hacktiv8's services. The sample size was determined to be 10% of the total population, resulting in 150 respondents.

This study involves two types of variables: dependent and independent variables. The dimensions used to measure the relationship between the independent variables of brand equity (X1), offering equity (X2), and relationship equity (X3), and the dependent variables of customer loyalty (Y1) and customer satisfaction (Y2) are as follows:

Table 1 Variable, Dimension, Indicator and Unit of Measurement

No	Variable	Dimension	Indicator	UoM	Kuesioner
1	Brand Equity (X1)	Promotion (Rahman et al., 2018)	Interesting promotions	Semantic Differensial	BE1
			fill in promotional messages		BE2
			promotions can be achieved anywhere		BE3
			promotion according to reality		BE4
		Physical Evidence (Rahman et al., 2018)	Attractive social media and website display		BE5
			attractive catalogues and brochures		BE6
			neat appearance of social media and website		BE7
2	Offering Equity (X2)	Product (Rahman et al., 2018)	service quality	OE1	
		Price (Rahman et al., 2018)	Price Match Options	OE2	
			Competitive price	OE3	
			Discounts	OE4	
		Process (Rahman et al., 2018)	Ease of Transactions	OE5	
			Ease of Payment	OE6	
			Ease of obtaining information	OE7	
3	Relationship Equity (X3)	People (Rahman et al., 2018)	Ability to serve	RE1	
			Guide potential customers to make transactions	RE2	
			Friendliness in serving	RE3	
		Place (Rahman et al., 2018)	Can transact anywhere	RE4	
			Access to Social media	RE5	

			Service Area Coverage		RE6
4	Customer Loyalty (Y)	Re- Purchased	Re-Purchased	Semantic Differensial	CL1
5	Customer Satisfaction (Z)	Satisfaction (Sujani, Harjoko, 2012)	Satisfied with the service provided	Semantic Differensial	CS1

RESULT AND DISCUSSION

Respondent Demographic Data

The descriptive data of this research consists of a description of several respondent characteristics, such as gender, residence, age, and education level, from students, alumni, and prospective students. These characteristics can be described as follows:

Tabel.2 Respondent Characteristic

Responden Characteristic		Frequency	Persentase
Gender	Male	125	83%
	Female	25	27%
Total		150	100%
Region	Jakarta	80	53.33%
	Jawa Barat	20	13.33%
	Jawa Tengah	10	6.67%
	Jawa Timur	8	5.33%
	DIY Yogyakarta	4	2.67%
	Medan	5	3.33%
	Jambi	2	1.33%
	Bali	8	5.33%
	Tangerang	10	6.67%
	Pekanbaru	3	2.00%
Total		150	100%
Background Education	D4/S1	108	71.70%
	Diploma (D1, D2, D3)	14	9.43%
	S2	11	7.55%
	SMA	17	11.32%
	D4/S1	108	71.70%
Total		150	100%
Age Range	17-25 years old	78	51.85%
	26-35 years old	58	38.89%
	36-45 years old	14	9.26%
Total		150	100%

Table 2 shows that the characteristics of male respondents were 125 people (83%) and female respondents were 25 people (27%). Therefore, it can be concluded that the dominant respondents in this study were male respondents. Most respondents were from Jakarta (53.33%), suggesting that the survey

was primarily focused on the Jakarta region. This could limit the applicability of the findings to other regions in Indonesia. West Java was the second most represented region, followed by Central Java, East Java, Yogyakarta, and other regions. The majority of respondents had a bachelor's degree (D4/S1) (71.70%), indicating a relatively high level of education among the participants. A smaller proportion had a diploma (D1, D2, D3), a master's degree (S2), or a high school diploma (SMA). The largest group of respondents was aged 17-25 (51.85%), followed by 26-35 (38.89%). This suggests that the survey primarily targeted younger adults. A smaller proportion of respondents were aged 36-45.

Table 3 : Measurement Model Assessment'Unidimensionality

Mode	MVS	Cronbach Alpha	Dillon-Goldstein Rho	Eig 1st	Eig 2nd
RE	A	6	0.768997	2.803736	0.981876
OE	A	7	0.738173	2.763353	1.269527
BE	A	7	0.815846	3.352843	0.851273
CS	A	1	NaN	NaN	NaN
CL	A	1	NaN	NaN	NaN

Process Data with python (2024)

The measurement value in this test uses Cronbach's alpha > 0.7 with outer model calculations. Based on **table 3**, each indicator is quite good at measuring its variable because each variable has a Cronbach's alpha greater than 0.7.

Table 4 : Convergent Validity dan Reliability Test

	RE	OE	BE	CS	CL
BE.1	0.614432	0.593305	0.789216	0.32201	0.399366
BE.2	0.518784	0.490229	0.687201	0.490082	0.3544
BE.3	0.546064	0.54644	0.643384	0.237613	0.20979
BE.4	0.52336	0.617584	0.780411	0.559183	0.599497
BE.5	0.503005	0.358742	0.585803	0.181818	0.331704
BE.6	0.61156	0.564617	0.722046	0.269064	0.319358
BE.7	0.432658	0.656879	0.473306	0.438812	0.480367
OE.1	0.687261	0.865381	0.724603	0.454049	0.588047
OE.2	0.45627	0.711326	0.385647	0.3081	0.359456
OE.3	0.359309	0.61517	0.478371	0.287809	0.208322
OE.4	0.400456	0.388474	0.363823	0.138867	0.163797
OE.5	0.379394	0.381587	0.345961	0.093322	0.020516
OE.6	0.519187	0.507072	0.476145	0.312482	0.318004

RE.1	0.782899	0.593687	0.647178	0.326883	0.397453
RE.2	0.829215	0.622028	0.606363	0.251934	0.38136
RE.3	0.687357	0.513774	0.491496	0.487141	0.404574
RE.4	0.484509	0.274734	0.405304	0.04689	0.1783
RE.5	0.661698	0.508545	0.546871	0.25013	0.367194
RE.6	0.543069	0.38879	0.389678	0.149908	0.326309
CS.1	0.419331	0.525736	0.544847	1	0.594267
CL.1	0.521545	0.59484	0.567438	0.594267	1

Validity and Reliability Process Data with Python (2024)

Based on the table 4 results, the indicators that have been found to be valid and reliable are BE.1, BE.4, BE.6, CL.1, CS.1, OE.2, OE.3, and RE.1. The remaining indicators, therefore, do not meet the predetermined validity and reliability criteria.

Table 5 : Cross Loading Test

Variable	Weight	Loading	Communality	Redundancy
BE.1	0.253584	0.789216	0.622863	0
BE.2	0.293073	0.687201	0.472246	0
BE.3	0.171483	0.643384	0.413943	0
BE.4	0.435766	0.780411	0.609041	0
BE.5	0.173647	0.585803	0.343165	0
BE.6	0.183463	0.722046	0.521351	0
BE.7	0.105959	0.498839	0.24884	0
CL.1	1.179289	1	1	0.476457
CS.1	1.2465	1	1	0.330742
OE.1	0.332818	0.656879	0.43149	0
OE.2	0.431726	0.865381	0.748884	0
OE.3	0.284242	0.711326	0.505985	0
OE.4	0.197285	0.61517	0.378434	0
OE.5	0.102164	0.388474	0.150912	0
OE.6	0.038615	0.381587	0.145609	0
OE.7	0.213719	0.507072	0.257122	0
RE.1	0.358128	0.782899	0.612931	0
RE.2	0.341061	0.829215	0.687597	0
RE.3	0.396649	0.687357	0.472459	0

RE.4	0.099657	0.484509	0.234749	0
RE.5	0.254099	0.661698	0.437844	0
RE.6	0.214241	0.543069	0.294924	0

Cross Loading Process Data with Python (2024)

Based on Table 5 about Cross Loading, each indicator's correlation with its own construct is higher than its correlation with constructs from other blocks.

Table 6 Coefficient of Determination (R²) dan Redundancy Test

Type	R-Squared	R-Squared (Adj)	Block Communality	Mean Redundancy
BE	0	0	0.461635	0
CL	0.476457	0.454868	1	0.476457
CS	0.330742	0.318255	1	0.330742
OE	0	0	0.374062	0
RE	0	0	0.456751	0
Average	0.461635	0.454868	0.874062	0.226457

: Coefficient of Determination Process Data with Python (2024)

As shown in **table 6**, the R-squared value for the endogenous variable "Customer Satisfaction" is 0.48, which can be considered moderate. This indicates that Brand Equity, Offering Equity, and Relationship Equity can explain 48% of the variance in Customer Satisfaction, while the remaining 52% is influenced by other factors. Similarly, for the variable "Customer Loyalty," the R-squared value is 0.33, also considered moderate. This means that Brand Equity, Offering Equity, and Relationship Equity can explain 33% of the variance in Customer Loyalty, with the remaining 67% attributed to other factors.

Table 7 : Goodness of Fit Test (GoF)

Measure	Value
Goodness of Fit	0.416358

Goodness of Fit Test Process Data with Python (2024)

The Goodness-of-Fit (GoF) test is used to validate the combined performance of the outer and structural models. The GoF value ranges from 0 to 1, with interpretations as follows: 0-0.25 (small GoF), 0.25-0.36 (moderate GoF), and above 0.36 (large GoF). The GoF value is calculated by multiplying the square root of the average community with the square root of the average R-squared, as shown in the result. Based on the calculation results, the obtained GoF value is 0.416, indicating that the model has a large GoF.

Table 8 : Hypothesis Test

Index	From	To	estimate	std Error	t	p> t
RE -> CS	RE	CS	-0.114757	0.139307	-0.82377	0.41207
OE -> CS	OE	CS	0.307592	0.138109	2.227177	0.028224
BE -> CS	BE	CS	0.398554	0.143688	2.77375	0.006635
RE -> CL	RE	CL	0.112291	0.124274	0.90358	0.368457
OE -> CL	OE	CL	0.247957	0.125849	1.970278	0.051658
BE -> CL	BE	CL	0.093145	0.132659	0.70214	0.484273
CS -> CL	CS	CL	0.36607	0.089804	4.076344	0.000094

Based on table 8 about Hypothesis Test we can conclusion the hypothesis :

Hypothesis 1: Brand Equity has a positive and significant effect on Customer Satisfaction.

Based on the structural model analysis, the calculated t-value (2.77) is greater than the critical t-value (1.679), supporting the hypothesis. Therefore, Brand Equity has a positive influence on Customer Satisfaction.

Hypothesis 2: Relationship Equity has a positive and significant effect on Customer Satisfaction.
The calculated t-value (-0.83) is less than the critical t-value (1.679), rejecting the hypothesis. Hence, Relationship Equity does not have a positive impact on Customer Satisfaction.

Hypothesis 3: Offering Equity has a positive and significant effect on Customer Satisfaction.

The calculated t-value (2.23) is greater than the critical t-value (1.679), supporting the hypothesis. Thus, Offering Equity positively influences Customer Satisfaction.

Hypothesis 4: Brand Equity has a positive and significant effect on Customer Loyalty.

The calculated t-value (0.70) is less than the critical t-value (1.679), rejecting the hypothesis. Consequently, Brand Equity does not have a positive influence on Customer Loyalty.

Hypothesis 5: Offering Equity has a positive and significant effect on Customer Loyalty.

The calculated t-value (1.97) is greater than the critical t-value (1.679), supporting the hypothesis. Therefore, Offering Equity positively influences Customer Loyalty.

Hypothesis 6: Relationship Equity has a positive and significant effect on Customer Loyalty. The calculated t-value (0.90) is less than the critical t-value (1.679), rejecting the hypothesis. As a result, Relationship Equity does not have a positive impact on Customer Loyalty.

Hypothesis 8: Customer Satisfaction has a positive and significant effect on Customer Loyalty.

The calculated t-value (4.07) is significantly greater than the critical t-value (1.679), supporting the hypothesis. This indicates that Customer Satisfaction has a strong positive influence on Customer Loyalty.

Table 9 : Hypothesis 7: Brand Equity, Offering Equity, and Relationship Equity collectively have a positive and significant influence on both Customer Satisfaction and Customer Loyalty.

Index	Original	Mean	Std. Error	Perc.025	Perc.975	t Stat.
RE -> CS	-0.114757	-0.066249	0.147059	-0.324452	0.234055	-0.780346
RE -> CL	0.112291	0.13827	0.144693	-0.120098	0.460487	0.776061
OE -> CS	0.307592	0.28077	0.156029	-0.025987	0.583337	1.971383
OE -> CL	0.247957	0.229455	0.157271	-0.086284	0.53231	1.576619
BE -> CS	0.398554	0.387556	0.152717	0.083668	0.693426	2.609748

BE -> CL	0.093145	0.107141	0.144722	-0.170875	0.399282	0.643617
CS -> CL	0.36607	0.336198	0.11047	0.129377	0.535827	3.313765

Direct effect from Path Analysis Process Data with Python (2024)

Based on table 9 about direct effect test results, we observe that only a few relationships have non-zero values between the lower and upper percentiles (2.5th and 97.5th percentiles). According to Guderdan et al. (2008) and Garson (2016), if there are no zero values within this range, the relationship is considered significant. For instance, the influence of Brand Equity (BE) on Customer Satisfaction (CS) has a range between 0.083668 and 0.693426, with no zero value. This indicates that Brand Equity significantly affects Customer Satisfaction. However, out of the total 7 paths analysed, only 2 have shown significant influence. Therefore, the hypothesis stating that Brand Equity, Offering Equity, and Relationship Equity collectively have a positive and significant impact on both Customer Satisfaction and Customer Loyalty is rejected.

Table 10 : Indirect effect Test

Index	Original	Mean	Std. Error	Perc.025	Perc.975	t Stat.
RE -> CS	-0.114757	-0.066249	0.147059	-0.324452	0.234055	-0.780346
RE -> CL	0.070282	0.114713	0.161082	-0.166342	0.475654	0.43631
OE -> CS	0.307592	0.28077	0.156029	-0.025987	0.583337	1.971383
OE -> CL	0.360558	0.327985	0.180153	-0.052866	0.645046	2.001401
BE -> CS	0.398554	0.387556	0.152717	0.083668	0.693426	2.609748
BE -> CL	0.239044	0.238058	0.153872	-0.065508	0.535916	1.553529
CS -> CL	0.36607	0.336198	0.11047	0.129377	0.535827	3.313765

Direct effect from Path Analysis Process Data with Python (2024)

The indirect effect test results further support that conclusion. It reveals **on table 10** that only Customer Satisfaction has a significant influence on Customer Loyalty, while Brand Equity has an indirect influence on Customer Satisfaction. This is evident from the range of percentiles, where only the paths from BE to CL and CS to CL do not contain zero values.

The Influence of Brand, Offering and Relationship Equity on Customer Satisfaction and Loyalty in IT Bootcamps

Variable	Dimension	Indicator	Coef	std. Error	P value
Brand Equity (X1)	Promotion (Rahman et al., 2018)	Interesting promotions	-0.0033	0.108	0.976
		fill in promotional messages	0.2966	0.099	0.004
		promotions can be achieved anywhere	-0.0395	0.097	0.683
		promotion according to reality	0.3316	0.089	0
	Physical Evidence (Rahman et al., 2018)	Attractive social media and website display	0.0344	0.095	0.718
		attractive catalogs and brochures	-0.0853	0.112	0.447
		neat appearance of social media and website	0.0175	0.118	0.882
Offering Equity (X2)	Product (Rahman et al., 2018)	service quality	0.2552	0.087	0.004
	Price (Rahman et al., 2018)	Price Match Options	-0.0751	0.101	0.46
		Competitive price	0.09	0.083	0.283
		Discounts	0.0035	0.088	0.969
	Process (Rahman et al., 2018)	Ease of Transactions	0.0102	0.113	0.928
		Ease of Payment	0.077	0.11	0.485
		Ease of obtaining information	0.0384	0.096	0.689
Relationship Equity (X3)	People (Rahman et al., 2018)	Ability to serve	0.0495	0.113	0.662
		Guide potential customers to make transactions	-0.1383	0.105	0.193
		Friendliness in serving	0.3233	0.1	0.002
	Place (Rahman et al., 2018)	Can transact anywhere	-0.1151	0.099	0.248
		Access to Social media	-0.0621	0.116	0.594
		Service Area Coverage	0.0013	0.088	0.988
Age Range	17-25 years old	78	51.85%	CL1	
	26-35 years old	58	38.89%	CS1	
	36-45 years old	14	9.26%		



Total		150	100%	
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Table 11 : Partial T (Uji Regresi Logistik) Test

Partial Test Process Data with Python (2024)

The analysis on table examined the relationship between individual indicators within the variables of Brand Equity, Offering Equity, and Relationship Equity, and their impact on Customer Satisfaction. A p-value of less than 0.05 was considered statistically significant, indicating a relationship between the indicator and Customer Satisfaction.

- **Brand Equity:**
Out of the 7 indicators, only **Promotional Message Content** and **Promotion aligns with reality** were found to have a significant positive impact on **Customer Satisfaction**. Indicators such as **Attractive Promotions, Promotions can be accessed anywhere, Attractive social media and website appearance, Attractive catalogues and brochures,** and **Neat social media and website appearance** did not show a significant relationship with Customer Satisfaction.
- **Offering Equity:**
Only the indicator **Service quality** was found to have a significant positive impact on Customer Satisfaction. Other indicators like **Price suitability options, Competitive pricing, Discounts, Ease of transaction, Ease of payment,** and **Ease of obtaining information** did not show a significant relationship with Customer Satisfaction.
- **Relationship Equity:**
Only the indicator **Friendliness in service** was found to have a significant positive impact on Customer Satisfaction. Other indicators such as **Service capability, Guiding potential customers through transactions, Ability to transact anywhere, Access to social media,** and **Service area coverage** did not show a significant relationship with Customer Satisfaction.

The Influence of Brand, Offering and Relationship Equity on Customer Satisfaction and Loyalty in IT Bootcamps

Variable	Dimension	Indicator	Coef	std. Error	P value
Brand Equity (X1)	Promotion (Rahman et al., 2018)	Interesting promotions	0.0236	0.108	0.828
		fill in promotional messages	0.0007	0.099	0.995
		promotions can be achieved anywhere	-0.1328	0.097	0.173
		promotion according to reality	0.3340	0.090	0.000
	Physical Evidence (Rahman et al., 2018)	Attractive social media and website display	0.1687	0.095	0.079
		attractive catalogs and brochures	-0.1215	0.112	0.279
		neat appearance of social media and website	-0.1432	0.118	0.227
Offering Equity (X2)	Product (Rahman et al., 2018)	service quality	0.2636	0.087	0.003
	Price (Rahman et al., 2018)	Price Match Options	0.2475	0.101	0.017
		Competitive price	0.0292	0.083	0.727
		Discounts	-0.0854	0.088	0.334
	Process (Rahman et al., 2018)	Ease of Transactions	0.0658	0.113	0.561
		Ease of Payment	-0.1212	0.110	0.273
		Ease of obtaining information	0.1090	0.096	0.258
Relationship Equity (X3)	People (Rahman et al., 2018)	Ability to serve	0.0262	0.113	0.817
		Guide potential customers to make transactions	-0.0221	0.105	0.835
		Friendliness in serving	0.1068	0.100	0.290
	Place (Rahman et al., 2018)	Can transact anywhere	-0.0401	0.099	0.686
		Access to Social media	0.1703	0.116	0.147
		Service Area Coverage	0.1015	0.088	0.252
Age Range	17-25 years old	78	51.85%	CL1	
	26-35 years old	58	38.89%	CS1	
	36-45 years old	14	9.26%		

Total		150	100%	
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Table 12 : Partial Test Process

The table 12 presents the influence of each individual indicator within the dependent variables (Brand Equity, Offering Equity, and Relationship Equity) on the independent variable (Customer Loyalty).

- **Brand Equity:**

Out of the 7 indicators, only "**Promotion aligns with reality**" showed a significant positive relationship with Customer Loyalty (p-value < 0.05).

Other indicators such as "**Attractive promotions**," "**Promotional message content**," "**Promotions can be accessed anywhere**," "**Attractive social media and website appearance**," "**Attractive catalogs and brochures**," and "**Neat social media and website appearance**" did not have a significant impact on Customer Loyalty.

- **Offering Equity:**

Two indicators, "**Service quality**" and "**Price suitability options**," were found to have a significant positive influence on Customer Loyalty (p-value < 0.05).

The remaining indicators, including "**Competitive pricing**," "**Discounts**," "**Ease of transaction**," "**Ease of payment**," and "**Ease of obtaining information**," did not show a significant relationship with Customer Loyalty.

- **Relationship Equity:**

None of the six indicators within Relationship Equity (Service capability, Guiding potential customers through transactions, Friendliness in service, Ability to transact anywhere, Access to social media, Service area coverage) had a significant positive impact on Customer Loyalty.

DISCUSSION

The study found a positive impact of Brand Equity on Customer Satisfaction. This aligns with Durianto et al. (2004) and Aaker (1997), who argue that Brand Equity creates value for both consumers and producers. Brand Equity is crucial for customer satisfaction, with promotional messages and realistic promotions being key factors. If a brand's promotional messages align with customer experiences, it fosters satisfaction and trust. Discrepancies between promises and actual experiences can lead to dissatisfaction. **Offering Equity significantly influences Customer Satisfaction.** This finding is supported by Agustina et al. (2014), who found that product quality and price impact customer satisfaction positively. Offering Equity, including product quality and pricing, plays a vital role in creating positive customer experiences. Theories from Tjiptono (2008) and Kotler & Gary (2008) also emphasise the importance of product quality and pricing in customer satisfaction. **The study indicated no significant impact of Relationship Equity on Customer Satisfaction,** contrary to findings by Romero et al. (2014) and Farizka (2011). Differences in industry context or methodology might explain these conflicting results. In service industries, direct customer experiences are crucial for satisfaction, but in this case, Relationship Equity's role might be less pronounced due to different industry dynamics or methodological approaches. **The study found no significant effect of Brand Equity on Customer Loyalty,** consistent with Ramaseshan et al. (2013), who found no direct link between Brand Equity and loyalty in B2B contexts. Despite Brand Equity's role in shaping brand image and reputation, other

factors like product quality and pricing might be more influential in driving customer loyalty. **Offering Equity positively impacts Customer Loyalty**, aligning with Kim et al. (2020) and Zhang (2014), who highlight the significance of Offering Equity in enhancing customer loyalty. Offering Equity, which includes product quality, pricing, and convenience, contributes to higher loyalty. However, other studies such as Liu et al. (2015) and Cuong et al. (2020) found no significant impact, indicating mixed results. **Relationship Equity did not significantly affect Customer Loyalty**, a finding that matches Kim et al. (2020). Factors such as inadequate facilities, limited promotional programs, and a focus on product quality over relational aspects might explain this lack of impact. In traditional retail settings, relationship-building aspects might be less critical compared to product quality and brand reputation. **The study found that Brand Equity, Offering Equity, and Relationship Equity, when considered together, do not significantly impact Customer Satisfaction and Loyalty.** This result contrasts with Lee and Park (2019) and Liu et al. (2015), who found significant effects. The findings suggest a need for Hacktiv8 to reevaluate its branding, offerings, and customer relations strategies, as there may be a disconnect between consumer perceptions and the actual brand experience. **Customer Satisfaction significantly affects Customer Loyalty.** This conclusion aligns with Mohsan et al. (2011), Urs et al. (2013), and Senthilkumar (2012), who found that higher customer satisfaction leads to increased loyalty. This emphasises the importance of maintaining high satisfaction levels to strengthen customer loyalty. In summary, while Offering Equity and Customer Satisfaction are strongly related to customer loyalty, Brand Equity and Relationship Equity have mixed results. Hacktiv8 should focus on enhancing its offerings and customer satisfaction to improve loyalty, while reassessing its brand and relationship strategies to align with consumer expectations.

CONCLUSION

Based on the research objective to determine the influence of Offering Equity, Brand Equity, and Relationship Equity on Customer Satisfaction and Customer Loyalty among Hacktiv8 Boot Camp participants, the following conclusions can be drawn: Brand Equity: While individual indicators within Brand Equity, such as promotional content and alignment with reality, positively influenced Customer Satisfaction, overall Brand Equity did not have a significant impact on Customer Loyalty. Offering Equity: Both service quality and price suitability options significantly influenced both Customer Satisfaction and Customer Loyalty. This suggests that the quality of offerings and their perceived value are crucial in driving customer satisfaction and loyalty in the context of the Hacktiv8 Bootcamp. Relationship Equity: Surprisingly, none of the Relationship Equity indicators, such as service capability or friendliness, had a significant impact on either Customer Satisfaction or Customer Loyalty. This suggests that while relationships are important, the specific dimensions measured in this study did not directly influence customer outcomes. Simultaneous Influence: When considering the combined influence of Brand Equity, Offering Equity, and Relationship Equity, the results did not show a significant overall impact on either Customer Satisfaction or Customer Loyalty. Mediating Role of Customer Satisfaction: Customer Satisfaction played a significant role in predicting Customer Loyalty. This indicates that increasing customer satisfaction is a key strategy to enhance customer loyalty. In conclusion, the findings highlight the importance of offering quality services at a suitable price to drive both customer satisfaction and loyalty in the context of the Hacktiv8 Bootcamp. While Brand Equity played a role in influencing Customer Satisfaction, its impact on Customer Loyalty was less pronounced. Surprisingly, Relationship Equity, as measured in this study, did not have a significant influence on either outcome.

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