



Sweeping Innovation and its Impact on Relational Ties

Wasan Jawad Kadhim

Lecturer, Southern Technical University Technical Institute of Amara

wasan.jawad@stu.edu.iq

Rafal Hamzi Naji Alhajji

Assist. Lecturer, University of Maysan / College of Administration and Economic

rafalhamzi@uomisan.edu.iq

Abstract: The research aims to reveal the relationship and impact between metacognitive thinking through its dimensions (planning, monitoring and control, evaluation) and soft skills through their dimensions (communication with others, self-development, use of cognitive skills, self-control, effective decision-making, dealing with differences and contradictions, and handling criticism and difficult situations). Identification of the research problem involved a set of questions that examined the nature of the relationship and effect of the study variables. Based on this, a hypothetical research model was developed, which states two major hypotheses. These hypotheses were put to the test a number of times in order to determine their legitimacy. The data collection tool used was the questionnaire and the study followed a descriptive-analytical research methodology.

The study sample included 323 leaders and subordinates who were selected in ten private schools found in the Al-Najaf Governorate. Out of 372 respondents that are the total research population, 188 respondents were chosen at random to collect data. Subsequently, the interpretation of the obtained data was performed using a combination of statistical methods, namely, the tau correlation coefficient of Kendall, simple and multiple determination coefficients. All the statistical calculations were done with SPSS version 23.

The research has made several findings among which the most important is that metacognitive thinking is the ability of an individual to externalize awareness and cognitive abilities into observing, altering and controlling cognitive processes in relation to learning competencies, experiential knowledge and creative imagination. Such ability enables individuals to operate in terms of knowledge-based frameworks that are founded on experience and, therefore, provide the capacity to address organizational challenges and issues.

Therefore, people can present their ideas in a convincing and unique manner, which utilizes leadership skills, activity, and interaction with clients when delivering educational services.

Among the major recommendations is that the organization in question needs to design a concise and explicit vision relating to the components of metacognitive thinking, as this construct is the highest stage of the cognitive processing, and individuals need to plan, observe, and analyze their strategic choices and mental activities constantly. Specific focus is to be put on the self-monitoring and the way people use metacognitive processes when performing work duties, thus contributing to the organizational success and maintaining competitiveness through the use of complex competencies and expert knowledge in a competitive environment.

Keywords: Disruptive Innovation, Destructive Innovation, Relational Ties.



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Chapter One

Study Methodology

First: The Research Problem

There have been great shifts and accelerated technology in the mobile phone production industry. The competition on prices has become an irrevocably connected network of online interconnected relationships, otherwise known as relational ties. The demand of mobile phones in Iraq has continued to increase, a trend that has been accompanied by growth and spread of these relational networks which in their turn creates a highly competitive market environment to firms.

The research problem attempts to explain the nature of such linkages and whether understanding them can result in the ability of the people to manage their relationships better, make better purchases, and achieve high customer loyalty levels and influence consumer behaviour.

Put differently, this paper aims to research how the three main components of relational ties, which are financial ties, social ties and structural ties affect disruptive innovation.

Considering the diversity and uncertainties involved in consumer tastes and preferences, it is difficult to have a specific framework that can be constructed to cater to the variability. However, when dealing with competitive market where the mobile phone market is highly competitive, it is oftentimes that individual preferences are quite clear. Based on this, the current study will attempt to empirically and methodically determine which product will be selected most optimal.

In line with this, the research problem can be stated as follows questions:

1. Does disruptive innovation result in high customer value in the sampled?
2. Is there any effect of relational ties on customer preferences in the sampled study?
3. Does disruptive innovation have a connection with relational ties in the research sample?

Second: The Importance of the Study

This paper aims to determine how far relational relationships determine consumer preferences in the choice of a mobile device, that is, between Samsung and Apple, in the background of the emerging telecommunication industry in Iraq.

Both companies strive to develop long term relationships with their clients, hence enabling acquisition of meaningful marketing intelligence with which marketing strategy and strategic formulation is informed.

Since relationship and relational tie strategies help firms to achieve more detailed knowledge of their customers requirements, they can then serve their customers more efficiently at lower costs than the acquisition of new customers which usually ends up as more costly.

The importance of this study is complex in that it involves the financial aspect of people, their preferences and how the two variables are combined to form a framework that incorporates both the intended and actual purchasing behavior based on the relationship. In addition, it examines how these connections can be helpful in discovering disruptive innovation.

In this regard, the study significance may be summarized as follows:

1. Determining relational relationships: structural, financial, and social and clarifying the philosophical processes that take place behind the scenes to purchase a given product.
2. Establishing the standpoints about the correlation between disruptive innovation and relational ties.
3. According to the relationship between the relationship ties and disruptive innovation and defining the nature of relationship between them in the various dimensions.

4. Having a clear conceptual framework of the substantive factors that motivate the behavior of people, on which the processes of the decision making are based.

Third: Research Objectives

The main aim of the research is to explore the impact of relational relationships, which are structural, financial, and social, on the choice of individuals in the type of mobile communications device to choose. The research will achieve this purpose by having the following specific sub-objectives:

1. To test disruptive innovation and test the variables within it, thus clarify the cause and effect relationships between disruptive innovation and high customer value.
2. To determine how relational ties can influence the preferences of people when choosing a mobile phone.
3. To establish the type of relationship that exists between disruptive innovation and relational ties.

Relational Ties

Over the past few years, online social sites have been able to proliferate and provide users with the ability to share and transmit personal stories, views, remarks, information, and experiences about products. To develop customer loyalty in competitive situations, and to develop unique models that can be used in marketing research studies conducted in various environments, the researcher Helen (2011, p.2) was able to determine the most salient variables that affect the decisions of participants in the media exchange behavior. The ties established the three main types of relationships, namely financial, social, and structural ties, and with these three, Helen offered an extensive framework of how the process of relationship could help to achieve success. Even though there might be other variables that can also be involved in the maintenance of long term customer relationship, the three dimensions are the pillars under which the other relational factors are based.

Previous research has recognized three types of relational ties, namely, financial, social and structural relational ties as the areas of emphasis of customer retention tactics (Berry, 1995). This taxonomy was taken up subsequently by Berry (1995), Peltier and Westfall (2000) and Williams et al. (1998) to examine the implications of these relational bonds.

Scholars have suggested that one of the driving factors that encourage consumers to engage into relational interactions is seeking financial benefits (e.g., Berry, 1995; Gwinner et al., 1998). However, although the aspects of financial interdependencies seem to be beneficial in terms of customer loyalty, other researchers argue that such associations are placed at the very bottom of the pyramid of relationship ties, as price is the most easily duplicable feature among the rival and competing companies (e.g., Peltier and Westfall, 2000; Zeithaml and Bitner, 2003).

Social and Structural Ties

Social ties are theorized as personal relation which relates to interpersonal aspects of service provision, which include human interaction, relationship building (Wilson, 1995), and identity building (Turner, 1970). A social bonding strategy has significant advantages to the customer, since it results in strong service relationships (Gwinner et al., 1998). These social connections positively influence customers' emotions and feelings associated with their service experiences, contributing to the formation of the emotional component of attitudes all of which are prominent aspects of intimate and high-quality relationships (Thorbjørnsen et al., 2002).

Therefore, although *social ties* alone may not permanently bind a customer to a company, they are ultimately more difficult for competitors to imitate (Wilcox King & Zeithaml, 2003). Several researchers (e.g., Berry, 1995; Peltier & Westfall, 2000) have suggested that social ties occupy the *intermediate level* in the hierarchy of relational bonds and help companies protect themselves from competitive price pressures.

Finally, **Berry (1995, p. 241)** noted that marketers practicing *relationship marketing* rely on *structural bonds* when “a solution to the customer’s problem is designed within the service delivery system.” Structural bonds offer customers *value-added benefits* that are difficult or costly for them to obtain elsewhere (Berry, 1995, p. 240).

From an *industrial marketing perspective*, **Turnbull and Wilson (1989, p. 233)** explained that effective *structural bonds* “create value for customers and either require investment by the buyer that cannot be recovered if the relationship ends, or would be costly if the buyer had to provide the service themselves upon changing suppliers.” Accordingly, *structural ties* refer to *value-added services* embedded in the service delivery system including specialized knowledge, industry information, and product customization which are not readily available elsewhere and would be expensive for customers to obtain if the relationship were terminated.

Furthermore, since customers perceive the provision of information, knowledge, and goods/services by businesses and their participation in such exchanges as a form of *mutual relational investment and adaptation*, these *value-added services* contribute to building *customer loyalty* by creating a *psychological barrier* to ending the relationship.

In turn, several studies suggest that *structural bonds* occupy the *highest level* in the hierarchy of relational ties. Accordingly, the following propositions are suggested:

1. The effects of *financial, social, and structural bonds* on customer loyalty differ.
2. The *positive effect* of *social bonds* on customer loyalty is greater than that of *financial bonds*.
3. The *positive effect* of *structural bonds* on customer loyalty is greater than that of *social bonds*.

Social Exchange and the Role of Service Encounters

Social exchange has a significant impact on a company’s *reputation* and, consequently, on *buyers’ intentions* and their willingness to *cooperate in the future* with employees. However, when *trust* derived through *collaboration* (the social factor) is introduced into the model, it fully mediates the effects of *perceived fairness, reputation, and outcomes*. This fact can be used as evidence that trust, developed by cooperative relationships, can influence the future development in business relationship even more significantly than equitable compensation and reputation in isolation.

The Role of Service Encounters

Past literature has emphasized the importance of service encounters to companies. As an illustration, a critical impact of such encounters is the purchase intentions, quality of relationship, and loyalty of the consumers (Bitner et al., 2000). Operational definition of a service encounter is the temporal period of interaction where the consumers directly interact with a service (Lovelock, 2001). These interactions may occur in the *physical service environment, over the phone, by mail, or even online* (Bitner et al., 2000).

Earlier research on service encounters primarily focused on *face-to-face interactions* between individuals (Morgan & Chadha, 1993). However, in order to *reduce costs* and *enhance customer convenience*, many companies have redesigned their customer interaction processes. Instead of encouraging *direct personal contact* between customers and company representatives, these companies now promote *lower-contact modes*, where customers interact *remotely* with company personnel (Lovelock, 2001). Consequently, more recent research has begun investigating *human-to-machine encounters*.

Across all of these settings, the same *three types of relational bonds* financial, social, and structural can be applied in a company’s efforts to maintain *long-term customer relationships*. However, because *financial bonds* are easily imitated and offer little long-term differentiation from competitors (Peltier & Westfall, 2000), discussions of their effects on *customer loyalty* within service encounters are typically excluded.

Social Bonds and Their Influence Across Service Encounter Types

Social bonds, however, may influence customers differently across various types of *service encounters* namely, *person-to-person*, *interactive voice response (IVR)*, and *internet-based interactions*. In *person-to-machine encounters*, customers primarily receive services through *self-service technologies*, which, according to **Sauer and Burton (1999)**, make it difficult to reproduce social elements.

In a research that was carried out by Donthu and Garcica (1999), it was found out that the social, economic, motivation, and behavioral profile of internet users differed significantly with the profile of consumers carrying out an offline shopping. Moreover, the pressure of the sales representatives reduced makes it easier to influence the inclination towards online shopping among consumers. In this context, the interactive voice response systems provide easy access and delivery of information at right time; but rarely provide interpersonal communication and sincerity between customer and service providers.

On the same note, in a virtual world, even though the online interactions can also be used to conduct two-way dialogues, online consumers often have restrictions due to lack of face to face interaction that defines remote purchases (Croft, 1998). In short, while *online retailers* can attempt to build social bonds with customers through *personalized emails*, *customer-to-customer interactions*, or *online communities and friendships* (Zeithaml & Bitner, 2003), many consumers may still prefer the *social component* present in direct service encounters.

Because of the *repeated interactions* between customers and service providers, clients can better assess the *credibility* and *benevolence* of the company. Increased interaction also tends to foster *emotional attachment*, as customers develop a sense of *mutual trust*. Therefore, *social bonds* that emphasize interpersonal interaction are likely to be more beneficial to customers in *person-to-person encounters* than in *person-to-machine interactions*.

Accordingly, we propose that:

- The effect of *social bonds* on *customer loyalty* is moderated by the *type of service encounter*, such that their impact is **stronger for customers in person-to-person encounters** than for those engaging in *internet-based* or *interactive voice response* encounters.

Structural Bonds and Their Influence Across Service Encounter Types

Structural bonds may also affect customers differently across the three types of service encounters. The development of electronic technologies has significantly reduced not only time but also cost requirements of the information exchange and associated processes, thus, enabling even more continuous integration of the isolated actors within the value chain (Tang et al., 2001). In addition to this, the internet has enabled consumers to obtain very personalized services (Wilson, 1995). Moreover, through the creation of systematically coordinated connections with the partner websites that were also chosen strategically, the firms will be in a position to provide a more comprehensive range of services to their clientele, which could, in its turn, strengthen customer loyalty.

Also, the online customers have an overwhelming desire to access the product specification, product usage guidelines, warranty and product listings (Burke, 2002). They also anticipate confirmation emails that accept receipt and shipment of their orders and also be able to monitor their shipments online.

Compared to online encounters, sales representatives provide some similar benefits through *regular customer visits*, offering product information and addressing customer concerns, especially in industries such as *financial services*. From the customer's perspective, however, structural bonds developed through sales representatives are likely *less timely* and *less convenient* than those in online encounters. Similarly, while *interactive voice response (IVR) systems* are easily accessible and provide timely information, they are *not personalized* for each customer and thus tend to deliver *weaker structural bonds*.

Accordingly, we propose that the effect of *structural bonds* on *customer loyalty* is **weaker for customers in person-to-person and IVR encounters compared to those in online encounters**:

- The effect of *structural bonds* on *customer loyalty* is moderated by the *type of service encounter*, such that the impact is **stronger for customers in online encounters** than for those in *person-to-person* and *interactive voice response (IVR)* encounters.

Moreover, the relationship between the strength of the social bonds and the employee behavior is further empirically proved by Helen (2011, p.3), who states that the formation and the support of strong relationship ties with the employees has a significant impact on loyalty. These empirical results support the relationship between relationship strength and customer loyalty.

Theoretically, financial, social and structural bonds are interacting with other relational outcomes. A relevant finding of Smith (1998) was that the financial relational bonds minimize inherent risks of the voluntary exchange relationship and strengthens total relationships of social variables. Besides, different researchers have presented empirical evidence that shows that financial bonds and other relational bonds are positively correlated, indicating that they are key elements in relationship marketing.

Practically, marketing scholars are often opposed between acquiring new customers and retaining those who are already in the company, arguing that the latter is more effective in firms that are in expansionary markets. They cite that collusion with existing customers can enhance the maximum sale volume than venturing into competing activities with potential customers. The development of strong customer relations is, in turn, considered to be essential. However, these relationships are expensive. The relationship development and maintenance process should be considered as an investment (Bursk, 1966) and once the relationships have been created they should be regarded as assets requiring protection and maintenance. This is achievable by customer bonding programmes, which protect the clients against competitive offers and develop the loyalty of the clients in the long term.

This is a change in paradigm where transactional marketing is replaced by relationship marketing where long-term engagements are made and long-term interactions are provided which underpin the further recommendations. On the part of the seller, organizational purchasers are now more and more likely to be incorporated in systems that possess strong and devoted relationships with suppliers; on the other hand, individual purchasers tend to have a relatively weak degree of engagement.

Chapter Two

Disruptive Innovation Theory

Christensen (1997) originally proposed the disruptive-innovation theory and later on perfected it with the help of Renor (2003) based on a mass of literature about technological innovation. Later that year, Christensen published *The Innovator Dilemma*, a book, which was commercially successful and created a theoretical model of analyzing technological innovation in business organizations. The article logically justified the main principles of disruptive innovation, developing it in detail and comprehensively.

With disruptive innovations, as discussed by Christensen, the technologies should present unique approaches and methods, which are based on the customer as the central focus. They create major performance transformations throughout time, tracing paths that organizations deliver and customers demand in a diversity of technological platforms and market sectors.

In the nascent developmental phase, a product based on disruptive innovation can serve specific market segments only, but still have the ability to jump out of the market and rapidly outperform current products. The performance of the innovation can be improved to meet more in-depth customer requirements as the innovation comes out of age with the help of iterative development. It is relevant to underline that disruptive innovation conceptually differs with technological innovation.

Disruptive innovations are developed to achieve high-performance levels in key dimensions and at the same time maintain low-cost structures. These innovations can access mainstream markets directly and have more significant disruptive effect than sustaining or incremental innovations.

The Concept of Disruptive Innovation

The concept of disruptive technologies is constantly mentioned in the discussion of high-technology industries. It defines a process according to which some innovations weaken the incumbent businesses in a systematic way, which do not address the emergent technologies on time. Therefore, one can think of disruptive innovation as a shift in the existing business model which includes modalities of the product value proposition, the production processes/ways, marketing schemes, distribution channels, and the after-sale services.

Christensen (2012, p. 43) defines innovation as the methodical procedure of producing, creating, purchasing, and applying new products, services or procedures with a goal of improving efficiency, effectiveness and competitive advantage thereby contributing to value to the organization and its stakeholders.

Paap (2004, p. 16) defines innovation as the act of creating a new idea and converting it into business value (both new creativity (generating an idea) and its introduction and transformation into a business value in the market). In this view, therefore, innovation is the transformation of a new idea into a quality product that meets the needs of persons or organizations.

The uniqueness brought about by innovation may be in the form of a new product, new technology or new service; in the case of the internet age, it may also be in the form of new business model.

Considering its close association with technology, a good percentage of researchers equate disruptive innovation with its technologically inclined counterpart. The given conceptualization has already received an adequate amount of scholarly interest throughout a range of studies, becoming one of the key factors that drive the decline of many formerly dominant businesses that were previously considered to have been invincible.

The Innovator's Dilemma

Innovator dilemma, known as the Innovation dilemma is a concept initially formulated by Clayton M. Christensen. He observed a major problem: Why do some organizations fail yet they have shown effective management practices? Christensen noted that a large number of organizations were shifting to disruptive innovation as opposed to the traditional sustaining innovation model. This shift created a predicament in the firms that were determined to provide products of high quality at low prices.

Although new products are a necessary condition in maintaining stability, sales growth, and profitability of organizations, the innovation process is highly risky. One of the main challenges is a high failure rate of new products:

- ✓ Industrial products: 20–30%
- ✓ Service products: 15–25%
- ✓ Consumer products: 40–60%

Empirical evidence has shown that 95 percent of all products in the market do not ever make it into the last phase of launching. This occurrence highlights the growth of an innovation crisis or quandary, more so in disruptive and advanced innovation environments.

According to Christensen, most organisations succeed in the application of disruptive innovations when they discard traditional values and principles. The key challenges as summarised by Markides (2006, p.19) include:

1. Constant market development can create a gap in the technological development hence leaving the consumers in the dark about their needs.

2. Necessary resources are a great number in the real implementation of innovation.
3. New innovations often require an introduction of new markets and attraction of new customers.
4. The process of implementing innovations needs the abilities and skills that are not aligned with traditional models.
5. The lack of the necessary information can delay the timely decision-making.
6. The type of innovation determines the role occupied by the producing organization whether it is a follower or a leader.
7. The small markets are rather insulated against the disruptive innovations, because they are not considered to be the threat to bigger organizations.

Chapter Three

The Relationship Between Variables

Firms operating in the dynamic markets need to carefully analyse their processes of value creation. They are required to raise the level of quality and reduce expenses, thus making them faster, more flexible, and active (say, preserving competitive edge). Companies focus on their core business and outsource services of a peripheral nature. As a result, the customers become part of a developed value-creation model, which enhances efficiency the ability to perform things properly and effectiveness the implementation of the right initiatives.

This figure outlines the features of the relationship between relational ties as well as their applicability outside a single organization to include a whole network of firms. Value creation based on networks fosters the improvement of efficiency and effectiveness, which in turn makes the member entities dependent on each other. The degree of interdependence depends upon the specificity and strategic salience of the outsourced activity and network members should protect themselves against predatory behavior by partners. In this regard, relational ties could act as a prerequisite to and as a result of value-generating relationships that aim at achieving greater degrees of efficiency and effectiveness than would otherwise be achieved without the ties.

The question involves the extent to which organisational relationships that are structurally embedded can be beneficial in terms of their efficiency and effectiveness. This problem can be investigated in two separate elements:

1. Structural Ties and Cost Efficiency

The literature provides numerous theoretical frameworks aimed to deal with the requirements and consequences of intimate interpersonal relationships. The most widely recognized of these has been the interaction approach, which has been most evidently demonstrated by the Industrial Marketing and Purchasing (IMP) model (Hakansson, 1982). Other theories that have been put forward include investment approach (Johanson and Mattsson, 1985), the population-ecology approach and the transaction cost theory (e.g. Williamson, 1985).

The transaction-cost approach particularly examines the consequences of alternative forms of coordination of a market with alternative ways of coordination, such as hierarchical control, or a hybrid of market and hierarchy, to the transaction costs of the participants in the vertical value-creating chain. This model provides a solid theoretical ground on why the structural interconnections are motivated and how structural interconnections can be related to an increase in organizational efficiency.

2. Structural Ties and Market Effectiveness

The transaction cost theory accounts the cost efficiency through a continuum of governance in terms of transaction costs that include exchange management costs as well as the production costs. However, in the business-to-business (B2B) environment, the clients are not only concerned with cost but also want to achieve market efficiency through increasing the delivered value which can be then used by their customers during the vertical value-create process. An operationally defined

concept of value can be the difference between the aggregate perceived value and the aggregate perceived costs.

The current analysis can be considered in the customer and the supplier perspective in a B2B model:

➤ **Customer Perspective**

The structural relationship is considered a requirement towards a stable patron supplier relationship. They indicate some level of trust which makes it easier to make committed investments by the supplier, and the customer, too. In addition, purchasers can also form partnerships with a supplier in the case of furniture manufacturing. In addition to the minimization of costs, the necessity of high quality finishing also requires certain investments on the part of the supplier, which are facilitated and insured by such structural associations.

➤ **Supplier Perspective**

The structural relationship can enhance the performance of the market in as far as the consumer is concerned, as well as the suppliers. In comparison to competitors, a supplier that is deeply engrained in strong structural networks could gain competitive edges through innovating the market with new value-generating elements and through building specific expertise that would be highly instrumental in designing customized products that could later become industry norms. Therefore, the ability of the supplier to provide the most favourable value proposition has a positive impact on market results.

3. Two Types of Customer–Supplier Relationships

Far as we have gone the basis of analysis of structurally embedded customer supplier relationships has been on B2B basis. Value-added partnerships are common in such relations. These include autonomous businesses that closely collaborate with one another in order to control the movement of products and services throughout the value-added chain. Customers have a contribution in the process of creating value in such partnerships. They usually have no intention of consuming the goods that are exchanged with them but ensuring value addition to their own customers.

Structural Bonds in Supplier Relationships with Customers and Consumers

The above section discussed how relationships, which are structurally embedded, can be used to make a business-to-business (B2B) more efficient and/or effective. The beneficial implications of structural ties, however, might be restricted to this situation or might not be as applies to supplier-to-household (B2C) relationships.

Structural bonds in the B2B environment enable particular investments, coordination and trust between the suppliers and the clients, which result in greater efficiency and market effectiveness. Conversely, the same mechanisms can be less significant in B2C relations since individual consumers usually do not invest in specific or do not have any strategic coordination in B2B relations. This means that potential advantages of structural embedding such as the reduction of transaction costs, better value provisioning, and long-term cooperative benefits can be much smaller or that they would work in different ways with end consumers.

Chapter Four

Analysis of Research Paragraphs

First: Analysis of the First Axis – Relational Ties

The statistical analysis results for this axis, presented in Table (5), are summarized as follows:

1. The averages of the first item were 3.289 compared to the default mean(3). This shows that there is an explicit distribution of the financial resources in the personal organizational structure with a relative weight of 78.77.

2. The second item analysis demonstrates a mean of 3.511, which is greater than the default mean, which implies that there is an individual department of each financial resource and the relative importance is 66.67.
3. The third item had a mean of 3.022, which is higher than a default mean, thus indicating that there is a sequential description of the financial expenditure procedures with a relative importance of 68.89.
4. The fourth item results present a mean of 3.133 which implies that there is a standardization of expenditure methods and personal preferences and the relative importance of this item is 60.
5. The fifth item achieved the mean of 3.2, which illustrates that there are instances of decisions of structural ties being correlated with the financial resources, and its relative importance is 71.11.
6. The mean of the sixth item was 3.289 that was higher than the default mean and established connections between responsibilities and authorities in responsibility centers, where the relative importance was 76.66.
7. The seventh item had a mean equal to the default mean that is 3.0 meaning that work nature is not very different among responsibility centres and the relative importance is 62.22.
8. The eighth one had a mean of 3.222 higher than the default mean and this indicates that students are competent and experienced enough to carry out giving out purchasing tasks and the relative importance of the item is 77.78.

S	Paragraphs	Very Hig	High	Medium	Low	Very Low	Mean ($\bar{X}$)	Standard Deviation (s)	Relative Importance (%)
1	There is a clear allocation of financial resources within the individual's organizational structure.	3	15	20	6	1	3,289	0,86	%77,78
2	There is a dedicated department for each resource.	7	19	11	6	2	3,511	1,046	%66,67
3	There is a sequential description of financial expenditure procedures.	3	9	22	8	3	3,022	0,953	%68,89
4	There is standardization in expenditure methods and individual preferences.	7	9	18	5	6	3,133	1,204	%60
5	Decisions regarding structural ties are sometimes linked	5	9	23	6	2	3,2	0,957	%71,11

	to financial resources.								
6	Links between responsibilities and authority in responsibility centers are clearly defined.	6	14	16	5	4	3,289	1,108	%66,67
7	The nature of work is homogeneous across all responsibility centers.	4	11	17	7	6	3	1,135	%62,22
8	Students possess sufficient competence and experience to perform purchasing tasks.	3	13	22	5	2	3,222	0,892	%77,78

The weighted mean was calculated using the following formula:

$$\bar{x} = \frac{\sum w_i X_i}{\sum w_i}$$

The weighted standard deviation was calculated using the following formula:

$$S = \sqrt{\frac{\sum w_i (x_i - \bar{x})^2}{\sum w_i}}$$

Second: Analysis of the Second Axis – Disruptive Innovation

The statistical analysis results for this axis, presented in Table (6), are summarized as follows:

1. The first item had a mean of **3.089**, higher than the default mean of 3, indicating that *the preferred phone provides the necessary data in a timely manner*, with a relative importance of **62.22%**.
2. The second item had a mean of **3.222**, showing that *it allows me to set up relatively easy and fast systems to access the internet*, with a relative importance of **77.78%**.
3. The third item had a mean of **3.133**, indicating that *performance details are always requested from me*, with a relative importance of **68.89%**.
4. The fourth item had a mean of **3.311**, higher than the default mean, suggesting that *the company participates in designing the phone's form*, with a relative importance of **71.11%**.
5. The fifth item had a mean of **3.2**, indicating that *it provides me with regular reports on all new developments*, with a relative importance of **84.44%**.
6. The sixth item had a mean of **3.244**, showing that *monitoring is easy and performance is improved through it*, with a relative importance of **82.22%**.
7. The seventh item had a mean of **2.8**, lower than the default mean, indicating that *important events are not adequately recorded or translated into excellent colors and covers as required*, with a relative importance of **62.22%**.

8. The eighth item had a mean of **2.956**, also lower than the default mean, suggesting that *majority tastes are not determined at the required level*, with a relative importance of **66.67%**.

S	Paragraphs	Very High	High	Medium	Low	Very Low	Mean ($\bar{X}$)	Standard Deviation (s)	Relative Importance (%)
1	The phone I prefer to purchase provides the necessary data in a timely manner.	4	10	18	12	1	3,089	0,962	%62,22
2	It allows me to set up relatively easy and fast systems to access the internet.	2	14	21	8	—	3,222	0,785	%77,78
3	I am always asked for details of actual performance.	2	14	17	12	—	3,133	0,859	%68,89
4	The company participates in designing the phone's appearance.	5	12	20	8	—	3,311	0,890	%71,11
5	It provides me with regular reports on all new developments.	1	13	25	6	-	3,2	0,686	%84,44
6	Monitoring is easy, and performance is improved through it.	-	19	18	8	-	3,244	0,735	%82,22
7	Important events are recorded and translated into excellent colors and covers.	—	13	15	12	5	2,8	0,980	%62,22
8	The majority of tastes are determined.	2	13	17	7	6	2,956	1,074	%66,67

Discussion of the Research Hypothesis:

"There is a relationship between relational ties and the presence of disruptive innovation."

This hypothesis suggests the *existence of a statistically significant correlation* between relational ties and disruptive innovation. The hypothesis will be tested as follows:

By linking the items related to the two variables (*relational ties* and *disruptive innovation*) using the *correlation coefficient*, the following indicators were obtained, as shown in the table:

Correlation	Degrees of Freedom (df = 1-n)	Calculated t-Value	Tabular t-Value
0,992	44	51,627	1,671

Table (7): t-Test for the Correlation between Relational Ties and Disruptive Innovation

The table data indicate that the *calculated t-value* is greater than the *tabular t-value* at a significance level of **0.05**, confirming the *strength of the relationship* between the two variables in this study. On this basis, the hypothesis (H 1: r 0) stating the presence of significant correlation is accepted and the null hypothesis (H 0: r 0) stating the absence of significant correlation between relational ties and disruptive innovation is rejected.

The t-value in the table was determined by the following formula:

$$T = r_{xy} \cdot \frac{\sqrt{n-2}}{\sqrt{1-r_{xy}^2}}$$

The *tabular t-value* is obtained from the distribution tables at (0.05, 1-n).

Test of the Effect Relationship between the Two Variables and Its Analysis:

The hypothesis of the researcher was that the dependence variable that is the relational ties and the independent variable which is the disruptive innovation have a statistically significant effect. This is the relationship that is embodied in the hypothesis and will be analyzed and studied as follows:

Hypothesis: It states that there is a correlation between the relational ties applicability and the disruptive innovation existence.

The hypothesis means that there is a statistically significant effect of relational ties (X) on disruptive innovation (Y). According to this hypothesis the simple regression equation allows the following hypothesis to be proposed: X (relational ties) influences Y (disruptive innovation). This effect presupposes that a real relationship exists between actual value of relational ties (X) and disruptive innovation (Y) which may be represented as follows:

The multiple regression equation is as follows:

$$\hat{y}_i = \hat{a} + \hat{b}x_i$$

This connection implies that monitoring and performance (Y) are a dependent variable of the actual value of relational times (X). These values with their statistical indicators were estimated on the sample of the research of 45 people. The effect relationship between the two variables is analyzed as follows:

The regression equation of the two variables of responsibility accounting (X) and monitoring and performance (Y) is:

$$\hat{y}_i = \hat{a} + \hat{b}x_i$$

This relationship implies that performance and monitoring (Y) is a factor of the true value of relationships ties (X). These values and their statistical indicators were estimated using the sample of 45 people that was used in the research. The effect relationship between the two variables is analyzed below:

The regression model of the correlation between monitoring and performance (Y) and responsibility accounting (X) is:

$$411+0.84x_i=ŷ_i$$

This relationship shows that monitoring and performance (Y) is a function of true value of relational ties (X). These values and their statistical measures were estimated on the basis of the sample of 45 participants of the research. The relationship between the variables to be analyzed is the following effect relation:

The regression equation of the relationship between the responsibility accounting (X) and monitoring and performance (Y) is:

$$411+0.84x_i=ŷ_i$$

- ✓ (y_i) represents the estimated value of the variable (*relational ties*).
- ✓ (x_i) represents the estimated value of the variable (*financial ties*).
- ✓ (b) represents the *regression coefficient*, which was calculated using the following formula:

$$b = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sum(x_i - \bar{x})^2}$$

- ✓ (a) represents the *regression constant*, which was calculated using the following formula:
- ✓ $b\bar{x} = \bar{Y} - a$

Based on this, it is possible to conclude that relational ties are strongly related to disruptive innovation. As can be seen, the nature of relational relationships is the existence of disruptive innovation, which is evident in its popularity, accessibility of information, and constant advertising. This will enable the relational ties concept to be applied in order to establish the existence of disruptive innovation.

Chapter Five

Conclusions and Recommendations

First: Conclusions

The aim of the research was to examine the extent to which relational ties influence the determination of disruptive innovation, in order to identify the level of impact of relational ties. Through the previous theoretical and field-based analyses, and based on the statistical analysis presented earlier, the main conclusions are as follows:

1. Relational ties establish frameworks that require a preferred type of phone among the research sample.
2. The efficiency of the phone is linked to responsibility through the provision of specialized and qualified expertise for its selection.
3. There is a clear delegation of decision-making authority regarding purchases and social ties.
4. Performance reports are of great importance in measuring the performance of the product in question.
5. Through performance reports, methods to address weaknesses in the product are identified and implemented, enhancing its overall quality.

Second: Recommendations

1. Create interactive content using surveys and contests to capture customers' attention.
2. Encourage the marketing team to generate new ideas and provide the necessary support and resources for their implementation.
3. Measure and evaluate the results of your marketing campaigns to determine what succeeds and what does not, and adjust your strategies accordingly.



4. Invest in technology and tools that support the marketing team's creativity and innovation, such as design software and data analysis tools.
5. Develop new and innovative campaigns on social media platforms.

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