Examining the Mediating Role of Perceived Quality in the Relationship Between Content Marketing and Brand Loyalty

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Abstract:

This study intends to examine the relationships between content marketing and brand loyalty, with a particular emphasis on the mediating function of perceived quality as considered by cybersecurity firms dealing with the Egyptian banking industry. According to the Central Bank of Egypt, there are 37 banks in Egypt's banking sector, which is the target population for this quantitative analysis. To get data, non-probability quota sampling was applied. Self-administered questionnaires were used to gather 314 responses, which were then analyzed using the partial least squares (PLS) approach, which is based on structural

equation modeling. The results show that perceived quality plays a critical mediating role in the relation between content marketing and brand loyalty, with content marketing having a major influence on perceived quality and brand loyalty. The study contributes to the body of knowledge on content marketing and brand loyalty while providing cybersecurity vendors in the Egyptian banking industry with useful recommendations.

Keywords: Cybersecurity, content marketing, perceived quality, brand loyalty.

الملخص:-

تهدف هذه الدراسة إلى استكشاف العلاقة بين التسويق بالمحتوى والولاء للعلامة التجارية، مع التركيز بشكل خاص على الدور الوسيط للجودة المدركة من منظور شركات الأمن السيبراني التي تستهدف القطاع المصرفي المصري. ويعتبر القطاع المصرفي المصري الذي يضم ٣٧ بنكًا وفقًا للبنك المركزي المصري هوالمجتمع المستهدف لهذه الدراسة الكمية. وقد تم جمع البيانات باستخدام أسلوب العينة الحصصية غير الاحتمالية، حيث اعتمدت الدراسة على الاستبيانات لجمع ٣١٤ استجابة. وقد تم تحليل البيانات باستخدام طريقة المربعات الصغرى الجزئية (PLS) القائمة على نمذجة المعادلات الهيكلية. أظهرت النتائج أن الجودة المدركة تلعب دورًا محوريًا كوسيط في العلاقة بين التسويق بالمحتوى والولاء للعلامة التجارية، إذ تبين أن التسويق بالمحتوى يؤثر بشكل كبير وإيجابي على كل من الجودة المدركة والولاء للعلامة التجارية. تسهم هذه الدراسة في تعزيز الفهم الأكاديمي للعلاقة بين التسويق بالمحتوى والولاء للعلامة التجارية، كما تقدم توصيات عملية قيمة لشركات الأمن السيبراني التي تستهدف القطاع المصرفي المصري.

الكلمات الرئيسية: الأمن السيبراني، تسويق المحتوى، الجودة المدركة، ولاء العلامة التجارية.

1. <u>Introduction</u>

The new era of digital transformation has brought about significant changes in a number of industries, including the financial industry. Digital technology has given rise to a wide range of new financial services, like loans over the online service, digital payments. These new developments have encouraged banks to undergo digital transformation in order to improve their client service and competitiveness (Xie & Wang, 2023). Due to this transformation, attackers and other cybercriminals are now more aware of the technological risks that may enable them to breach banking systems and take money and sensitive data (Al-Alawi & Al-Bassam, 2020). Thus, cybersecurity companies provide solutions to protect digital assets, such data and information, against possible harm and unlawful access (Chaturvedi, Sharma & Ahmed, 2021). However, cybersecurity companies work hard to keep an edge over their competitors, as well as the content marketing has become a critical tactic to help them cultivate client brand loyalty (Hashem, 2024).

Content marketing stands out as a prominent digital strategy for captivating audiences within specific domains. Unlike traditional promotional methods that solely emphasize product features, content marketing builds brand interest by delivering valuable content that addresses customer needs and

aspirations (Ajina, 2019). Despite the increasing significance of content marketing, there is still a substantial gap in knowledge regarding its impact on brand loyalty, especially in the context of cybersecurity vendors serving the Egyptian banking industry.

Content marketing is an excellent way to promote products and connect with consumers. Moreover, Designing and implementing effective content marketing strategies will help encourage customer engagement, thus leading to customer retention and loyalty (Jafarova & Tolon, 2022). Although, the current researches indicate the effective role of content marketing in enhancing customer engagement (Pulizzi & Barrett, 2020), it frequently ignores the unique play in highly specialized fields like cybersecurity. This omission draws attention to an important gap in the literature, highlighting the need for further research that explores the special qualities of content marketing within cybersecurity, particularly in a region like Egypt, where cybersecurity is becoming more and more important for the stability and expansion of the banking sector (Al-Alawi & Al-Bassam, 2020).

Furthermore, Brand loyalty has become one of the key business concepts that has significantly developed over the past decade (Chatterjee & Basu, 2023). The concept of brand loyalty has been researched in different sectors. However, there is a scarcity researches examining the role of content marketing in fostering brand loyalty within the cybersecurity industry,

especially in relation to the Egyptian banking sector. Most studies have either focused on content marketing broadly or analyzed brand loyalty independently, without sufficiently connecting the two concepts in this particular industry context. (Kim & Ko, 2021). Thus, comprehending this relationship within the cybersecurity industry is vital, considering the significant importance of maintaining trust and security in banking activities.

Perceived quality is a subjective impression influenced by consumer's knowledge, experiences, and factors like demographics and emotions (Suhud & Prihandono, 2022). Although existing research explores the relationship between brand experience and loyalty, there is limited focus on how specific marketing strategies like content marketing directly influence brand loyalty through perceived quality (Akoglu & Özbek, 2022). Additionally, previous researches overlook the mediating effect of perceived quality through the digital marketing landscape, particularly in cybersecurity industry within Egyptian financial sector. For instance, studies on social media marketing have shown its role in enhancing brand loyalty, but they fail to examine how perceived quality interacts with content marketing strategies specific to financial services (Ebrahim, 2020). This gap is especially evident in developing markets such as Egypt, where unique cultural and economic influences may lead to different consumer perceptions.

Filling these gaps is crucial for gaining a deeper insight into how cybersecurity vendors can leverage content marketing to build and strengthen brand loyalty. Considering the critical role of cybersecurity in safeguarding financial institutions and their clients, identifying the factors that influence brand loyalty in this field is both academically valuable and practically important for vendors aiming to build a strong footprint in the market.

Therefore, this study seeks to address the identified research gaps by examining how content marketing impacts brand loyalty in the cybersecurity industry within Egypt's banking sector. Specifically, the research explored the mediating role of perceived quality in strengthening the link between content marketing efforts and customer loyalty. The insights gained from this study will help cybersecurity vendors optimize their marketing approaches and cultivate deeper customer relationships.

2. Theoretical Background
2.1. Stimulus Organism Response (S-O-R) Model

This study used stimulus-organism-response (S-O-R) theory. Mostafa & Kasamani, (2021) confirmed that the "S-O-R model" comprises three main components: stimulus, organism, and response. This theory clarifies the reasons behind individuals' behaviors in particular circumstances. It suggests that external stimuli, like the environment, initiate internal emotional and cognitive responses, ultimately influencing behavior (Hameed,

Hussain and Khan, 2022). The S-O-R model has been frequently used in various contexts to explain how external stimuli affect consumer behavior, satisfaction, and loyalty (Saewanee, Napalai & Jaroenwanit, 2024). Content marketing acts as a stimulus in this context. The organisms are represented by intermediary processes that mediate the relationship between the initial inputs and the resulting outcomes. Accordingly, this study identifies perceived quality as a mediator. The final aspect involves the responses, which in this case, refer to brand loyalty (Rahmawati and Kuswati, 2022).

2.2. Content Marketing

One of the best digital marketing techniques for interacting with an audience in a certain field is content marketing. Content marketing, as opposed to outright product or service promotion, frequently focuses on drawing in the audience by emphasizing significant value generating components connected to the brand (Fog and Indra, 2022). Moreover, content marketing motivates companies to create content marketing plans that communicate their values and identity effectively, without needing to focus on commercial transactions or direct sales, depending on the industry and business goals (Barbosa, Saura, Zekan, & Ribeiro-Soriano, 2024). Hollebeek (2019) discovered that the majority of customers prefer content-based product information rather traditional advertising. Moreover, content marketing is about teaching and enlightening potential consumers about a company,

as opposed to advertising, which is mostly about selling. Furthermore, the way content is presented and communicated in content marketing can engage consumers on different levels. After receiving the information, they evaluate it and form an impression, which leads to a particular psychological drive toward the brand's products (Li, 2022). Thus, the approach has the potential to build trust and appreciation, which could eventually lead to increased customer loyalty and higher sales. Content marketing is essential for vendors interacting with the banking sector, as it helps cultivate trust and establish lasting customer relationships (Pulizzi, 2020). By adopting a content marketing strategy, the company has successfully built a strong connection with consumers and actively engaged them, leading to an increased market share through content distributed on communication platforms (Ansari & Kazi, 2019). Besides, Core dimensions like content quality, personalization, and consistency enable vendors to stand out in the competitive cybersecurity market for the banking sector contribute to building brand loyalty and increasing the perceived value of their products and services (Holliman & Rowley, 2021).

2.3. Perceived Quality

Aakko & Niinimäki (2022) define the quality as the standard of something as judged against other items of a similar kind or the degree of excellence of something and a distinguishing property or characteristic possessed by someone or

something. Perceived quality refers to a consumer's subjective assessment, shaped by their knowledge, experiences, and internal factors such as demographics and emotions. Moreover, external factors, such as marketing and social influences, also impact perceived quality that lead to increase customer value, purchasing intent, and loyalty (Suhud & Prihandono, 2022). Furthermore, Perceived quality describes how consumers evaluate the overall excellence or advantages of a product or service relative to other available options. It is distinct from the actual features or properties of the product itself (Evgeniy & Roh, 2019). A strong perceived quality indicates that consumers have recognized the unique features and benefits of a product over time when compared to similar offerings. Additionally, since perceived quality contributes to brand value, a high level of it will encourage customers to prefer one brand over its competitors (Islami, Wahyuni & Tiara, 2020).

2.4. Brand Loyalty

Brand loyalty offers firms various advantages, including expanding market share, attracting new customers, sustaining brand extensions, reducing promotion costs, and enhancing the brand's resilience against competitive challenges (Zia, Younus and Mirza, 2021). Besides, the brand loyalty is characterized by a deep commitment to consistently buying or endorsing a favored brand, regardless of external influences or marketing strategies that may prompt a switch to a rival. This loyalty develops when a

customer believes that the brand enhances their self-perception (Boateng & Okoe, 2020). In the current competitive environment, brand loyalty is becoming more and more important since it is more expensive to acquire new customers than it is to keep existing ones. By endorsing the brand, introducing it to prospective consumers, and encouraging them to make purchases, devoted customers help businesses succeed (Bilgin, 2018). Moreover, Perceived quality is playing essential function for cultivating brand loyalty. it has been discovered that perceived quality inspires consumers to buy a brand again and again, resulting in brand loyalty (Mateen Khan, 2019).

2.5. Literature Review and Hypotheses Development
2.5.1 Content Marketing and Brand Loyalty

Researches have shown that content marketing can plays role in fostering brand loyalty, as it delivers value by engaging the target audience with consistent and relevant content. Aljuhmani et al. (2023) demonstrated that integrating social media marketing strategies with customer engagement initiatives leads to a notable enhancement in brand loyalty by increasing consumers' cognitive involvement. Furthermore, Hollebeek & Macky (2019) suggested that incorporating content marketing with personalized and interactive customer experiences not only boosts customer satisfaction but also fosters trust and commitment, both of which are essential factors in driving brand loyalty. The research emphasized the significance of delivering a

comprehensive brand experience by producing content that is engaging and reliable, which in turn enhances customer loyalty. Several studies, including Aljuhmani et al. (2023), found that emotional engagement does not play a significant mediating role in the relationship between social media marketing and brand loyalty, challenging previous theoretical assumptions. Furthermore, Previous research has shown that digital content marketing has a positive influence on brand engagement, which subsequently leads to an increase in brand loyalty (Fashami, Haghighinasab, Seyyedamiri and Ahadi, 2022). However, another study revealed that content marketing positively influenced brand trust, which subsequently led to an increase in consumer loyalty (Fog and Indra, 2022). Based on the above literature, the second hypothesis of this study was proposed as follows:

H1: Content marketing has a significant positive influence on brand loyalty.

2.5.2 Content Marketing and Perceived Quality

The impact of content marketing on perceived quality has garnered significant attention in recent years due to the increasing role of digital content in shaping consumer perceptions. In the context of cybersecurity vendors, especially those targeting the Egyptian banking sector, effective content marketing plays a crucial role in conveying technical expertise, trustworthiness, and product superiority. Previous studies have

shown that content marketing can positively influence perceived quality, yet a deeper understanding of its effects on niche markets such as cybersecurity remains underexplored (Dwivedi et al., 2021). In the banking sector, perceived quality is crucial due to the high-stakes nature of financial transactions, particularly with cybersecurity solutions that safeguard sensitive information. Recent research highlights that content marketing strategies such as educational blogs, webinars, and white papers can enhance perceived quality by providing valuable insights and demonstrating expertise (Karjaluoto et al., 2021). However, the current literature lacks a detailed examination of how such strategies specifically influence the perceived quality of cybersecurity solutions in the Egyptian banking sector. Further, content marketing's role in perceived quality can be enhanced through personalization, where content is tailored to the specific needs of the target audience (Kingsnorth, 2022). However, there is limited empirical research that tests the direct relationship between personalized content marketing and perceived quality in cybersecurity, especially within the Egyptian banking context (Alalwan et al., 2021). Further study found that the more consumers engage with a brand's content, the more likely they are to perceive the brand as high-quality. While the study does not specifically examine the impact of content marketing on perceived quality, it is plausible to suggest that content marketing can contribute to building a positive brand image (Khan,

Mehmood and Talat, 2022). Moreover, the dynamic nature of cybersecurity, which requires constant updates and innovations, suggests that content marketing strategies should be continuously evolving. Research by Ashley & Tuten (2022) suggests that maintaining perceived quality in fast-paced industries requires frequent, high-quality content updates to keep audiences informed about the latest threats and solutions. Based on the above literature, the first hypothesis of this study was proposed as follows:

H2: Content marketing has a significant positive influence on perceived quality.

2.5.3 Perceived Quality and Brand Loyalty

Marketing literature has extensively studied the connection between perceived quality and brand loyalty, emphasizing perceived quality as a key element that fortifies consumer loyalty to a brand. According to Akoglu and Özbek's (2022) investigation of this relationship in the sports sector, brand loyalty is greatly impacted by perceived quality. According to their argument, brand experiences have a favorable impact on perceived quality, which in turn leads to the development of brand trust, which is essential for winning over sports fans. Furthermore, Tran, Taylor, and Wen (2023) examined how value co-creation in branded applications might increase brand loyalty and perceived quality. They discovered that customers' perceptions of quality improve when they actively interact with

businesses via apps, which in turn increases loyalty. Moreover, prior research emphasized the significance of perceived quality in fostering brand loyalty, especially in the e-commerce industry. Their analysis of Shopee's branding revealed that customer loyalty is greatly impacted by perceived quality as well as brand awareness and connotations. A positive brand impression is created by high perceived quality, which encourages consumers to remain loyal to the brand in the face of many competitors in the cutthroat e-commerce market (Supiyandi, Hastjarjo and Slamet, 2022). However, another study discovered that consumer brand loyalty is significantly impacted by perceived quality, which is mediated by customer satisfaction. This study emphasizes the critical role that quality perception plays in obtaining long-term client commitment by showing that perceived quality increases customer satisfaction, which in turn leads to brand loyalty (Sinta, Lumbanraja, and Sembiring, 2023). Based on the above literature, the third hypothesis of this study was proposed as follows:

H3: Perceived quality has a significant positive influence on brand loyalty.

2.5.4 Perceived Quality Mediating Content Marketing and Brand Loyalty

Previous studies have lacked sufficient exploration of the role of perceived quality as a mediator in the relationship between content marketing and brand loyalty among

cybersecurity vendors within the banking sector. Moreover, purchase intension is directly influenced by perceived quality, and brand loyalty and satisfaction are mediated by perceived quality. Moreover, studies have demonstrated that customers are motivated to pick a brand over and over again by their perceived quality, which promotes brand loyalty (Mateen Khan, 2019). Furthermore, previous study suggested that the perceived quality of the festival experience has a significant impact on the attendees' attachment to the destination which mean that the higher perceived quality can lead to a positive brand image and increase brand loyalty (Kim, Choe and Petrick, 2018). However, little prior studies found that social media marketing activities, including content marketing, positively affect perceived quality. There is lack of knowledge on the full impacts of content marketing on brand loyalty since it is unclear how exactly these activities affect perceived quality and loyalty. Furthermore, in the relationship, brand trust is essential. The relationship between content marketing and brand loyalty is typically mediated by brand quality, which typically serves as the basis for brand trust.al media marketing activities, including content marketing, positively affect brand quality (Ebrahim, 2020). Thus, this study aims to examine the mediating role of perceived quality in the relationship between content marketing and brand loyalty within cybersecurity industry in the Egyptian banking sector. Thus,

based on the above literature, the fourth hypothesis of this study was proposed as follows:

H4: Perceived quality mediates the relationship between content marketing and brand loyalty.

2.5.5 Conceptual Framework

The conceptual model proposed in Figure 1 indicates that content marketing functions as an independent variable that affects customer loyalty, treated as a dependent variable, through perceived quality, which serves as a mediating factor. This model aims to investigate how content marketing strategies can foster brand loyalty, especially among cybersecurity firms targeting the banking sector in Egypt. By highlighting perceived quality as a key mediator, the model underscores the necessity of developing content that not only captivates but also improves the brand's perceived quality, thereby enhancing customer loyalty. This perspective is vital for comprehending the intricacies of customer loyalty in highly competitive environments like cybersecurity indistry (Madadi et al., 2021).
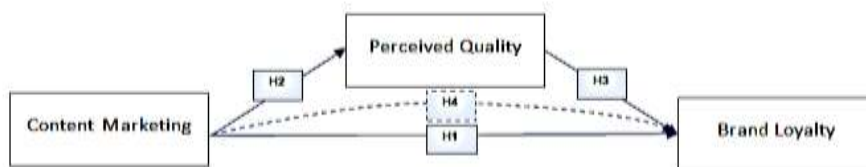

Figure 1: Proposed Conceptual Model

3. **Methodology**
3.1. Research Design

This research adopts a quantitative approach, which are often grounded on logical reasoning and seek to identify patterns in people's experiences. A common focus of the quantitative method is on examining the relationships between variables, with the underlying premise being that variables can be quantified objectively (Creswell & Creswell, 2023). Furthermore, the quantitative research method relies on numerical data and statistical analysis. Due to its accuracy and efficiency, researchers can assess data quickly and objectively. Researchers can minimize bias and enhance the reliability of their findings by assessing and comparing data. This method is especially valuable for gaining an objective understanding of facts, events, and phenomena (Mohajan, 2020). Thus, the aim of this study is to examine the releashinships between content marketing and brand loyalty, emphasizing the mediating role of perceived value within cybersecurity industry in the Egyptian banking sector. The research seeks to assess the effectiveness of content marketing in enhancing perceived quality, which in turn fosters brand loyalty. Consequently, the quantitative approach is well-suited for examining the impact of content marketing on consumer loyalty behavior, as well as understanding how perceived quality affects the relationship between content marketing and brand loyalty (Nguyen & Le, 2022).

3.2. Sampling Design

All employees in the information technology and security division who are concerned about protecting digital bank data and systems in the Egyptian banking sector are the study's population. The Central Bank of Egypt reported on December 31, 2023, that as of June 2023, there were 37 public and commercial banks in Egypt, employing 137,908 people in the banking sector. The sample is a subset of the larger population that is selected at random. Not the entire group, but a portion of it is shown. Researchers can make conclusions about the larger population by analyzing the characteristics of the sample (Sekaran, 2016). Participants are selected using a nonprobability quota sampling technique due to the descriptive nature of the study. It is known that there are 37 Egyptian banks in total, but it is hard to estimate how many employees there are in the information security division. To ensure representation from different segments of the community, participants are selected using quota sampling, a nonprobability approach. Since they are thought to be decision makers or have the ability to influence, participants comprised senior information technology department staff, executives, and heads of security sections from all Egyptian banks. Cross-sectional research designs are particularly useful for descriptive research due to how they enable comparisons between different groups of people (Yasmin & Salma, 2022). Self-administered questionnaires used to gather data from the chosen participants.

The cost-effectiveness, confidentiality, and consistency of this approach are only a few of its benefits. However, certain limitations should be considered, such as non-response bias and the requirement for unambiguous and straightforward questionnaire answers. Additionally, there are several methods for figuring out how many people to include in a quota sample (Iliyasu & Etikan, (2021). They also suggested use more advanced methods that consider statistical power and effect sizes, such as the approach outlined by Chuan & Penyelidikan (2006) or the G*Power software. Three is the maximum number of arrows that can point to a particular latent variable in this inquiry. As per the criteria provided by Hair et al. (2017), the study's PLS path model can only be accurately estimated with a minimum sample size of 30 observations.

3.3. Measurements

In this study, all variables are measured on a 5-point Likert scale, with 5 representing "strongly agree" and 1 representing "strongly disagree". The questions provided to respondents used by the researcher to determine the dimensions of each variable for this research. The researcher has carefully selected and modified a series of questions from widely recognized scales in the literature to effectively capture each variable. The six items used to assess content marketing are adapted from Ayele's (2021) study. Similarly, the measurement of perceived quality consists of six items drawn from a combination of research by Alhaddad

(2015), Sasmita and Suki (2015), and Ayele (2021), providing a comprehensive evaluation of its multidimensional nature. Finally, brand loyalty is measured using six items adapted from Bilgin (2018) and Alhaddad (2015).

3.4. Data Collection and Analysis Techniques

Based on population estimates, a total of 314 respondents from 37 banks in Egypt were provided with a structured questionnaire to gather data. The researcher handle the responses to the closed-ended questions. Various methods, including emails, instant messaging, social media platforms, and other channels, were employed to distribute online questionnaires and surveys to a diverse target demographic. The electronic questionnaire distributed using Google Forms and shared the link through email, instant messaging, and social media platforms. Moreover, the research used the partial least squares (PLS) method, rooted in structural equation modeling (SEM). SEM is a multivariate statistical analysis technique that investigates complex relationships between constructs and their indicators. Measurement and structural models are both evaluated using SEM. While measurement models examine the relationships between latent constructs, causal relationship models look at the relationships between latent constructs (Mathew & Soliman, 2021). The data gathered from participants refined, analyzed, and categorized with the help of SPSS 26 and Smart PLS 3 software.

The researcher used the mean, range, standard deviation, and variance to analyze the data in order to comprehend how respondents answered the questionnaire. Factor analysis, regression analysis, and correlation analysis are the statistical methods that applied.

4. <u>Data Analysis</u>
4.1. Initial data examination

Outliers are identified using Z-scores, with a standard range of ±3.29, which can extend to ±4 for large samples (Hair et al., 2014). Analysis of the current data revealed no univariate outliers among the 309 cases.

Table (1): Detection of univariate outliers

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Z	309	-2.78	2.29	.0000	.87705

Mahalanobis distance (D^2) tests for outliers, with extreme values indicated by (D^2/df) exceeding 4 and a significance level below 0.001.

Table (2): Mahalanobis distance Test

ID	Mahalanobis Distance (D2)	D2 /df	Probability	Outliers
36	10.51826	2.10	.005	0
95	10.51826	2.10	.005	0
238	10.51826	2.10	.005	0

Table (2) shows the top 10 Mahalanobis distance (D^2) values for the 309 questionnaires. With all (D^2/df) values below

4, the data shows no significant extremism. While large samples might have some outliers, they do not substantially impact the analysis (Parke, 2013), so no questionnaires were removed.

Table 3 shows that the skewness and kurtosis values for all variables conform to normal distribution, with most dimensions within acceptable limits, indicating univariate normality. However, the Mardia test revealed skewness and kurtosis values of 509.4 and 13.5, respectively, with a significance level below 0.05, indicating that the data does not follow a multivariate normal distribution (Ringle et al., 2009).

Table (3): Normal distribution Test

	Skewness		Kurtosis	
	Statistic	**Std. Error**	**Statistic**	**Std. Error**
Content Marketing	-.486	.139	.160	.276
Perceived Quality	.153	.139	.478	.276
Brand Loyalty	-.393	.139	.479	.276
Mardia's Multivariate	Skewness = 509.4***		Kurtosis = 13.5***	
Valid N (listwise)	309			
*** Significance level less than 0.001, confidence greater than 99.9%. ** Significance level less than 0.01, confidence greater than 99%. * Significance level less than 0.05, confidence greater than 95.				

Table 4 indicates no common method bias in the data, with the explained percentage of variance at 36.41%, which is below the 50% threshold.

Table (4): Harman's single-factor Test

Total Variance Explained						
Factor	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	7.153	39.737	39.737	6.554	36.412	36.412
2	1.674	9.299	49.036			
3	1.054	5.856	54.892			
4	.925	5.137	60.029			
5	.835	4.639	64.667			
Extraction Method: Principal Axis Factoring.						

4.2. Demographic variables

The following tables show some demographic variables like gender, and type of banks.

Table (5): Demographic variables

Gender		**Frequency**	**Percent**
Gender	**Male**	**209**	**67.6**
	Female	**100**	**32.4**
Type of bank	**Private**	**224**	**72.5**
	Public	**85**	**27.5**
Total		**309**	**100**

Table 5 shows that the majority of the sample is male, with a percentage of 67.6% compared to females (32.4%). Results show that the majority of the samples are from private banks (72.5%) compared to public banks (27.5%).

4.3. Descriptive analysis of research variables
Table (6): Descriptive statistics

Constructs or Items	Mean	Std. Deviation	Coefficient of Variation	Rank
CM1	4.12	0.633	15.35	6
CM2	4.33	0.566	13.06	2
CM3	4.49	0.568	12.64	1
CM4	4.18	0.634	15.17	5
CM5	4.23	0.605	14.30	4
CM6	4.45	0.583	13.08	3
Content Marketing	4.302	0.419	9.74	
PQ1	4.08	0.581	14.22	4
PQ2	4.24	0.540	12.74	1
PQ3	4.04	0.646	16.01	5
PQ4	4.13	0.531	12.86	2
PQ5	4.08	0.558	13.66	3
PQ6	2.56	0.890	34.78	6
Perceived Quality	3.855	0.356	9.25	
BL1	4.23	0.526	12.43	1
BL2	4.41	0.560	12.71	2
BL3	4.14	0.552	13.32	4
BL4	3.96	0.656	16.55	6
BL5	4.25	0.547	12.87	3
BL6	4.04	0.594	14.71	5
Brand Loyalty	4.172	0.414	9.93	

We found that there is a general tendency among the sample respondents to agree with the CM items, which the mean value of CM is (4.302). We find that CM3 item is the first item that reflects the importance of content marketing (CM) with the lower coefficient of variation (12.64) and the last important item is (CM1) with the higher coefficient of variation reached (15.35) with a standard deviation of (0.633). Also, there is a general tendency among the sample respondents to agree with perceived quality (PQ) items, and the mean value of PQ is (3.855). We find that (PQ2) item is the first item that reflects the importance of perceived quality with the lower coefficient of variation (12.74) while the last item important of perceived quality is (PQ6) with the highest coefficient of variation reaching (34.78) with standard

deviation of (0.890). Finally, there is a general tendency among the sample respondents to agree with the brand loyalty items, and the mean value of BL is (4.172). We find that (BL1) item is the first item that reflects the importance of brand loyalty (BL) while the last item important to brand loyalty is (BL4) with the highest coefficient of variation reaching (16.55).

4.4.   Inferential analysis using structural equations modeling

Figure (1) illustrates the theoretical model of the research, detailing the variables, their measurement items, levels, types of measurement, and the relationships between the variables.
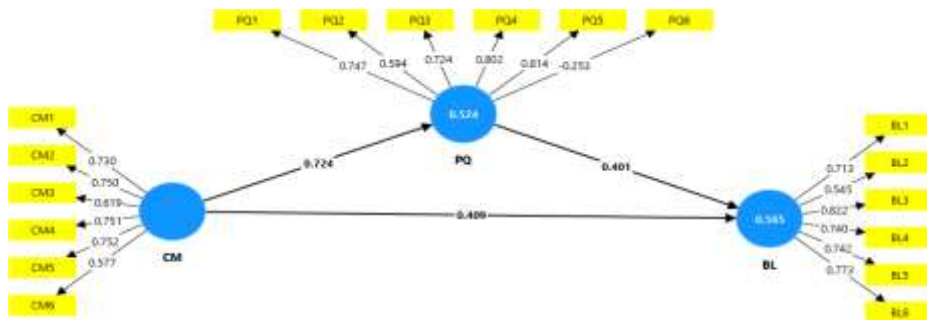

Figure 1: Measurement model before development

4.4.1. Factor loading (Constructs & dimensions)

Table (7) shows that all factors loading values for all items are higher than 0.59 without three items (CM6; PQ6; BL2), which means that the covariance between the latent variable and its items is greater than the variance of measurement errors, thus all the questionnaire items were retained.

Table (7): Factor loading before the development

	BL	CM	PQ
BL1	0.713		
BL2	0.545		
BL3	0.822		
BL4	0.740		
BL5	0.742		
BL6	0.773		
CM1		0.730	
CM2		0.750	
CM3		0.619	
CM4		0.751	
CM5		0.752	
CM6		0.577	
PQ1			0.747
PQ2			0.594
PQ3			0.724
PQ4			0.802
PQ5			0.814
PQ6			-0.253

Figure (2) shows the final measurement model after deleting three items (CM6; PQ6; BL2) that leads to a significant improvement in the results.
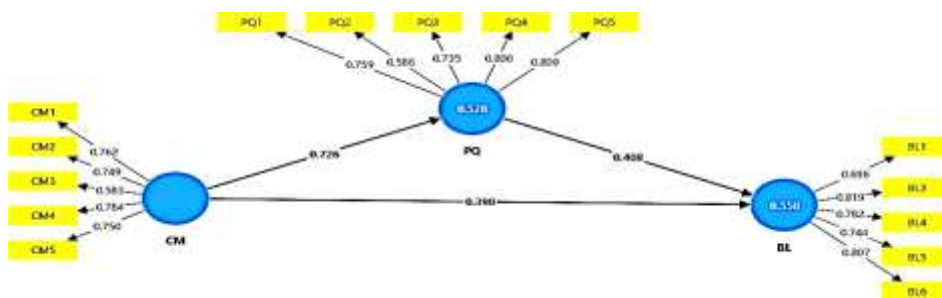

Figure 2: Measurement Model after the improvement

According to Table (8), all factors loading values for all items are higher than 0.62, which means that the covariance between the latent variable and its items is greater than the variance of measurement errors, thus all the questionnaire items were retained.

Table (8): Factor loading after the development

	BL	CM	PQ
BL1	0.696		
BL3	0.819		
BL4	0.782		
BL5	0.744		
BL6	0.807		
CM1		0.762	
CM2		0.749	
CM3		0.583	
CM4		0.784	
CM5		0.750	
PQ1			0.759
PQ2			0.586
PQ3			0.735
PQ4			0.800
PQ5			0.809

4.4.2. Assessment of Measurements Model

Table (9) shows the results of validity and reliability of the research model as follows:

Table (9): Reliability and validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
BL	0.828	0.829	0.879	0.594
CM	0.778	0.793	0.849	0.532
PQ	0.792	0.801	0.858	0.551

Table (9) shows that all Cronbach's alpha values exceed 0.7, indicating strong internal consistency. Since Cronbach's alpha assumes equal reliability for all items, SEM-PLS also uses Rho De Joreskog and composite reliability (CR) to account for external factor loads and errors. Both Rho_A and CR values are above 0.7, confirming high internal consistency. Additionally, the average variance extracted (AVE) values exceed 0.5, demonstrating strong consistency and convergence among the latent variable dimensions (Hair et al., 2010, 2014).

Discriminant validity assesses whether a latent variable is distinct from other constructs in the model and does not overlap with them (Hair et al., 2017). To establish discriminant validity, two criteria are used:

- **Fornell-Larcker Criterion:** This measure whether the square root of the average variance extracted (AVE) for each latent variable is greater than its correlations with other variables in the model. Table (10) shows that the diagonal values, representing the square root of the AVE for each variable, are higher than their correlations with other variables, confirming that the study model variables exhibit discriminant validity.

Table (10): Discriminant validity using the Fornell-Larcker criterion

| Fornell-Larcker	BL	CM	PQ
BL	0.771		
CM	0.686	0.729	
PQ	0.691	0.726	0.742

- **Heterotrait-Monotrait (HTMT) Criterion:** HTMT assesses the correlation between indicators across different constructs, with values below 0.9 indicating discriminant validity. Table (11) shows that all HTMT values are below 0.9, confirming the discriminant validity of the variables in the study model.

Table (11): Discriminant validity using Heterotrait-monotrait ratio (HTMT)

	BL	CM
CM	0.842	
PQ	0.854	0.819

4.5. Developing the structural model (estimating path parameters)

Considering this stage, we focus on the shifting from latent and apparent variables to focus on the relationships between the main variables of the research, thus obtaining the estimates of the structural model (path coefficients), which represent the assumed
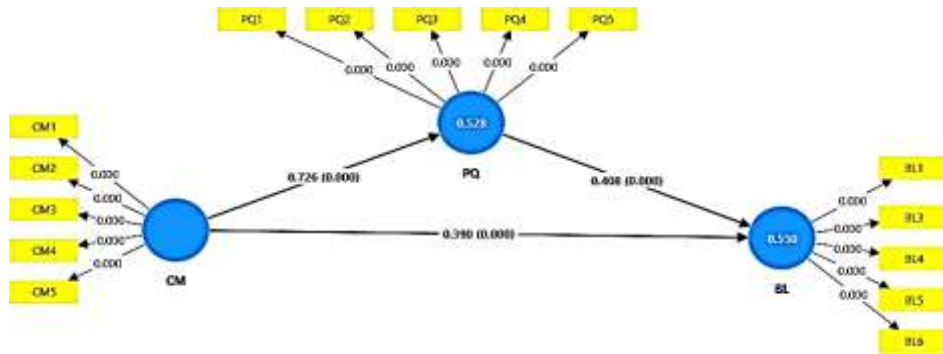
relationships between the variables as shown in the following figure (2).

Figure (3): Structural Model

The first stage aims to test hypotheses in terms of the concept adopted in the research for content marketing (CM), perceived quality (PQ) on brand loyalty (BL).

According to the results of the structural model of the research model (figure 3), the relationships between the main variables (CM, PQ and BL) of the study are examined to determine the extent to which the concepts adopted in the context of the current research contribute to examining the effect of content marketing (CM), and perceived quality (PQ) on brand loyalty (BL). According to the basic ten hypotheses, we test these hypotheses using path analysis based on the structural model in Figure (3).

H₁: Content marketing has a significant and positive impact on brand loyalty.

Table (12): The first hypothesis result

H	Path analysis	Beta	T statistics	P values	Accepted /Rejected
H1	CM -> BL	0.390	6.766	0.000***	Accepted
*** Significance level less than 0.001, confidence greater than 99.9%. ** Significance level less than 0.01, confidence greater than 99%. * Significance level less than 0.05, confidence greater than 95%.					

Table (12) shows that there is a positive impact of content marketing (CM) on brand loyalty (BL), whereas the value of (β = 39; P < 0.001). This means that content marketing (CM) contributes to improving brand loyalty (BL) by 39%, at a significant level of less than 0.001. The value of "T" exceeds 3.29, which reflects the confidence level in the research results at a significant level of 99.9%, and therefore the first main hypothesis is accepted.

H₂: Content marketing has a significant and positive impact on perceived quality.

Table (13): The second hypothesis result

H	Path analysis	Beta	T statistics	P values	Accepted /Rejected
H2	CM -> PQ	0.726	24.647	0.000***	Accepted
*** Significance level less than 0.001, confidence greater than 99.9%. ** Significance level less than 0.01, confidence greater than 99%. * Significance level less than 0.05, confidence greater than 95%.					

Table (13) shows that there is a positive and significant impact of content marketing(CM) on perceived quality (PQ), whereas the value of (β = 73; P < 0.001). This means that content marketing(CM) contributes to improving perceived quality (PQ) by 73%, at a significant level of less than 0.001. The value of "T" exceeds 3.29, which reflects the confidence level in the research

results at a significant level of 99.0%, and therefore the second hypothesis is accepted.

H₃: Perceived quality has a significant and positive impact on brand loyalty

<p align="center">Table (14): The third hypothesis result</p>

H	Path analysis	Beta	T statistics	P values	Accepted /Rejected
H3	BI -> BL	0.408	6.880	0.000***	Accepted
*** Significance level less than 0.001, confidence greater than 99.9%. ** Significance level less than 0.01, confidence greater than 99%. * Significance level less than 0.05, confidence greater than 95%.					

Table (14) shows that there is a positive impact of perceived quality on brand loyalty, whereas the value of ($\beta = 41$, $P < 0.001$). This means that perceived quality contributes to improving brand loyalty by 41%, at a significant level of less than 0.001. The value of "T" exceeds 3.29, which reflects the confidence level in the research results at a significant level of 99.9%, and therefore the third hypothesis is accepted.

H₄: There is an indirect effect of perceived quality on the relationship between content marketing and brand loyalty.

<p align="center">Table (15): The fourth hypothesis result</p>

H	Path analysis	Beta	T statistics	P values	Accepted / Rejected
H4	CM -> PQ -> BL	0.296	6.479	0.000***	Accepted
*** Significance level is less than 0.001, and confidence is greater than 99.9%. ** Significance level is less than 0.01, and confidence is greater than 99%. * Significance level is less than 0.05, and confidence is greater than 95%.					

Table 15 shows that there is an indirect positive and significant impact of perceived quality (PQ) on the relationship between content marketing (CM) and brand loyalty (BL), whereas the value of ($\beta = 30$; $P < 0.001$). This means that

perceived quality (PQ) mediates the relationship between content marketing (CM) and brand loyalty (BL) by 30%, at a significant level of less than 0.001. The value of "T" exceeds 3.29, which reflects the confidence level in the research results at a significant level of 99.9%, and therefore the fourth hypothesis is accepted.

4.6. The effect size of the mediator variable

Table (16) shows that the overall effect of content marketing (CM) on brand loyalty (BL) is 69%. Also, we note that the effect size of the variance calculated from the mediation analysis is 43%, which indicates the presence of partial mediation. Thus, perceived quality (PQ) is accepted as a mediate relationship between content marketing (CM) and brand loyalty (BL).

Table (16): The effect size of the perceived quality of the fourth hypothesis

Steps	Hypotheses	Path analysis	Beta
Step1	H1	CM -> BL	0.390***
Step2	H4	CM -> PQ -> BL	0.296***
Third Step: Total effect (direct effect + indirect effect)			
Step3		CM -> BL	0.686***
Fourth Step: Calculated the variance size = indirect effect/total effect			
Step4		CM -> BL	0.43
*** Significance level is less than 0.001, and confidence is greater than 99.9%. ** Significance level is less than 0.01, and confidence is greater than 99%. * Significance level is less than 0.05, and confidence is greater than 95%.			

4.7. Coefficient of determination or interpretation (R^2)

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Table (17): coefficient of determination

Variables	R2	R2 Adjusted	Interpretive Ability
BL	0.550	0.547	Medium explanatory power
PQ	0.528	0.526	Medium explanatory power

Table (17) shows that the coefficients of R^2 and R^2 adjusted are all statistically acceptable, as the coefficients of determination of the dependent variable are medium explanatory power. This means that the (R^2) of BL is 0.55, which means that content marketing (CM), and perceived quality(PQ) explains 55% of brand loyalty (BL) in addition to (R^2) of perceived quality (PQ) is 0.53, which means content marketing (CM) explains 53% of perceived quality in the banking sector.

4.8. Goodness-of-fit (GOF) index

GOF index is a comprehensive measure of the measurement model using the PLS-SEM method. GOF measures the availability of the study model, which shows the overall brand loyalty of the research model. It is calculated from the relation $GOF = \sqrt{\mathbf{R2 * AVE}}$

Wetzels et al. (2009) demonstrate the statistically acceptable value for this criterion is "greater than 0.36". According to our research model, we find that:

$$G\,O\,F = \sqrt{\mathbf{R2 * AVE}} = \sqrt{\mathbf{0.539 * 0.559}} = 0.55$$

As the GOF value of the model is approximately equal to 0.55, which is greater than 0.36, this indicates the great quality of

the study model, or the results of this model can be relied upon with confidence because it is statistically acceptable.

4.9. Predictive index (Q^2)

The predictive index represents an indicator of out-of-sample predictive ability or the ability of the research model to predict when Q^2 values are greater than zero for a particular endogenous variable indicating the predictive ability of the path model to construct the dependent variable (Hair et al, 2016).

Table (18): Predictive ability of the study model

	Q²predict	RMSE	MAE
BL	0.466	0.736	0.578
PQ	0.522	0.696	0.557

As shown in the previous table (18), all Q^2 coefficients are significant and statistically acceptable because they are greater than zero, which indicates that all latent variables included in the study model have a high ability to predict the improvement of brand loyalty with a percentage of 47%.

4.10. Significant Differences

The researcher conducted an independent sample T-Test to measure the significant differences between the average responses according to the type of bank (TB) for all study variables (content marketing, perceived quality, and brand loyalty).

Table 19: Independent T-Test

Constructs	JD	N	Mean	T	df	Sig.
Content Marketing	Private	224	4.291	-.837	188.260	.404
	Public	85	4.331			
Perceived Quality	Private	224	3.833	-1.733	307	.084
	Public	85	3.912			
Brand Loyalty	Private	224	4.148	-1.694	307	.091
	Public	85	4.237			

The results in Table 19 indicated that there are no significant differences between the average responses based on the type of bank, whether the public or private bank didn't support any differences related to content marketing, perceived quality, and brand loyalty because the p-value of the significance level is higher than 0.05, and since the majority of the study sample are private banks, their average responses indicated higher content marketing, perceived quality, and brand loyalty in public banks compared to private banks

5. **Discussion**

This study provides a comprehensive examination of the research findings regarding the mediating effect of perceived quality on the relationship between content marketing and brand loyalty among cybersecurity providers in the Egyptian banking sector. The study was guided by four primary hypotheses that explored these connections, each of which discussed in relation to the existing literature.

Hypothesis 1: The study show that content marketing has a significant positive impact on brand loyalty. This aligns with Dwivedi et al. (2021), who observed that providing consistent and valuable content strengthens the relationship between a brand and its customers, ultimately boosting loyalty. In the cybersecurity industry, where trust is crucial, content marketing that informs and reassures customers about the reliability of security solutions can play a critical role in fostering brand loyalty.

Hypothesis 2: The findings indicating that content marketing has a significant impact on perceived quality. This is consistent with the findings of the study conducted by Koob (2021), which showed that effective content marketing characterized by the enhancement of customer-perceived content value and compliance with standard content quality norms, significantly boosts content marketing performance. Thus, the cybersecurity vendors should maintain a positive perceived quality, as it fosters trust and demonstrates expertise in an area where customers are particularly worried about security threats.

Hypothesis 3: The study demonstrates that perceived quality has a strong positive effect on brand loyalty. This finding is consistent with the observations of Tran (2023), Supiyandi (2022), and Akoglu (2022), who noted that perceived quality plays a substantial role in enhancing brand loyalty. For cybersecurity suppliers operating in the Egyptian banking

industry, perceived quality is essential since it has a direct bearing on client loyalty and confidence. Banks depend on these suppliers to protect sensitive financial information, and a high level of quality assurance guarantees a long-term collaboration and goodwill, which eventually helps the vendor's long-term profitability.

Hypothesis 4: Similarly, the study indicating that perceived quality mediates the positive relationship between content marketing and brand loyalty. This finding aligns with the research of Aquinia and Wahyudi (2021), which emphasized that higher perceived quality leads to an increase in brand loyalty. In other words, the overall quality of the product meets customers' perceptions and fulfills their expectations.

The study's findings highlight that customer retention is a crucial result of successful content marketing. This aligns with Verma et al. (2021), who observed that content marketing not only helps in attracting new customers but also significantly contributes to retaining current ones. However, the study also underscores the difficulties in accurately assessing the exact influence of content marketing on brand loyalty. However, Oliveira and Ferreira (2021) highlight the complexity of directly linking brand loyalty to content marketing, as other factors like customer service and product performance also play a significant role. For cybersecurity vendors, establishing strong metrics and

analytics to assess content marketing effectiveness is essential for refining their strategies.

The results of this study carry important implications for cybersecurity vendors serving the Egyptian banking sector, suggesting that their content marketing strategies should not only highlight product quality but also strengthen perceived quality to enhance customer loyalty.

6. Research Implications

The finding offers valuable insights into how content marketing strategies can be utilized to strengthen brand loyalty within the specialized and crucial field of cybersecurity. This research has made notable contributions to the academic literature on content marketing and brand loyalty. First, it empirically validated the positive impact of content marketing on brand loyalty, confirming that the content must be unique and impactful to interact and educate the customer and make them more loyal (Barbosa, Saura, Zekan & Ribeiro-Soriano, 2024)., the study emphasized the direct positive impact of content marketing on brand loyalty, showing that effective content marketing strategies can greatly enhance customer loyalty within the cybersecurity industry (Johnson & Taylor, 2021). Second, it empirically validated the positive impact of content marketing on perceived quality, confirming that the content must be unique and impactful to lead the user to perceived this quality and is the content have poor quality users will not pay attention to it (Barbosa, Saura,

Zekan & Ribeiro-Soriano, 2024). Third, the study highlighted that perceived quality has a direct positive effect on brand loyalty. High perceived quality fosters a favorable brand impression, which motivates consumers to stay loyal to the brand (Supiyandi, Hastjarjo & Slamet, 2022). Additionally, this study offers valuable insights for cybersecurity vendors serving the Egyptian banking sector. By concentrating on content marketing strategies that highlight the technical superiority of their products and the reliability of their brand, vendors can strengthen brand loyalty (Miller & Lee, 2021). Furthermore, the importance of perceived quality as mediators suggests that content should be crafted not only to provide information but also to shape favorable perceptions of product quality ultimately enhancing customer loyalty (Chen & Xu, 2022).

7. Recommendations

Drawing from the findings on the relationship between content marketing and brand loyalty in the Egyptian banking sector, with perceived quality acting as a mediator, we offer several recommendations for cybersecurity vendors operating in this sector. Moreover, the research findings can assist cybersecurity vendors in enhancing their marketing approaches and fostering stronger relationships with their target audience. By implementing these recommendations, cybersecurity vendors can leverage content marketing to position themselves as reliable

partners for financial institutions in Egypt, resulting in increased brand loyalty and greater business success.

- Examine which content types (e.g., videos, blogs, webinars) and channels of distribution (e.g., email, social media, websites) work best to improve the perception of quality and, in turn, the level of brand loyalty in the banking industry.
- Examine how perceived quality mediates the relationship between content marketing and brand loyalty through the use of surveys or interviews to collect both qualitative and quantitative data from banking professionals and clients in the cybersecurity sector.
- Perform a comprehensive examination of various banking professionals within the sector to explore how differing views of perceived quality affect loyalty in relation to particular content marketing strategies.
- Implement longitudinal research designs to evaluate how the relationship between content marketing initiatives, perceived quality, and brand loyalty evolves over time, offering insights into the sustained effectiveness of these strategies within the ever-changing banking industry.
- Investigate how Egypt's unique cultural factors influence the success of content marketing strategies in developing perceived quality and loyalty, taking into account local preferences, values, and trust levels in the cybersecurity sector.

8. Limitations and Future Research

Although the study offers important insights, it does have certain limitations. A key limitation is its focus on the Egyptian banking industry, which could restrict the applicability of the findings to other regions or sectors (Jones & Kim, 2020). Furthermore, future studies could investigate the link between content marketing and brand loyalty across various regions or industries to gain a deeper understanding of this relationship. (Brown & Green, 2022). The limitation of non-probability quota sampling is its potential lack of generalizability. Since the sample is chosen based on predetermined quotas rather than through random selection, the findings might not accurately reflect the larger population. Additionally, although perceived quality is a key factor in shaping consumer perceptions, it is not the sole mediator of this relationship. Other variables, such as customer trust, satisfaction, and brand image, could also offer important insights into how content marketing initiatives by cybersecurity vendors impact brand loyalty. Future studies should investigate the connection between content marketing and brand loyalty in other key sectors, such as healthcare or financial services, where trust and perceived quality play a crucial role. Furthermore, exploring how various forms of content (e.g., text versus video) influence perceived quality could offer valuable insights into the ways different content strategies impact brand loyalty (Smith & Rogers, 2022).

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