

Analysis of the multidimensionality of brand equity for the banking sector: a study on generation Z

Análisis de la multidimensionalidad del brand equity para el sector bancario: un estudio en la generación Z

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Received on: 13/12/23 **Revised on:** 15/01/24 **Approved on:** 19/02/24 **Published on:** 01/04/24

Abstract: in the competitive scenario of the banking sector, marketing and branding activities have become a crucial element for the long-term success of financial institutions. From the perspective of brand equity management, trust and loyalty are essential, not only in the operational processes with users, but also in the consolidation of the brand as a strategic asset. The aim of this research was to analyse the multidimensionality of brand equity for the banking sector from the perspective of Generation Z. A quantitative, analytical, and cross-sectional study was carried out, using exploratory and confirmatory factor analysis based on an instrument applied online to people belonging to this generational segment. The findings infer that brand equity in the banking sector aimed at Generation Z is made up of the following dimensions: brand loyalty and importance (BLI), perceived quality (PQ), brand association (BA), brand performance (BP) and brand awareness (BA). It is concluded that the banking sector must continue to consolidate its brand equity as a strategic activity based on these dimensions, strengthening its brand positioning, market share and market orientation, ensuring an understanding of the needs, desires, and behaviours of Generation Z.

Keywords: brand equity, banking industry, marketing strategy, branding, generation Z, factor analysis, management, innovation management.

Suggested citation: López-Rodríguez, C. E., Sotelo-Muñoz, J. K., Muñoz-Venegas, I. J. and López-Aguas, N. F. (2024). Analysis of the multidimensionality of brand equity for the banking sector: a study on generation Z. *Retos Revista de Ciencias de la Administración y Economía*, 14(27), 9-20. <https://doi.org/10.17163/ret.n27.2024.01>

Resumen: en el escenario competitivo del sector bancario, las actividades de marketing y branding se han convertido en un elemento crucial para el éxito a largo plazo de las instituciones financieras. Desde la gestión del brand equity, la confianza y la lealtad son esenciales, no solo en los procesos operativos con los usuarios, sino en la consolidación de la marca como un activo estratégico. El objetivo de esta investigación fue analizar la multidimensionalidad del *brand equity* para el sector bancario desde la perspectiva de la generación Z. Se desarrolla un estudio de tipo cuantitativo, analítico y de corte transversal, utilizando el análisis factorial exploratorio y confirmatorio a partir de un instrumento aplicado de forma on line a personas pertenecientes a este segmento generacional. Los hallazgos infieren que el *brand equity* en el sector bancario dirigido a la generación Z está conformado por las siguientes dimensiones: fidelidad e importancia de la marca (FIM), calidad percibida (CP), asociación de marca (AM), rendimiento de la marca (RM) y conciencia de la marca (CM). Se concluye que el sector bancario debe seguir consolidando su *brand equity* como actividad estratégica a partir de dichas dimensiones, fortaleciendo el posicionamiento de sus marcas, su participación y su orientación al mercado, garantizando el entendimiento de las necesidades, deseos y comportamientos de la generación Z.

Palabras clave: valor de marca, sector bancario, estrategia de marketing, gestión de marca, generación Z, análisis factorial, gerencia, gestión de la innovación.

Introduction

Although demographic changes affect economy, they have a special impact on banking, since it is an activity that participates in the processes of purchase, payment and other financial transactions that involve the other productive sectors (Garg *et al.*, 2021; Imam, 2013). This sector develops products and automation forms that do not always fit the characteristics of consumers; hence, the banking can join this relational dynamic depending on the market, especially with generation Z (Thusi and Maduku, 2020). In the digital and technological era of the 21st century, this generation has emerged as a driving force in the consumer. Originated in the 1990s and mid-2010s, this generation have grown up immersed in technology, constant connectivity and open access to information (Djafarova and Fouts, 2022).

Generation Z has transformed the way companies approach the market; hence, offering must have strategic communication processes from mobile devices, since the internet connection is a natural extension of these consumers. This generation demonstrates a very relevant social and environmental awareness in its purchasing decisions (Wawer *et al.*, 2022), making sustainability an obvious practice, not only as a flag in integrated marketing communications, but in the actual operability of organizations.

Yasin *et al.* (2020) highlight how marketing has gradually become a key activity for banking, which characterizes by the wide range of multichannel services, making entities not only develop efforts to attract customers but to retain them, leaving aside their approach to the product

to head towards the market. Unlike previous generations, Generation Z values not only products but consumer experiences (Windasari *et al.*, 2022); therefore, brands that offer memorable experiences strengthen the market's perception of their brand value, i.e., their brand equity.

Brand equity consolidates in an organization when the product is memorable, easily recognizable, trustworthy and superior in quality and reliability (Sürücü *et al.*, 2019). According to Forero Siabato and Duque Oliva (2014), brand equity has gained popularity since the early 1980s, because the brand has been considered a main asset for companies, particularly for those market oriented. Brand equity enables companies to build strong brands, supported by marketing and communication strategies, resulting in profits and financial statements strengthening by increasing the value of this intangible asset (Kim *et al.*, 2018). Therefore, Buil *et al.* (2013) highlight the role of consumers in the success of the brand in the market, so they suggest that these should be considered in the development of their measurement to know their perception, preference and behavior; hence, it is necessary to have strategic tools to manage brand equity in organizations.

As for Keller (2002), brand equity is a managerial proposal associated with brand building and is evident at the time when the consumer possesses a high level of awareness and knowledge of it, identifying strong, favorable and unique associations of brands in the memory. It is a great challenge for the banking to have strategic tools that support the strengthening of its brand, because adapting to new technologies and understanding the changing values of the new generations

are crucial to succeed in the market. Banks that understand the changing dynamics of Generation Z and can align it with the dimensions to manage their brand equity will be able to achieve successful commercial and financial results, based on a lasting and mutually beneficial relationship with that generation in the contemporary competitive scenario.

Based on the above, this research poses the following research question: What are the dimensions of brand equity that must be consolidated in banking to strengthen its relationship with generation Z? It is necessary to develop a conceptual approach focused on brand equity and the benefits of its consolidation for companies that have a high market orientation, to identify the underlying structure of the theoretical variables related to brand equity in the banking sector through an exploratory factor analysis, and finally, to evaluate the adjustment of brand equity dimensions in banking for generation Z through a confirmatory factor analysis.

Literature review

Brand equity measures how consumers perceive and value a brand compared to others in the market. It is not limited only to tangible aspects, such as products or services, but also it incorporates intangible elements such as perception, customer loyalty, emotional association and reputation (Sürücü *et al.*, 2019). For Aaker (1996), high brand value can have several benefits for a company, such as the ability to charge premium prices, increase customer loyalty, greater resilience to competition, and the ability to expand into new markets and product categories.

Brand equity is built over time through the positive experiences that consumers have with the brand, as well as through effective marketing strategies that reinforce the image and positioning of the brand in the public mind (Nikhashemi *et al.*, 2017). Brand equity consists of these dimensions: brand awareness, perceived quality, brand associations, brand loyalty and brand image (Aaker, 1996; Keller, 2002). The conceptual approach is presented below.

According to Keller (2002), brand awareness refers to the level of recognition consumers have

about a particular brand. It is a measure of the extent to which consumers are able to identify and remember a brand in the context of a category of products or services. It is the ability of consumers to identify and recognize a brand when it is shown to them, whether through their logo, name, slogan or other visual elements associated with the brand (Sürücü *et al.*, 2019).

Perceived quality can be influenced by a variety of factors, such as past experiences, opinions of other consumers, advertising, online reviews, and more (Nikhashemi *et al.*, 2017). For Snoj *et al.* (2004), perceived quality is subjective and is based on individual consumer perceptions and beliefs. The marketing strategies and actions of the company can influence how the quality of the brand is perceived. To build and maintain high brand value, it is essential that a company supports its perception of quality with products that consistently meet consumer expectations (Uncles and Lee, 2006).

Brand association represents the attributes, values, emotions, characteristics and concepts that consumers and the general public relate to a particular brand (Liu *et al.*, 2017). These partnerships are built over time through the interactions that consumers have with the brand, as well as through the marketing and communication strategies implemented by the company (Sürücü *et al.*, 2019). Brand partnerships are important because they influence how consumers perceive, remember and connect emotionally with a brand.

From the perspective of Mills *et al.* (2022), brand loyalty represents the degree to which consumers have a consistent and repetitive preference for a particular brand compared to other options available on the market. Loyal consumers tend to buy their products or use their services consistently over time, even when other consumer alternatives are presented (Jensen and Hansen, 2006).

When there is a high rivalry between competitors and where customers have a high bargaining power (Porter, 2008) having a solid brand image consolidates a competitive advantage used by organizations to differentiate themselves from other offers, and even more so, when in addition to buying products to meet needs, consumers also consume image (Kim *et al.*, 2018). Therefore,

Keller (2002) states that the brand image represents the perceptions about the brand that are reflected as existing associations in the consumer's memory.

Materials and method

For conducting this research, 535 elderly people living in Bogotá, Colombia, were considered, belonging to generation Z, who for Priporas *et al.* (2017) are those who were born between 1995 and 2010. A non-probabilistic sampling was carried out from the infinite population methodology. The fieldwork was carried out through an *online* questionnaire applied between October and November 2023.

A quantitative study with a descriptive correlational design was carried out, in which a questionnaire was developed to collect the infor-

mation. The applied questionnaire was divided into two sections: the first was formed by demographic questions that characterize the participants, initially identifying their age as a filter question to ensure that each of them belonged to generation Z. Likewise, they were asked their gender, socioeconomic stratum, education, occupation, and consumption trends of products of the banking. In the second part, an adaptation of the Narteh scale (2018) was developed with the constructs associated with brand equity, extracted from Aaker's proposal (1996) with a five-point-Likert-type scale where 1 was "totally disagree" and 5 "totally agree". For identifying internal consistency, constructs from the Cronbach Alpha were analyzed. The total of the instrument presented a $\alpha=0.972$ for all theoretical items. The results of internal consistency for each theoretical construct are presented in table 1.

Table 1
Internal consistency of the applied instrument

Theoretical construct	Cronbach Alpha	Cronbach's Alpha	Número de ítems
Brand Awareness (BAS)	0.753	0.782	5
Perceived Quality (PQ)	0.906	0.907	5
Brand Association (BA)	0.910	0.911	5
Brand loyalty (FL)	0.923	0.924	5
Brand Importance (BI)	0.898	0.902	5
Brand Sympathy (BS)	0.904	0.907	5
Brand Performance (BF)	0.914	0.915	5

To support the psychometric level of the instrument and thus achieve the proposed objectives, an exploratory factor analysis was performed, followed by a confirmatory. The Exploratory Factor Analysis (EFA) used the Kaiser Meyer Olkin (KMO) test that allows a factor measurement to properly evaluate the data. Then the Bartlett sphericity test was done to determine if there is a significant correlation structure between the variables studied. The factorial extraction method was the factorization of main axes with a Varimax rotation to obtain the solution of correlated factors and identify structures of observed variables and group them into latent factors (Grieder and Steiner, 2022).

Confirmatory Factor Analysis (CFA) used the Diagonally Weighted Least Squares (DWLS) method due to the ordinal nature of the items present on the measurement scale (Chen *et al.*, 2015). The fit of the model was evaluated with Chi-square test (χ^2), the approximation mean square error index (MSEI) and the standardized mean square residue index (MSRI), where values below 0.05 determine a good fit, and between 0.05 and 0.08 an acceptable fit (Li, 2016). The Comparative Adjustment Index (CAI) and the Tucker-Lewis Index (TLI) were also taken into account, whose values above 0.95 indicate a good adjustment (Li, 2016).

The Omega Coefficient (ω) and the Alpha Coefficient (α) were revised to evaluate the internal

consistency of the scale, which are determined to be adequate since they are greater than 0.80 (Hayes and Coutts, 2020). The mean extracted variance (AVE) was calculated, which is a concept used in the data analysis and validation of measurement models around the underlying value, in order to explain more than 50% of the variance in the established indicators (Rubia, 2019). Finally, the Kaiser Meyer Olkin (KMO) test for each item is presented, observing that values close to 1.0 indicate that a factor analysis can be useful with the data it possesses (Chen *et al.*, 2015).

The analysis of the information was carried out through free software JASP, which characterizes by the implementation of methods such as statistical-frequentist analysis, Bayesian analysis and regression analysis (Huth *et al.*, 2023).

Results

The average age of participant was 23.73 years old with a deviation of 3.6. Likewise, 68.2% of them were girls while 31.8% were men. More than 90% of participants are students or workers,

occupations in which the use of digital payment is an important tool for their financial movement.

Exploratory factor analysis

To initiate the EFA, the Bartlett test was analyzed, which is observed as statistically significant ($\chi^2 = 10534.540$, $p < 0.001$) allowing to consider the factorial extraction relevant. The Kaiser Meyer Olkin test is performed, where the adequacy of the total sample is analyzed to support the relevance of this analysis, obtaining an indicator of 0.958, as shown in table 2.

As for the approximation error (MSEI) that explains the amount of unexplained variance, a 0.051 was obtained, determining a good fit for the data. The Tucker-Lewis index (TLI), which compares the degree-of-freedom adjustment of the proposed model to zero reached 0.931 and identified a very good fit for it. Regarding the Comparative Adjustment Index (CFI) that allows to evaluate the goodness of fit of a model to the observed data reached 0.959, determining an excellent fit of the model.

Table 2
Kaiser Meyer Olkin and Bartlett test

Kaiser-Meyer-Olkin measure of sampling adequacy		0.958
Bartlett sphericity test	Approx. Chi-square	10534.5
	DF	276
	p	<0.001

From the EFA, the factor loads of the model are presented in table 3, where five new factors and 24 items that adequately meet these loads are finally identified, which will allow managing the multidimensionality of brand equity for the

banking sector in generation Z. These new dimensions are brand loyalty and importance (BLI), perceived quality (PQ), brand association (BA), brand performance (BP), and brand awareness (BAS).

Table 3
Factor loads

Items	Brand loyalty and importance (BLI)	Perceived Quality (PQ)	Brand Association (BA)	Brand Performance (BP)	Brand Awareness (BAS)
BL2	0.806				
IM3	0.779				
BL1	0.723				
BL4	0.682				

Ítems	Fidelidad e importancia de la marca (FIM)	Calidad percibida (CP)	Asociación de marca (AM)	Rendimiento de la marca (RM)	Conciencia de marca (CM)
IM4	0.669				
BL3	0.611				
PQ3		0.888			
PQ2		0.871			
PQ4		0.749			
PQ1		0.693			
PQ5		0.534			
BA5			0.897		
BA4			0.854		
BA3			0.824		
BA1			0.579		
BA2			0.517		
BP2				0.844	
BP1				0.783	
BP4				0.669	
BP3				0.593	
BP5				0.483	
BAS2					0.900
BAS1					0.784
BAS3					0.641

Confirmatory factor analysis

Table 4 presents the general report of the goodness of fit of the EFA, which allows to evaluate how well the proposed model fits the observed data, as well as to understand the underlying

structure of the data set of brand equity dimensions for the banking in generation Z, finding favorable results in the instrument. In general, the results show that the observed factors of the test confirm the theoretical factorial structure with which the instrument was designed.

Table 4
General Adjustment Report

Indicator	CFA Adjustments
Chi-square test (χ^2) Baseline model	10731.791
Chi-square test (χ^2) Factor model	1213.475
Comparative Fit Index (CFI)	0.907
Tucker–Lewis Index (TLI)	0.894
Root mean square error of approximation (MSEI)	0.087
MSEI 90 % CI lower bound	0.082
MSEI 90 % CI upper bound	0.092
Standardized root mean square residual (MSRI)	0.059

The scale used for the analysis presented an overall mean extracted variance (AVE) of 0.664, an Omega Coefficient (ω) of 0.965, and an Alpha Coefficient (α) of 0.961. Table 5 presents these same indicators independently for each of the

resulting dimensions of the EFA, and for each of its total scale items, non-standardized factor loads, the Kaiser Meyer Olkin test (KMO) and the standard error, finding satisfactory results for each subscale.

Table 5

Coefficients, extracted average variance and item description for the multidimensionality of the brand equity of the banking sector in generation Z

Dimensions	Omega (ω)	Alpha (α)	BIRD	Items	Factor loads	KMO	p	Std. Error
Brand loyalty and importance (BLI)	0.904	0.909	0.624	FM2	0.923	0.963	< 0.001	0.043
				IM3	0.827	0.959	< 0.001	0.048
				FM1	0.896	0.967	< 0.001	0.041
				FM4	1.007	0.960	< 0.001	0.040
				IM4	0.834	0.964	< 0.001	0.041
Perceived Quality (PQ)	0.911	0.06	0.665	FM3	0.971	0.968	< 0.001	0.041
				CP3	0.839	0.967	< 0.001	0.033
				CP2	0.802	0.963	< 0.001	0.036
				CP4	0.847	0.969	< 0.001	0.036
				PA1	0.711	0.969	< 0.001	0.033
Brand Association (BA)	0.914	0.910	0.673	CP5	0.785	0.964	< 0.001	0.039
				AM5	0.800	0.947	< 0.001	0.035
				AM4	0.773	0.944	< 0.001	0.039
				AM3	0.856	0.955	< 0.001	0.034
				AM1	0.830	0.963	< 0.001	0.036
Brand Performance (BP)	0.916	0.914	0.683	AM2	0.847	0.971	< 0.001	0.038
				RM2	0.823	0.936	< 0.001	0.035
				RM1	0.825	0.952	< 0.001	0.037
				RM4	0.811	0.959	< 0.001	0.037
				RM3	0.877	0.972	< 0.001	0.037
Brand awareness (BAS)	0.856	0.847	0.656	RM5	0.885	0.961	< 0.001	0.039
				CM2	0.702	0.876	< 0.001	0.031
				CM1	0.738	0.905	< 0.001	0.033
				CM3	0.752	0.962	< 0.001	0.039

Table 6 presents the factor covariances for the relationship between the dimensions of brand equity found, with satisfactory results between

the estimates, the standard error, the z-value and the level of significance (p) of each relationship.

Table 6

Factor covariances

Relationships	Estimate	Std. Error	z-value	p
BLI \Leftrightarrow PQ	0.834	0.018	47,410	< 0.001
BLI \Leftrightarrow BA	0,750	0,023	32,179	< 0.001
BLI \Leftrightarrow BP	0.812	0.019	42,123	< 0.001
BLI \Leftrightarrow BAS	0.426	0.042	10,163	< 0.001
PQ \Leftrightarrow BA	0,806	0.020	40,489	< 0.001
BP \Leftrightarrow BP	0,781	0.021	36,575	< 0.001

Relationships	Estimate	Std. Error	z-value	p
PQ \Leftrightarrow BAS	0.538	0.037	14,421	< 0.001
BA \Leftrightarrow BP	0,740	0,024	30,999	< 0.001
BA \Leftrightarrow BAS	0,652	0.031	20,751	< 0.001
BP \Leftrightarrow BAS	0.450	0.041	11,080	< 0.001

Table 7 proposes the multidimensional structure for measuring brand equity in the banking sector from the perception of generation Z.

Table 7

Multidimensional structure of brand equity in the banking sector from the perception of generation Z

Dimension	Items
Brand loyalty and importance (BLI)	I consider myself an advocate of my bank
	My bank is the only alternative for all my banking activities
	I am loyal to my bank
	I am satisfied with the benefits I make in my bank
	My bank can give me a long-term return when market conditions change
Perceived Quality (PQ)	I will keep saving with my bank
	I think my bank products have a good quality
	The cost of my bank's products is commensurate with the quality of these
	The quality of my bank's interpersonal service fits my need
Brand Association (BA)	My bank's products have better quality than those of other banks
	The digital development offered by my bank is of good quality
	My bank has good brand positioning
	Easy access of my bank on digital platforms
	My bank has a good reputation in society
Brand Performance (BP)	My bank has a positive image in the country
	I have fond memories linked to my bank
	I think my bank has increased the number of customers compared to others in the country
	I consider my bank's growth to be higher than others in the country
Brand Awareness (BAS)	My bank has extensive digital and in-person media coverage
	I think my bank is interested in projects that benefit society
	My bank cares about knowing the level of customer satisfaction
	I identify my bank logo
	I easily recognize my bank among others
	If someone asks me about a bank, mine comes easily to mind

Conclusions and discussion

Aaker (1996) describes that brand equity is supported by brand awareness, perceived quality, partnerships and brand loyalty, dimensions that since the Narteh proposal (2018) were complemented with the importance, sympathy and performance of the brand; however, according to

the results obtained in the study focused on the banking sector from the perception of generation Z, a multidimensional structure of brand equity is proposed with the following constructs: brand loyalty and importance (BLI), perceived quality (PQ), brand association (BA), brand performance (BP) and brand awareness (BAS).

The dimension called “brand loyalty and importance” relates with the perception that the consumer has of the services offered by the banking sector in terms of loyalty and defense towards the brand (Althuwaini, 2022), since this dimension relates to the responsiveness that banks have about the particular needs of generation Z, and that this is the only and most important alternative when choosing a bank, since their specific needs will be met.

Regarding the dimension of “perceived quality”, it can be determined that by comparing different brands, the consumer will be able to obtain better expectations regarding the real efficiency of the services offered and visualize the benefits, all focused on the image in the market increase, generating a greater positioning of the brand (Zhao *et al.*, 2022). The “brand association” dimension determines the degree to which consumers belonging to generation Z are aware of the existence of the brand and easily recognize the services offered by it (Lim and Guzmán, 2022). Therefore, branding plays a very important role that supports the loyalty of each client and the association that it makes with the brand, allowing banking entities an increase in prices that does not decrease their participation in the market, making their brand image recognized, respected and reliable in the face of the continuous innovation of their competitors (López-Rodríguez *et al.*, 2022).

“Brand performance” is recognized as the way to measure in a future whether the brand is being successfully accepted among the population studied to anticipate its performance in the market (Oliveira *et al.*, 2022). Some of the measures used to analyze this dimension allow to evaluate the current performance of the brand to identify problems and determine its potential. The “brand awareness” represents the capacity of remembering and recognizing from the communication strategies. When brand awareness becomes stronger and increases continuously, it generates a high probability that users will choose their main consumption option, increasing loyalty levels (Supiyandi *et al.*, 2022).

This research provides a detailed insight to address brand equity management in the banking sector for Generation Z. While strengths in emo-

tional connection and positive brand perception have been identified, the recommendations offer ways to further strengthen the validity and applicability of the results. Generation Z has specific characteristics in their role as consumers, which are associated with digitalization, empowerment, social awareness, personalization, and the valuation of consumer experiences (Lee *et al.*, 2023; Puiu *et al.*, 2022; Thangavel *et al.*, 2022), characteristics that have led companies to dynamize their marketing and branding strategies, as well as the way they approach Generation Z as consumers, where adaptability and the ability to connect authentically with these consumers are essential to success in this market.

This new multidimensional proposal of brand equity for banking brands in the generation Z will allow these entities to strengthen their market orientation, making the shopping experiences for these consumers significant by developing effective and particular microsegmentation processes, developing appropriate activities related to integrated marketing communications with the management of marketing strategies, with actions aimed at improving the service, as well as the specialization of the sales force, which by recognizing the characteristics of these digital natives, will not only be able to fully meet their needs as a consumer, but will make an important contribution to corporate branding from the strengthening of the brand equity of the companies that constitute the banking sector.

Among the most relevant limitations of this research, the resistance of the population to participate in the study stands out, despite the fact that the survey was applied *online*, which is a daily scenario of generation Z; and although this generation tends to perform multiple tasks at once, since they are constantly exposed to information through different channels, influencing how they consume content and make purchasing decisions, a significant sample was obtained that supported the methodological strategy.

Future lines of research are proposed, such as the processes of analysis of the consumer experience that belongs to generation Z in banking from the digitalization and use of technology; the valuation of diversity in integrated marketing

communications; the authenticity of the value proposals of banking entities, as well as their social and environmental commitment (Reyes-Ramírez *et al.*, 2022).

For future studies, it is important to verify whether this new multidimensional proposal of brand equity in banking has effects on the consumption intention of products offered by these entities to consumers belonging to generation Z, from structural equation models, which allow to test hypotheses for setting empirical studies.

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