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The Impact of Augmented Reality on Data-Driven Innovation Capabilities In Enhancing Customer Interaction: An Applied Study

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Abstract: The research aims to measure the impact of augmented reality on data-driven innovation capabilities (DDI) in enhancing Customer Interaction (CI) among employees at Nour Al-Kafeel Company, as the research variables represent an aspect that has not been sufficiently studied in the current literature. This objective was set to address the problem faced by the company, which was formulated in an important question: (Is there an impact of augmented reality on DDI in enhancing CI among the company's employees?). To address the problem, the research developed a questionnaire tool to collect the necessary data about employees and the levels of the research variables. A total of 100 survey forms were distributed, of which 83 were returned, 7 of them damaged and 76 valid for analysis, resulting in a response rate of 76%. For data analysis, the statistical package (SPSS & AMOS) was used, and after the analysis, the results showed that there is a correlation and influence between augmented reality, DDI, and CI. This highlights Noor Al-Kafeel Company's interest in revealing information related to its products by granting customers the right to compensation and discounts when exposed to the resulting risks. Noor Al-Kafeel Company is also keen to enhance CI by revealing innovation marketing ideas, which motivates customers to engage, repeat purchases, and enrich themselves with sufficient information about these products, encouraging them to try and satisfy their intrinsic desires. Based on this, the study recommended that Noor Al-Kafeel Company focus on using the principles of motivation, compensation, and rewards by investing in innovation ideas that lead to development and steering the company to safety, making it a leading company in the labour market and the first among competing companies in the same sector, which directs the maximum possible number of customers towards adopting and using its products available in the labour market.

Keywords: data-driven innovation capabilities (DDI), Customer Interaction (CI), Noor Al-Kafeel Company

Introduction

Customers' orientation towards large stores is not limited to seeking products alone, but also includes entertainment and evaluating stores based on the level of enjoyment they provide, as these stores attract wealthy customers who seek emotional gratification as a primary motive for consumption, which shapes their emotional expectations (Chang et al.,

2023), and in turn directly affects the actual happiness they derive from consuming the service and their satisfaction. Therefore, CI in the retail sector is extremely important because a customer's evaluation of a store is influenced not only by its functional quality but also by the quality derived from the emotions customers impart to the shopping experience, and in both pre-purchase and post-purchase processes, consumption experiences are highly diverse (Cachero-Martínez et al., 2024), as it is a strong activity that motivates the customer to make a purchase decision, and in consumer behaviour, CI represents a personal event of significant emotional importance, based on interaction with stimuli, which are the consumed products and services (Vrtana & Krizanova, 2023).

Interacting with customers is a highly important resource for small and medium-sized enterprises, as it directly affects the customer experience, which in turn is a critical factor in business success (Nethanani et al.,2024). In a highly competitive market, small and medium-sized enterprises cannot overlook the importance of maintaining strong customer relationships and ensuring efficient and responsive service operations. CI reinforced by DDI can help these businesses achieve these objectives by if immediate and accurate replies to customer inquiries, plummeting waiting times, and release human resources to focus on more multifaceted tasks (Christodoulou et al.,2025; Oham & Ejike,2024). Additionally, the data collected provides valuable insights into customer preferences and behaviours, enabling small and medium-sized enterprises to design their marketing strategies more effectively (Kedi et al.,2024).

Thanks to the technical advantages of providing product specifications and values to ensure positive CIs, innovation capabilities have become one of the most common tools for gathering information among corporate marketers, enhancing interaction between organisations and customers. Reciprocal opinions on a particular service or product are important to organisations, yet these standards also pose certain challenges, such as how to evaluate and improve DDI strategies to use them to increase sales and create an interactive dialogue with current or new customers (Alghizzawi et al., 2024).

From this perspective, DDI represent one of the key ways to enhance CI, as focusing on CI is one of the inspiring issues that improve the reality of companies and their marketing level, which in turn has encouraged many organisations to use different methods to enhance CI in order to participate in brand innovation and improve product quality, prompting these organisations to develop their capabilities through DDI.

Research Method

First: Research Problem

Global economic developments, including market economy, globalisation, technological advancements, and the emergence of many new products, have exacerbated the challenges of international competition, as institutions are now threatened with exiting the market if they cannot withstand this fierce competition and meet the increasing demand of consumers. Every era and place has its own requirements for excellence and progress (Akter et al.,2024), and the twenty-first century is the century of technology and innovative ideas, a century of abandoning old methods in favour of new and different approaches, and

making substantial improvements in all aspects of performance (Sultana et al.,2022). Technological advancement has also enabled institutions to achieve the concept of faster production, significantly contributing to increased production volume, market expansion, and intensified competition. This has also led to the contraction of local markets, prompting all industrial institutions to seek foreign markets to sell their products, as local markets are no longer able to absorb the full production (Sultana et al.,2024).

In order to keep up with developments and secure a larger market share, developed countries have been at the forefront of discovering production methods that enable them to achieve this, particularly in the production of high-quality products. The cases of Japanese and American organisations are a good illustration (Babu et al., 2024), in that they have led to the development of a new managerial philosophy and a fundamental shift in organisational management methods, namely marketing management. The challenge with the marketing management methodology is how to bring about the changes in the internal processes of the organization (Eriksson & Heikkilä, 2023).

Because operating in today\'s market demands great efforts in marketing products in the face of great competition, these organizations need to reach a wider customer base, and they do so by using different techniques in their field of activity (Wang et al., 2025). In order to keep their market position, they use certain marketing techniques, specifically, those associated with CI (Żyminkowska & Zachurzok-Srebrny, 2025). From this, the research problem can be formulated as a fundamental question: (Is there an impact of DDI on enhancing CI among the company's employees?), and to address this problem, it is necessary to determine a precise answer to the following subsidiary questions:

1. What is the level of DDI at Noor Al-Kafeel Company?.
2. To what extent does Noor Al-Kafeel Company possess the internal capabilities to enhance CI with its products?.
3. What mechanisms and methods can Noor Al-Kafeel Company employ to improve CI and increase its informational and social interaction?.
4. Can DDI improve CI?.
5. What is the nature and type of relationship between DDI and CI at the company?

Second: The importance of the research

The importance of this research stems from its focus on studying the topic of DDI and CI, which represent an aspect that has not received sufficient attention in the current literature. DDI create cognitive and value capacity for building and developing the company's products, as well as fostering a positive relationship between the customer and the organisation's brand. This, in turn, contributes to encouraging customers to engage with the company's brand and develop it by providing greater levels of satisfaction, loyalty, communication, emotional bonds, and trust toward the brand, and increasing their enthusiasm by utilising high levels of effort, activity, and cognitive flexibility during service provision, as well as harnessing customers' passion and willingness to offer the highest possible level of cooperation with employees.

The practical significance of this study is highlighted by the contribution of its results

in formulating a sound strategy that helps demonstrate the importance of DDI and CI among the surveyed sample, as well as directing the attention of the studied sample to use the dimensions of DDI to develop their potential and build a positive reputation with customers.

Third: The objectives of the research

The research aims to measure the impact of augmented reality on DDI in enhancing CI among employees at Noor Al-Kafeel Company, as CI and its participation in improving the company's directions represent one of the key points through which the company's reputation can be built and its competitiveness enhanced, in addition to increasing its productive and environmental capabilities by boosting demand for these products. The research also aims to guide the company in investing methods and mechanisms adopted by DDI to enhance CI, and aims to achieve the following:

1. To determine the level of DDI at Noor Al-Kafeel Company.
2. To identify the extent to which Noor Al-Kafeel Company possesses internal capabilities to enhance CI with its products.
3. To identify the mechanisms and methods that Noor Al-Kafeel Company can employ to improve CI and increase its information and social interaction.
4. To determine the extent to which DDI can improve CI.
5. To measure the nature and type of relationship between DDI and CI within the company.

Fourth: Hypothetical Plan and Hypothesis Development

In light of the above-mentioned study methodology and objectives, a hypothetical study arrangement was developed (see Figure 1) to signify the relationship between the study variables. This arrangement comprises a set of correlations and effects between the study variables, as follows:

The independent variable: data-driven innovation capabilities, surrounding three dimensions: (Marketing orientation capabilities, Infrastructure capabilities, innovation talent potential).

The dependent variable: Customer Interaction, signified by two dimensions: (Information Interaction, Social Interaction).

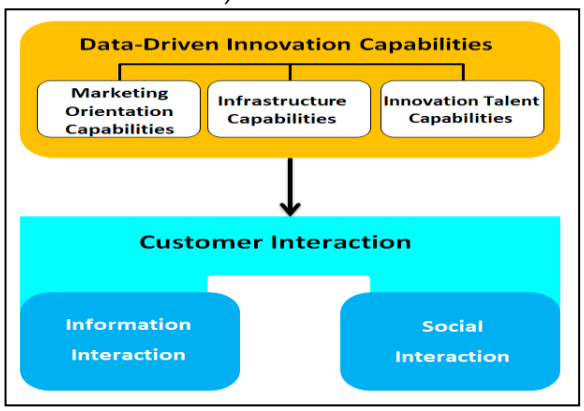

Figure 1. Hypothetical Plan of the Research

From Figure (1), two hypotheses can be developed:

H1: There is a correlation between DDI and CI, which can be broken down as follows:

1. There is a correlation between the DMO and all dimensions of CI combined.
2. There is a correlation between the DIN and all dimensions of CI combined.
3. There is a correlation between the DIT and all dimensions of CI combined.

H2: DDI have an impact on CI, which can be broken down as follows:

1. The DMO dimension has an impact on all dimensions of CI combined.
2. The DIN has an impact on all dimensions of CI combined.
3. The DIT dimension has an impact on all dimensions of CI combined.

Fifth: Research Sample

Noor Al-Kafeel Company for Animal and Food Products, affiliated with the Holy Abbasid Shrine, is considered one of the leading companies in animal and food production, supplying the Iraqi market with various types of animal, agricultural, and dairy products. The products of Noor Al-Kafeel are of high quality and reasonably priced, benefiting the ordinary citizen. Thanks to the support and guidance of the legitimate custodian of the Holy Abbasid Shrine, His Eminence Sayyid Ahmed Al-Safi (may his dignity be preserved), Noor Al-Kafeel has expanded its reliance on national products and encouraged national projects such as fruit juice, dairy, and egg enterprises. The company director has also been keen to invest in youth talent within the company, translating their ideas into projects that serve the citizen and striving to advance the national production sector by establishing or contracting with local factories and employing the largest possible number of national workforce. Noor Al-Kafeel Company began establishing direct sales centres in the holy province of Karbala, then in Najaf al-Ashraf and the capital Baghdad, and today, thanks to the efforts of its director, it has reached most of the Iraqi provinces. The company monitors all stages of material production through specialised committees formed by the Al-Kafeel Islamic Centre affiliated with the Holy Abbasid Shrine, and the company management directly supervises from the initial steps of production, ensuring the safety of the products and their compliance with international standards until they reach the hands of the esteemed citizen. Based on this, Noor Al-Kafeel Company was chosen as the sample for the current research; 100 survey forms were distributed, 83 were returned, including 7 damaged forms and 76 valid forms for analysis, resulting in a response rate of 76%.

Result and Discussion

First: Data-Driven Innovation Capabilities

The Concept of Data-Driven Innovation Capabilities

DDI are a company's ability to use data, advanced analytics, and technologies (like AI/machine learning) to innovate new products, services, and business models (Pietronudo et al., 2022), to gain a competitive advantage through data-driven insights, process improvement, and agility in dynamic markets (Eriksson & Heikkilä, 2023). These key

components, including technological readiness, analytical skills, market orientation, talent, and a data-driven culture, allow companies to sense, interpret, and act on market opportunities before competitors (Bhatti et al., 2024).

Described innovation (Ravat et al.,2024) as new combinations, where untested techniques are used to: produce a new product, produce an existing product in a new way, discover a new source of supply, identify a new outlet for products, and reorganise the industry. In contrast, innovation is defined as the application of a new or significantly improved product (good or service), a new process, a new marketing method, or a new organisational method in business practices, workplace organisation, or external relations (Alaskar, 2025). In fact, organisational capabilities are information-based processes that typically evolve within specific functional areas. However, they may also develop through diverse combinations of resources at the organisational level (Babu et al., 2024).

The term DDI here refers to innovation that uses data as a fundamental component (Al-Khatib, 2025). described it (Chatterjee et al.,2024) as business innovation that largely depends on data investment and is capable of creating positive economic and social impacts. Companies seek new ways to use data and analytics to support decision-making, improve organisational processes, or innovate new methodologies to address challenges and create value for customers (Jetzek et al., 2014). Companies also engage in innovation as they anticipate economic benefits from this innovation, as digital transformation has led to the accumulation of vast amounts of data by many companies daily (Akter et al., 2021).

Researchers have recently increasingly focused on the use of data in innovation, particularly on leveraging big data, which is characterised by its huge volume, variety, and velocity (Wong & Ngai, 2024). Some studies emphasise the requirements of analysis, while other researchers focus on real-time information or unstructured data that can be obtained, for example from social media (Lee et al., 2024). Big data has been found to constitute a structural resource, given its potential to be used in various ways to produce different services or products (Wong & Ngai, 2025).

DDI refer to an organisation's aptitude to collect, manage, analyse and efficiently use data to generate new ideas, improve events, and grow innovative products, facilities or business models (Ghosh et al., 2025). These capabilities mix technological, human and organisational rudiments to transform raw data into criminal insights that provision innovation (Kissi, 2024).

The Importance of Data-Driven Innovation Capabilities

DDI can help organizations anticipate market trends, personalize customer experiences, improve operational efficiency, and achieve a sustainable competitive advantage in fast-changing, knowledge-rich environments (Dinter et al., 2017). The importance of DDI is that it allows organizations to use data as a strategic resource to support innovation and decision-making in a complex and rapidly evolving business environment (Babu et al., 2024), converting large and diverse data into actionable knowledge and insights that can lead to new products and services, as well as enhanced organizational processes (Jetzek et al., 2014).

By using evidence and analysis instead of intuition, these DDIs increase the precision of strategic decisions, which reduces risks and improves performance efficiency (Chen et al., 2024). Organizations can anticipate market trends and gain a deeper understanding of customer behavior through DDI, which leads to customer-oriented customization and innovation (Awan et al., 2021).

Dimensions of Data-Driven Innovation Capabilities

The variable of DDI is measured finished three dimensions (Alghamdi & Agag, 2024):

a. **Marketing orientation capabilities**: Marketing orientation capabilities reflect the core competencies of the organization to understand and meet customer needs (Dinter et al., 2017) by gathering market information, distributing it and reacting to it (Pietronudo et al., 2022). These capabilities include market sensing (understanding customers), brand management, and customer relationship management, and they represent an evolution from more basic concepts like production, product, and sales to market orientation (customer focus and meeting customer needs innovatively), and are critical for increasing competitive advantage and sustaining growth (Wong & Ngai, 2024).
b. **Infrastructure capabilities**: Infrastructure capabilities are the ability of an organization to deliver the fundamental services required for economic and social activity, including water, energy, transport, and communications (Dinter et al., 2017). They include the ability to grow, respond to threats (such as cloud resilience), manage critical systems, and incorporate technology such as cloud computing, which is a key enabler of development and enhanced quality of life (Pietronudo et al., 2022). They also represent the availability and effectiveness of the physical, technical, and organizational resources that provide the basic support for the work of an organization and enable it to conduct activities in an efficient and effective manner (Wong & Ngai, 2024). These include technological infrastructure such as information systems, communication networks, and databases, physical infrastructure such as buildings and equipment, and organizational and procedural structures that govern workflow.
c. **Innovation talent capabilities**: Innovation talent capabilities (Dinter et al., 2017) are the skills, competencies, and cognitive and behavioral attributes that individuals possess that enable them to generate new and innovative ideas and convert them into usable solutions that create value for the organization; these include innovation thinking, unconventional problem-solving, continuous learning, effective knowledge acquisition and application, and mental flexibility with a willingness to experiment and take calculated risks (Pietronudo et al., 2022 ;Wong&Ngai,2024).

Second: Customer Interaction

The Concept of Customer Interaction

The concept of CI seemed in marketing works over the past decade and has been labeled as a precursor to consumer acquisition and brand loyalty. CI is defined as the emotional, cognitive and behavioural engagements with the brand (Lee, 2020). It manifests in four sources of value obtained by the customer: lifetime value, which refers to the

purchases a customer makes from the brand (Guerola-Navarro et al., 2021), including customer recommendations to other customers to buy the brand's products; influence value, which refers to customers' willingness to talk about and share their purchase experiences with the brand with others (Nicolescu & Tudorache, 2022); and feedback, which includes the information a customer provides to the brand such as suggestions or complaints, and also encompasses online product reviews on e-commerce sites (Khan et al., 2022).

CI encompasses any communication and interaction that the organization has with the customer during the purchase decision process, from brand awareness to post-purchase, and aims to foster a relationship to create loyalty and satisfaction (Baashar et al., 2020). It includes direct interactions (phone, support) and indirect interactions (social media, self-generated content, advertisements), and it extends beyond satisfaction to include cognitive, emotional, and behavioral aspects (Adam et al., 2021).

CI is the sum of the behaviors and the cognitive, emotional, and behavioral reactions of the customer from direct or indirect contact with the organization or the brand across all touchpoints (AlHarbi et al., 2016), which also represents the degree of customer participation in marketing activities, such as information exchange, feedback, digital communication, and product or service development (Heinonen et al.,2018).

This concept of CI has changed in recent years as more companies try to find new ways to appeal to customers and keep them loyal; in the past, a good product or service (Subagja et al., 2023) was sufficient, but recent data and analytical tools demonstrate that interaction is a strong influencer in the decision of the customer to purchase. In today\'s world, CI is a hot topic everywhere, but many people are still unclear about the concept of CI (Guerola-Navarro et al.,2024). CI involves building an ongoing relationship between the company and the consumer that goes beyond merely completing the transaction (Monfort et al.,2025). It is a conscious and consistent approach adopted by the company to provide added value in every CI, thereby enhancing loyalty (Huang et al.,2024).

Customer engagement refers to the extent to which they communicate and interact with each other on social media platforms, where customers participate in these platforms to engage with peers with shared interests and other brands to gain added value, such as entertainment, keeping up with the latest trends, and reading product reviews, which in turn strengthens the relationship between consumers (Cheung et al., 2020). Specifically, customers share and enjoy their experiences and express themselves on these platforms, which in turn enhances community relationships and thus encourages the exchange of information among members of the online community (Coelho et al., 2019).

The Importance of Customer Interaction

CI is an important indicator of the strength of the relationship between the customer and the organisation, as it contributes to enhancing satisfaction, loyalty and trust, leads to an improved customer experience and creates shared value for both parties, in addition to supporting a sustainable competitive advantage in a dynamic marketing environment (Nicholls & Gad Mohsen, 2019). CI is important in this competitive and changing business environment because it helps organisations understand the needs and expectations of

customers, which allows them to create products and services that are more in line with what the customer actually wants and enhance their experience (Nicholls, 2011).

CI also results in higher levels of satisfaction and loyalty, as the customer is being recognized and included in the marketing, which creates an emotional attachment to the brand and lowers the propensity to switch to competitors (Sheth et al., 2023), and it motivates positive word-of-mouth and increases the good word-of-mouth about an organisation, especially online and in social media (Eckert et al., 2022). CI is also a source of information and innovation ideas that organisations can leverage to use customer opinions and feedback to improve performance and innovation (Coelho et al., 2019), and hence CI is a strategic tool to enhance competitive capability and deliver sustainable shared value for the organisation and its customers (Rane et al., 2023).

Dimensions of Customer Interaction

The CI variable was measured finished two dimensions (Cao et al., 2021):

a. **Information Interaction**: It is noted that information conversation includes user interfaces connected to the creation, brand, and marketing information (Liu et al., 2021). Online social media platforms are considered effective platforms for searching and obtaining information, as they enable its exchange among customers (Rachmad, 2024). Members of these platforms share their brand consumption experiences in a purposeful manner concerning product usage, brand knowledge, technology, market information, and other consumption-related aspects. Purposeful brand consumption experience means that customers share their personal understanding of the brand through their unique consumption experiences, helping them feel a sense of belonging, importance, and understanding from other customers (Smith & Moore, 2020). Therefore, online social media platforms are electronic platforms where information is distributed from highly diverse sources (Ismagilova et al., 2022).
b. **Social Interaction**: Social Interaction is an integral part of customer engagement on social media platforms. Members of these platforms express their personal opinions or direct experiences through this interaction (Bell, 2020). In this way, they offer and receive emotional support and social communication from other members on the forum. As a result, this self-disclosure enhances trust and closeness among platform members (Czeszumski et al., 2020). A recent study found that brands encourage interaction among consumers on social media platforms to exchange knowledge. Social Interaction refers to the personal interactions between platform members, which are not directly related to the brand's product but are essential for building and developing social relationships among members, contributing to positive consumer behaviours (Kolhar et al., 2021).

Part Three: The Practical Aspect

First: Describing and Coding Research Variables

This step purposes to present the symbols on behalf of the variables and the measurement tool substances, helping the reader to properly understand the results and if a clear view of the objectives the study seeks to disclose. Therefore, Table (1) exemplifies the

coding and account of the study variables.

Table 1. Coding and Describing Variables

Variables	Dimensions	NO.	Code		Source
data-driven innovation capabilities	Marketing orientation capabilities	9	**DMO**	**DDI**	**Alghamdi& Agag,2024**
	Infrastructure capabilities	7	**DIN**		
	Innovation talent capabilities	6	**DIT**		
Customer Interaction	Information Interaction	**3**	**CIN**	**CI**	**Cao et al.,2021**
	Social Interaction	**5**	**CSO**		

Second: Normality Test

Results presented in Table (2) show the data analysis of the research variables. A normality test was conducted to determine that the data are normally distributed. The significance value is higher than 0.05 (p>0.05), therefore the data are normally distributed, the null hypothesis that the data from the study sample follow a normal distribution was accepted and the alternative hypothesis was rejected.

Table 2. Normality Test for Study Variables

NO.	Kol-Smia		Sig.	
DMO	**0.169**	**0.132**	**0.083**	**0.062**
DIN	**0.148**		**0.098**	
DIT	**0.161**		**0.123**	
CIN	**0.188**	**0.160**	**0.117**	**0.078**
CSO	**0.143**		**0.107**	

Third: Analysis of the Measurement Instrument's Reliability

Table (3) displays the overall reliability of the measurement tool (0.879) for the variable DDI with (3) dimensions and (22) items, and the reliability of its dimensions, which ranged from (0.853) for the Infrastructure capabilities dimension to (0.860) for the Innovation talent capabilities dimension.

The results designated that the dependent variable (CI), signified by two dimensions comprising eight items, attained a reliability of (Cronbach's Alpha =0.860). The reliability of its dimensions reached from a minimum value of (0.873) for the Social Interaction dimension to a supreme value of (0.880) for the Information Communication dimension, demonstrating constancy in the questionnaire items.

Table 3. Cronbach's Alpha Parameter

Variables	Dimensions	NO.	Cronbach's Alpha		
DDI	**DMO**	9	**0.857**	**0.843**	**0.879**
	DIN	7	**0.853**		
	DIT	6	**0.860**		
CI	**CIN**	**3**	**0.880**	**0.860**	
	CSO	**5**	**0.873**		

Fourth: Statistical Description and Exploratory Factor Analysis

The results of Table (4) indicate a clear focus by Noor Al-Kafeel Company on improving DDI, achieving a mean score of (3.60) with a standard deviation of (0.56). This is attributed to the company's emphasis on adopting the Marketing Orientation capabilities (DMO) dimension, achieving a mean of (3.61) and a standard deviation of (0.57). Meanwhile, there is relatively little attention to the Infrastructure Capabilities (DIN) dimension, with a mean of (3.59) and a standard deviation of (0.89). This demonstrates Noor Al-Kafeel Company's interest in establishing a marketing channel dedicated to handling customer complaints regarding offered products, providing quick solutions to develop products and align them with customer needs, which in turn leads to prolonged product lifecycle and achieving good and acceptable revenues and profits.

The results in Table (4) indicate a clear interest by Noor Al-Kafeel Company in improving CI, achieving an arithmetic mean of (3.61) and a standard deviation of (0.57). This is due to their orientation towards the Social Interaction CSO dimension, where they have a higher arithmetic mean (3.65) and a higher standard deviation (0.68) than the Information Interaction CIN dimension, where they have a lower arithmetic mean (3.56) and a lower standard deviation (0.64); which demonstrates how Noor Al-Kafeel Company emphasizes strengthening their capabilities with customers by improving its marketing orientation and infrastructure by investing in innovation talents, which in turn improves Information and Social Interaction that positively affects customer experience and leads to loyalty and satisfaction with its products.

The results in Table (4) also show that the normal fullness values for the research variable items are acceptable, as the fullness value exceeded 0.60 at a meaning level of less than 0.00001. Moreover, all the items intended to measure the research variables signify this variable and help in explanation it.

Table 4. Statistical Description and Exploratory Factor Analysis Saturations

NO.	Mean	Std. Deviation	Component Matrix DDI			CI	
			DMO	DIN	DIT	CIN	CSO
DMO1	3.60	0.90	0.804				
DMO2	3.48	1.06	0.788				
DMO3	3.65	0.85	0.794				
DMO4	3.74	0.88	0.863				
DMO5	3.72	1.07	0.815				
DMO6	3.64	0.85	0.860				
DMO7	3.52	0.84	0.921				
DMO8	3.46	0.98	0.910				
DMO9	3.65	0.98	0.871				
DMO	**3.61**	**0.57**					
DIN1	3.52	0.91		0.977			
DIN2	3.67	0.93		0.837			
DIN3	3.48	0.91		0.793			
DIN4	3.56	1.08		0.872			

NO.	Mean	Std. Deviation	Component Matrix DDI			CI	
			DMO	DIN	DIT	CIN	CSO
DIN5	3.75	0.84		0.809			
DIN6	3.62	1.00		0.908			
DIN7	3.56	0.84		0.909			
DIN	**3.59**	**0.89**					
DIT1	3.59	0.95			0.875		
DIT2	3.69	0.89			0.881		
DIT3	3.65	0.78			0.851		
DIT4	3.44	0.82			0.875		
DIT5	3.56	0.97			0.936		
DIT6	3.61	0.98			0.892		
DIT	**3.60**	**0.66**					
DDI	**3.60**	**0.56**					
CIN1	3.53	1.02				0.815	
CIN2	3.43	0.80				0.810	
CIN3	3.73	0.90				0.856	
CIN	**3.56**	**0.64**					
CSO1	3.74	1.08					0.827
CSO2	3.28	0.81					0.908
CSO3	3.49	0.81					0.949
CSO4	3.79	0.97					0.900
CSO5	3.97	0.99					0.912
CSO	**3.65**	**0.68**					
CI	**3.61**	**0.57**					

Sixth: Hypothesis Testing and Path Analysis

H1: There is a correlation between DDI and CI.

As seen in Table (5), DDI and CI have a strong correlation of (0.833), where the sample emphasizes the priorities of the relationship between the dimensions of these variables, with correlation strengths ranging from (0.721) between the Innovation Talent Capabilities DIT dimension and the Social Interaction CSO dimension, to (0.919) between the Infrastructure Capabilities DIN dimension and the Social Interaction CSO dimension. This demonstrates Noor Al-Kafeel Company\'s commitment to improving CI by uncovering marketing ideas for innovation, which can trigger customer engagement, repeat purchases, and increase knowledge about the product, which can lead to trying the product and meeting their internal needs.

Table 5. Correlation Matrix

	DMO	DIN	DIT	DDI	CIN	CSO	CI
DMO	1						
DIN	.756**	1					
DIT	.708**	.755**	1				
DDI	.903**	.926**	.897**	1			
CIN	.822**	.802**	.871**	.712**	1		
CSO	.723**	.919**	.721**	.830**	.585**	1	
CI	.803**	.923**	.812**	**.833****	.890**	.890**	1

H2: DDI have an effect on CI.

The results in Table (6) and the cross-sectional data in Figure (2) show that DDI has a significant impact on CI: the estimated coefficient is (0.853) with a standard error of (0.087) and a critical value of (9.805), reflecting that Noor Al-Kafeel Company realizes that DDI is an important factor for CI because it is focusing on the needs of DDI to improve CI and establish a connection between augmented reality, DDI, and CI, indicating that Noor Al-Kafeel Company is interested in sharing information about its products with customers and compensating them with discounts when they are exposed to the risks of its products.

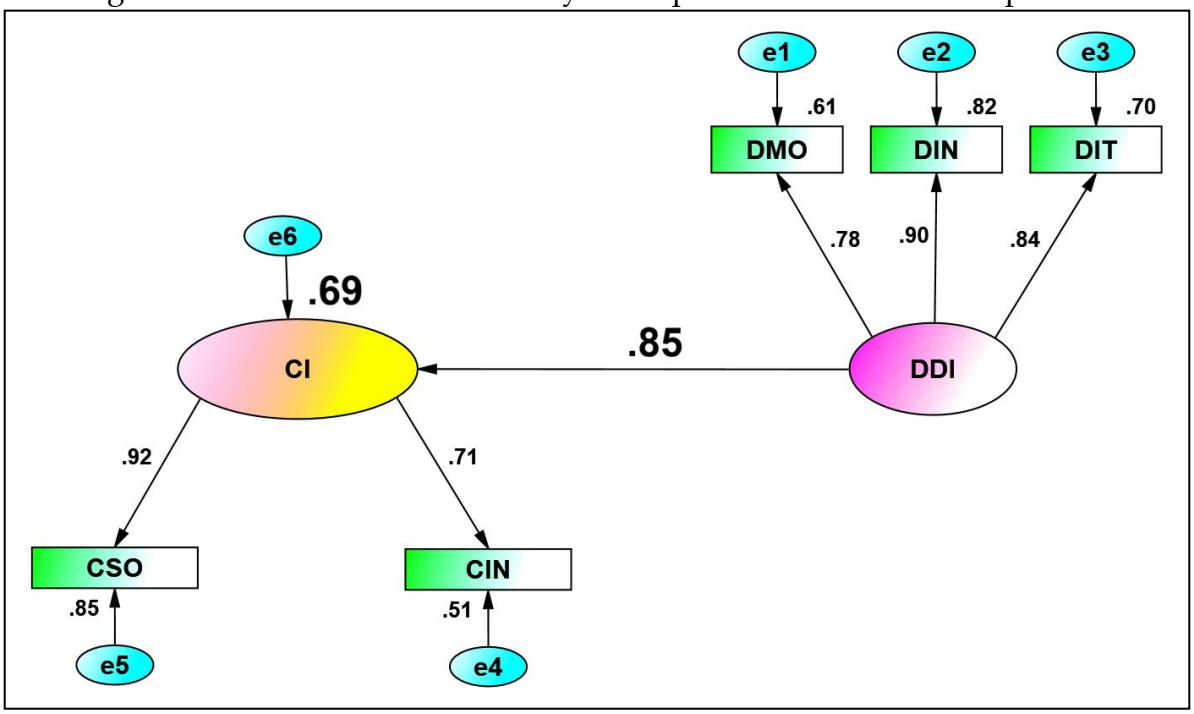

Figure 2. Path Analysis of the Effect of DDI on CI

DDI contributed to explaining (0.694) of the variance in CI, while the remaining value falls outside the scope of the study.

Table 6. Results of the Path Analysis of the Effect of DDI on CI

Path			Standard weights	standard error	critical value	R^2	P
DDI	**--->**	**CI**	**0.853**	**0.087**	**9.805**	**0.694**	***

Conclusion

The research results showed that There is a correlation and impact between augmented reality, DDI and CI, which highlights Noor Al-Kafeel Company's interest in revealing information related to its products by granting customers the right to compensation and discounts when exposed to risks arising from this. It also keen to Noor Al-Kafeel Company is enhance CI by revealing innovation marketing ideas, which motivates customers to engage, repeat purchases and enriches them with sufficient information about these products, encouraging them to try and satisfy their internal desires. as well as focuses Noor Al-Kafeel Company on strengthening the relationship between customers and their capabilities by improving their marketing orientation and developing infrastructure through investing in innovation talents, which enhances Information Interaction and social interaction, positively reflecting on the customer experience and achieving loyalty and satisfaction with its offered products.

On the other hand, the focuses Noor Al-Kafeel Company on customer engagement through its brand by offering products that suit customer tastes and satisfy them, thereby building a positive reputation in the company's market among customers. And Noor Al-Kafeel Company is concerned with establishing a marketing channel that addresses customer complaints regarding the offered products, which provides quick solutions to improve the products and align them with customer needs, which in turn leads to the prolonged lifecycle of the product and achieves good and acceptable revenues and profits.

Based on the research findings, the study proposed several recommendations, the most important of which are It is essential for Noor Al-Kafeel Company to focus on the principle of motivation, compensation and rewards by investing in innovation ideas that lead to the development and safe progression of the company, making it a leading company in the labour market and the foremost among competing companies in the same sector, which in turn guides the maximum number of customers towards adopting and using its products in the market. In addition ensure commitment Noor Company should with its employees by strengthening family bonds, behavioural, ethical and emotional values, and promoting a culture of learning and trust between employees and management.

On the other hand, it is necessary to focus on the need for Noor Company to focus on building interactive relationships with customers to gather precise information about the nature of its products and their suitability to customer needs, and whether they fulfil their personal desires, which positively contributes to enhancing and increasing internal productivity and improving its competitive advantage sustainably.

On this basis, the company should aim for future prospects that encourage learning, development and training opportunities, as they form the foundation for enhancing the company's standards and the skills of its employees, thereby refining their internal expertise. It should also support creative efforts and participation that achieve its goals

towards meeting sustainable development standards, as it represents the main interface for both the community and the world at large.

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