

The Relationship between Digital Transformation in The
Banking and Compulsive Buying
"An Empirical Study on Customers of Egyptian Public Banks"
submitted by

Sara Salah Mohamed Elymany

Master student at Business Administration Department Faculty of
Commerce- Mansoura University

Prof. Dr. Abd El-Aziz Ali Hassan

Prof. of Marketing, Head of Business

Administration Department Faculty of

Commerce - Mansoura University

Dr. Lamees El-Agamy

Lecturer of Business Administration

Faculty of Commerce

Mansoura University

Abstract:

This research aimed to analyze the Relationship between Digital Transformation in Banking and Compulsive Buying among Customers of Egyptian Public Banks. Based on the literature review, researchers developed the conceptual framework of the relationships between research variables (Digital Transformation in banking, Compulsive Buying). To collect data, researchers depended on a questionnaire uploaded to Google Drive in Google form format and shared via social media channels from customers of Egyptian public banks. The collected responses were 396, The data was then analyzed using SPSS and AMOS 23. The findings show that there is a significant, positive, and direct effect of Digital Transformation in banking on Compulsive Buying. For Digital Transformation in Banking Dimensions, results showed that only Five dimensions of the six significantly affect Compulsive Buying: Perceived Usefulness, Perceived Ease of Use, Security, Privacy, Trust, Cost-effectiveness, and Web Features. Demographic differences don't have significant differences in respondents' opinions regarding research variables (Digital Transformation in Banking, Compulsive Buying).

Keywords: Digital Transformation in banking, Compulsive Buying

Introduction

The issue of digital transformation in banking has been of great importance recently, due to the great technological developments that the world has witnessed banks within the Arab Republic of Egypt have paid great attention to Digital transformation in banking, due to their constant need to keep pace with the continuous changes in society and to achieve a better level of flexibility, ease, and speed in providing their services. As well as because of the intensity of competition and its constant aspiration towards achieving the largest financial return for it.

Digital transformation in the banking sector is a continuous process that affects both the external and internal environment by redesigning internal processes and existing methods. There are many reasons for digital transformation in banking, such as serving remote areas without physical branches, differentiation from competitors, and reducing operating costs (Kitsios et al.,2021).

The shift from traditional to digital banking has been gradual and remains ongoing and is constituted by differing degrees of banking service digitization. Digital banking involves high levels of process automation and web-based services and may include APIs enabling cross-institutional service composition to deliver banking products and provide transactions. It provides the ability for users to access financial data through desktop, mobile, and ATM services (Yogesha,2023).

The primary goal of an integrated digital transformation business strategy in the banking sector is to delight customers by taking a customer-focused approach. This objective can be achieved by introducing cutting-edge digital products and services and digitally enhancing current offerings. Secondly, the rapid advancement of digitalization has offered the potential for cost reduction in data production and analysis and has enhanced the potential to not only streamline administrative processes but also enhance transparency and accountability (Ionaşcu et al.,2023).

The global crisis of the COVID-19 pandemic has devastated the global economy and health care and has raised a lot of fear, panic, and uncertainty among billions of people. Lockdowns are also being implemented in many places, and panic buying has emerged as a reliable feature of the coronavirus spread. According to the theoretical guidelines of the stimuli organism response model and the competitive arousal model, to find out how the epidemic panic state affects external stimuli such as limited quantity scarcity (LQS) and limited time scarcity (LTS) on emotion. Excitement among people, which in turn affects impulsive and obsessive buying behaviors. (Islam et al.,2021)

Compulsive buying is listed as one of the financial behaviors of consumers. It refers to an uncontrolled, obsessive tendency to shop and

purchase (Ridgway et al.,2008) it involves a preoccupation with buying, irresistible impulses to buy, frequent purchase of unnecessary products, and purchases of products that exceed the consumers' financial capability (She et al.,2021).

Compulsive buying is a psychological term describing the compulsive desire to shop is considered an impulsive disorder and uncontrollable disorder, a historical disorder called Oniomania by Kraplin in 1915 The word "onios" means a sale in Greek, while the word "mania" means madness in Greek, described more than 100 years ago. Although it involves pathological motives and is based on unbalanced reactions, it has been largely ignored from the mid-quarters of the 20th century until today and is a painful mental illness that is not yet widely known. Referred to in the Diagnostic Manual of Mental Disorders as Compulsive Purchasing Disorder (CPD), it has serious consequences, and the characteristics of most people with it match the criteria for Axis II disorder, and it is found at 5.8% in the population of the world, and the percentage of females constitute about 80%, The age of onset of compulsive buying behavior was determined to be 18–30 years of age¹³. In a study conducted in the literature, it was stated that the age of onset coincides with the process of leaving the nuclear family (emancipation) and establishing one's own family. (Hiwell last update 16/6/2023)

Extant research indicates that compulsive buying might lead to many negative impacts on people's lives. Compulsive buying may create problems for individuals both financially and socially, such as unmanageable debts, a sense of guilt, and negative relationships with family and friends (Tarka et al.,2022).

In this context, current research studies the effect of Digital Transformation in banking on Compulsive Buying on customers of Egyptian public banks.

1. Literature Review

1.1 Digital Transformation in Banking

The digital transformation in banks is currently heading towards a real revolution from automated use to complete many routine processes and steps, which will lead to the exploitation of human energies to accomplish other banking matters, that is: harnessing artificial intelligence to allow the opportunity to rely on machines and applications; to analyze data, predict the behavior of the customer and companies, in addition to predicting customer risks, and analyze (Ali,2020).

the customers themselves, the aspirations are moving towards greater integration into digital banking services to integrate with the lives of customers, and to form a pillar of future growth; because of the added values for all concerned parties, and as it contributes to creating more sophisticated and advanced business models and services that enhance the upgrading of banking sectors and improve economies. (The Central Bank of Egypt,2020)

At first, it is necessary to refer to a group of digital transformation and banking concepts before addressing the concept of digital transformation in the banks.

Digital transformation was defined (Vial,2019) as a process Where digital technologies create disruptions triggering strategic responses from organizations that seek to alter their value creation paths while managing the structural changes and organizational barriers that affect the positive and negative outcomes of this process.

While (Selgin,2022) defined banking, as an institution that deals in money and its substitutes and provides other money-related services. In its role as a financial intermediary, a bank accepts deposits and makes loans. It derives a profit from the difference between the costs (including interest payments) of attracting and servicing deposits and the income it receives through interest charged to borrowers or earned through securities.

On the other hand (Diener et al.,2021) defined digital transformation in banking as the omnipresent challenge the banking industry is currently

facing. In this digital change process, banks have almost all cooperative processes.

Digitalization in banking means integration and adoption of digital and latest technology to enhance operational capacity and performance, delivering better and faster customer services, and paperless transactions through different banking applications (Ionaşcu et al.,2023).

(Cuesta et al.,2015) defined the digital transformation in banking generating the supply, distribution, and sales of financial products and services via digital channels, exploiting cutting-edge technology to know customers better and anticipate their needs swiftly and suitably, and an omnichannel solution, or the possibility of customers communicating with their bank via all channels, both analog and digital, as well as the automation of services.

(Kitsios et al.,2021) it defined Digital transformation in the banking sector as a continuous process that affects both the external and internal environment by redesigning internal processes and existing methods.

(Bykanova et al., 2020) can be defined as Digital transformation in banking as the introduction and strengthening of the use of digital technologies by banks to create a new digital business model and provide opportunities for generating new sources of income and creating value. This is the transition to digital banking.

1.2 Digital transformation in banking Dimensions

Digital transformation in banking has six main dimensions (Ananda et al.,2020): Perceived Usefulness, Perceived Ease of Use, Security, Privacy, and Trust, Cost-effectiveness, Web Features, and Awareness of Digital Banking Services.

1.2.1 Perceived Usefulness:

The degree to which a person believes that using a particular system would bring customers certain gains.

1.2.2 Perceived Ease of Use:

The degree to which a person believes that using a particular system would be free from effort.

1.2.3 Security, Privacy, and Trust:

Convincing customers that their information and transactions are secure; try to bring the customers into confidence.

1.2.4 Cost-effectiveness:

Lower fees than the conventional mode.

1.2.5 Awareness of Digital Banking Services:

Customers' awareness about the availability of services through technology mode.

1.2.6 Web Features:

Quality of web design to enhance usability and usefulness.

1.2 Compulsive Buying

Compulsive buying was first described in the early 20th century by Emil Kraepplin and Eugen Bleuler. Diagnostic criteria for compulsive or addictive buying were first proposed in 1994 and later refined. These criteria describe symptoms equivalent to craving and withdrawal applied to buying behavior. However, compulsive buying is not yet represented in the Diagnostic and Statistical Manual (DSM) or International Classification of Diseases (ICD) Classifications (Lejoyeux et al.,2010).

Compulsive buying (CB) has long been recognized as a problem and was described more than 100 years ago as “oniomania” by Kraepelin. Much later consumer researchers and psychiatrists became interested in the topic. While research on CB is growing, there is still a need for a greater understanding and recognition of this problem. Although CB seems to be not only prevalent but even increasing in prevalence, especially among younger individuals, it often remains neglected or minimized in clinical settings. The lack of recognition might be due to the

relatively sparse literature on this topic and the lack of consensus regarding the classification of CB as a mental disorder. (Muller et al.,2015)

Often, compulsive buying disorder is linked to mood, anxiety, drug abuse, and eating disorders. The onset of this type of disorder occurs at the end of adolescence and the beginning of the twenties, and it is generally considered a chronic disorder. It is also similar to obsessive-compulsive disorder, hoarding, and mania, but it is also different from them. Compulsive buying is not limited to people who spend beyond their financial means but also includes people who spend too much time shopping or who think about buying things chronically but don't buy them. Some psychiatrists believe that compulsive buying is more indicative of impulse control disorder, while others see it as more indicative of obsessive-compulsive disorder bipolar disorder, or even addiction. It has been accepted as a disorder by the Deutsche Gesellschaft (German Organization for Obsessive-Compulsive Disorders), for several years. But in the United States, 'impulse control disorder unless otherwise specified. (Muller et al.,2015)

Compulsive Buying is defined by (Lejoyeux et al.,2010) as buying that may be unplanned and sudden, initiated on the spot, and associated with a strong urge and feeling of pleasure and excitement. When it is repetitive and associated with adverse consequences (usually psychological and financial), this kind of buying is known as compulsive buying.

Defined as an impulse control disorder, it is assumed that persons suffering from the disorder are not able to control impulses, and they exhibit this behavior despite the negative consequences for themselves or others. This behavior is preceded by the stage of increased tension or anxiety which can be replaced by experiencing pleasure, satisfaction, or relaxation only as a result of this particular behavior. (Adamczyk et al., 2020)

(Tarka.,2022) compulsive buying has been frequently investigated in mature economies and wealthy societies this phenomenon has also grown steadily in developing countries, Compulsive buying is on the rise because of increased availability and accessibility of products via offline and online retail channels, improved living standards, greater wealth

(especially in large urban areas), as well as new forms of payment, which may encourage consumers to buy without thinking.

(Müller et al.,2015) define compulsive buying as a preoccupation with buying and shopping, frequent buying episodes, or overpowering urges to buy that are experienced as irresistible and senseless. The shopping and buying episodes are accompanied by relief and pleasure but followed by remorse and guilt due to the inappropriateness of the spending behavior and its negative consequences.

Also (Mueller et al., 2011) define compulsive buying as uncontrolled purchasing behavior. (Islam et al., 2018).

Compulsive buying is defined by (Aw et al., 2018; Duh et al., 2015; He et al., 2018) is acknowledged as a prominent psychological and psychiatric situation that can influence an individual's well-being (Lim et al., 2020).

(Darrat et al., 2016; Kukar- Kinney et al., 2016) they defined The term compulsive buying as being generally associated with shopaholics or excessive purchasing. Consumer behavior researchers often describe compulsive buying as a type of behavioral addiction, and (Japutra et al.,2018) defined it as associated with shopaholics and excessive purchasing (Lim et al., 2020).

As such, (Harnish et al.,2018) asserted that consumers engage in compulsive buying to overcome tension and escape from life's pressures.

In addition, (Gallagher et al.,2017) surmised that compulsive buying is a medium for an individual to cope with negative emotions.

In addition, past studies found that compulsive buying is the result of materialism, self-discrepancies, ideal self-buying motivation, loss of control, external temptation, or low self-control (Pahlevan et al., 2018; Duroy et al., 2014; Pradhan et al., 2018).

Compulsive buying constitutes an extreme and maladaptive cognition and behavior that results in uncontrollable retail activity – often in response to threatening societal challenges, it's defined by (Kellet et al., 2009).

Indeed, pandemics do appear to constitute a significant trigger of compulsive buying (which is also referred to as ‘panic buying’), which has been noted in the UK and elsewhere during the COVID-19 pandemic (Hall, 2020).

(Hall, 2020), compulsive buying is construed as a self-protective measure in the face of fear and uncertainty associated with the pandemic. While compulsive buying is not very prevalent in the general population (Black, 2007), it can increase in situations of uncertainty, such as the COVID-19 outbreak. Indeed, in response to this pandemic, people have begun to engage in compulsive buying, targeting packs of antibacterial wipes and hand sanitizers, in particular (Hall, 2020). The term compulsive buying refers to a preoccupation with buying, impulses to buy that are irresistible, “senseless” and frequent buying of, more than what one can afford or, things that are not essential, as defined by (Phau & Woo, 2008; Spinella et al., 2014; Williams et al., 2012).

Findings suggest that compulsive buying is exacerbated by internet use (Griffiths, 2000; Kukar-Kinney et al., 2009). More specifically, (Mueller et al., 2011; Kukar-Kinney et al., 2009) reported that certain internet use characteristics seem to compel consumers to buy compulsively.

2. Hypotheses Development

2.1 The literature discussed digital transformation in banking and compulsive buying.

studies (Lo et al., 2011; Park et al., 2005; Roberts et al., 2001; Khare, 2016) indicated the relationship between credit cards with compulsive buying, and this is not considered a main focus of the study, but rather is part of it because credit cards are a type of digital banking transformation.

(Lo et al., 2011) this study examined compulsive buying and the effect of credit cards and found that the financial consequences of compulsive buying are obvious given a large amount of debt where Credit cards allow

consumers to borrow money very easily to satisfy their desire to purchase.

(Park et al.,2005) this study talked about Fashion orientation, credit card use, and compulsive buying and the results of this study showed that fashion interest not only significantly influenced compulsive buying directly but also indirectly by influencing credit card use as credit card use raises compulsive buying.

(Roberts et al.,2001) studied Money attitudes, credit card use, and compulsive buying among American college students and found that credit cards do facilitate dysfunctional behavior such as compulsive buying.

When (Rahman et al.,2023) talked about the Impact of Website Quality on Online Compulsive Buying Behavior: evidence from Online Shopping Organizations, Purpose – The influence of website quality on online compulsive buying behavior (OCBB) in the context of online shopping based on the usage of a credit card (UCC) and online impulsive buying behavior (OIBB) was investigated in this study. The results of this study showed that aspects of website quality (usability, ease of use, entertainment, and complementary functions) influence customers' OIBB (impulsive purchases) and UCC (the latent construct that describes customers' less anxious, more impulsive behavior, debt worries, desire to keep more credit cards and paying the least amount on credit card bills while shopping). Finally, UCC and OIBB both had an impact on OCBB, showing that customers are dissatisfied with their existing purchases, want to acquire new things regularly, and want to discard them without utilizing them. Thus, if online marketers want to increase website earnings, they should improve website usability, which means that their

website effectively provides useful information that customers want, customers trust the information provided, customers can connect through the website and feel secure in dealings, and the website loading time is very short. E-commerce website pages should be simple to comprehend, the language should be easy to read, the website should be simple to use, and clients should acquire experience while using the e-commerce website. Furthermore, the website should provide better entertainment, implying that the website is aesthetically appealing and pleasant, that its design is current, and that people are delighted when they visit it. Finally, the website should have more complimentary services, suggesting that it supports online transactions, that the purchasing experience is more convenient via the website than by email, fax, or phone and that communication is more convenient via the website. This study addressed some dimensions of digital banking transformation and its relationship to compulsive buying.

(Khandelwal et al.,2022) they discussed the subject of Compulsive Buying Behavior of Credit Card Users and Affecting Factors Such as Financial Knowledge, Prestige, and Retention Time: Cross-sectional Research. This study confirms previous research by Lai (2010), Norvilitis et al. (2006), and Roberts and Jones (2001) recommending that credit card practice exaggerates the difficulty of persuasive buying. Credit card practice happens more momentarily and implies facilitating credit cardholders to be inclined to boost their money attitudes. However, they have access to credit cards, resulting in increasing their compulsive buying behavior (Vieira et al., 2016). The improvement in internet technology may affect the increase in credit card usage as technology provides consumers with a suitable channel to shop for services and goods (Sharma, 2008). Further, it can be assumed that frequent credit

card usage may add to compulsive buying, mainly when credit card holders are not capable of managing their purchasing behavior.

In the same logic, as per the previous literature, the researcher developed hypotheses (1 and 2) as follows:

H1. There is a significant effect of the dimensions of digital transformation in banking on compulsive buying on Customers of Egyptian Public Banks.

H2. There are significant differences in customers' perceptions of the study variables (digital transformation in banks, compulsive buying) with different demographic variables.

3. Research Gap & Problem

The researcher reviewed previous studies related to the subject of the study, some studies (Vial,2019; Schwertner,2017; Diener et al.,2021; Cuesta et al.,2015; Kitsios et al.,2021; Bykanova et al., 2020; Hadi et al.,2020; Arsanjani et al.,2019; Udovita,2020; Matt et al.,2015; Cuadros-Solas et al.,2020; Baumann et al.,2019; Zaoui et al.,2019; Yogesha,2023; Ionaşcu et al.,2023; Ananda et al.,2020) studied digital transformation in banks,

while many studies have studied compulsive buying (Lejoyeux et al.,2010; Müller et al.,2015; Mueller et al., 2011; Aw et al., 2018; Duh et al., 2015; He et al., 2018; Darrat et al., 2016; Kukar- Kinney et al., 2016; Hadi et al.,2020; Arsanjani et al.,2019; Udovita,2020; Matt et al.,2015; Cuadros- Solas et al.,2020; Baumann et al.,2019; Zaoui et al.,2019), (abobakr et al.,2019; darbashi et al.,2015 el-lahyani et al.,2021; Mostafa et al.,2021; She et al.,2021; Tarka et al.,2022; Adamczyk et al., 2020; Tarka et al., 2021; Khandelwal et al.,2022).

Based on the literature review, the researchers noticed that few previous studies explored the relationship between credit cards and compulsive buying but credit cards are considered a part of digital transformation in banking. So, The current research seeks to explore the relationship between digital transformation in banks and compulsive buying.

4. Research Questions

Q1. What is the nature of the correlation Relationship between Digital Transformation in banking and Compulsive Buying?

Q2. What is the effect of Digital Transformation in banking on Compulsive Buying of Customers of Egyptian Public Banks?

Q3. Are there differences in customers' perceptions of the study variables (digital transformation in banking- compulsive buying) according to different demographic variables?

5. Research Objectives

O1. To Determine the nature of the correlation Relationship between the Research variables (Digital Transformation in banking- Compulsive Buying).

O2. To Measure the effect of Digital Transformation in banking on Compulsive Buying of Customers of Egyptian Public Banks.

O3. To Determine the differences in customers' perceptions of the Research variables (Digital Transformation in banking - Compulsive Buying) according to the differences of demographic variables.

6. Research Hypotheses

H1. There is a significant correlation Relationship between the dimensions of the study variables (Digital Transformation in banking - Compulsive Buying).

H2. There is a significant effect of the dimensions of Digital Transformation in banking on Compulsive Buying on Customers of Egyptian Public Banks.

H3. There are significant differences in customers' perceptions of the study variables (digital transformation in banks, compulsive buying) according to the differences of demographic variables.

Conceptual Framework for the Relationships Between Research Variables

Based on the literature and the research hypothesizes, the researchers were able to construct the Conceptual Framework for the Relationships between Research Variables as follows

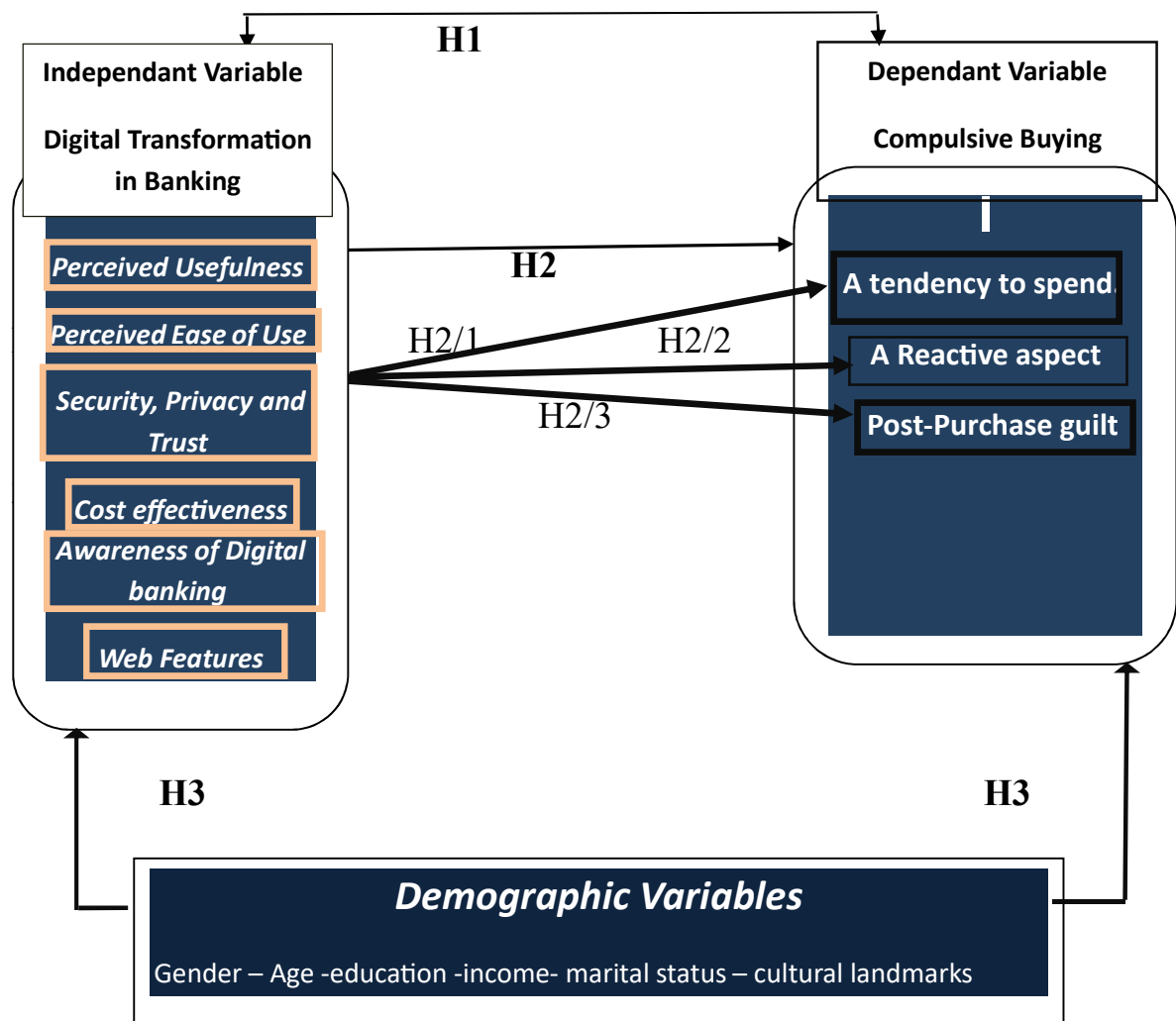


Figure 1 Conceptual Framework for the Relationships between Research Variables.

Source: By researchers depending on Literature and Research hypotheses

7. Research Methods

Current research depends on quantitative research methods to collect data from the targeted sample. The quantitative approaches entail developing hypotheses to guide statistical testing, employing instruments to appropriately measure the research variables, collecting data, and then statistically analyzing the data to test the hypotheses (Nardi, 2018).

Research Design

There are three categories of research based on their purpose: descriptive, exploratory, and explanatory (Saunders et al., 2009). The current research is explanatory in nature, as it seeks to explain the causal link between the research variables.

8. Data Collection

Research data was collected during the period from October 2023 to November 2023. Using Google Forms, researchers designed an electronic version of the questionnaire which was published to bank customers through social media channels like Facebook Pages, Facebook Groups, and WhatsApp Groups. Total responses were (396). The questionnaire was directed to 432 customers, and only 412 of them accepted the questionnaire. Finally, the researcher collected only 399 questionnaires with a response and included 3 of them in a completed questionnaire, then found that only 396 questionnaires were statistically valid and free of missing data with a response rate of 91.7% (396/432). Researchers exported the collected data from Google Forms to Google Sheets and then to Excel Sheets in which items were coded and formatted then analyzed using SPSS and AMOS 22.

8.1 Questionnaire Design:

The current research employed a closed-ended, structured questionnaire in which a number of predefined alternative answers were presented, from which respondents must select one answer from a specific set of answers (de Vaus, 2014; Fink, 2012).

The questionnaire included a cover, letter and two major parts. Part One had five sections, while Part Two had demographics.

Part, one began with a closed-ended yes or no question to determine whether the respondent had dealt with any Egyptian public banks. If the answer was "no," he or she was thanked, and the questionnaire was closed. If his or her response is "yes," we will proceed to choose his or her bank.

In the second section of the first part and up to the fifth section, the elements measuring research variables were Likert Five Scale sentences. They were closed-ended answers in which the respondent was able to select between “Strongly Disagree” to "Disagree", "Undecided", "Agree", or "Strongly Agree”. (1) Point was given to the answer “Strongly Disagree”, (2) refers to “Disagree”, (3) refers to “Un-decided”, (4) refers to “Agree”, and (5) refers to “Strongly Agree”.

Part two included (5) demographic closed-ended questions about gender, age, income level, education level, and years of dealing with the company.

9. Variables Measurement

9.1 Digital transformation in banking

Digital transformation in banking is measured by a construct that involves 28 items proposed by (Anada et al.,2020). This study categorizes Digital transformation in banking into Perceived Usefulness, Perceived Ease Of, Security, Privacy and Trust, Cost Effectiveness, Awareness of Digital Banking Services, and Web Features was measured by items from 1 – 5, while the second dimension measurement items ranging from 6 – 10, and the third dimension measured by items from 11 – 15, the fourth

dimension measured by items from 16 – 19, and the fifth dimension measured by items from 20 – 23, finally the sixth dimension measured by items from 24 – 28.

9.2 Compulsive Buying

compulsive buying is measured by a construct that involves 15 items proposed by (Tarka et al., 2021) where the first 5 items ranging from 29 to 33 were designed to measure the tendency to Spend dimension, while the items from 34 to 38 were designed to measure the Reactive Aspect Dimension, and finally, the items from 39 to 43 were designed to measure the Post-Purchase Guilt Dimension.

10. Population and Sampling

The population of the present research is all Egyptian public bank customers.

10.1 Sampling Unit

The sampling unit used in the current study is the customer of any Egyptian Public bank.

10.2 Sample Size

The generalization of the findings to the population depends mainly on using a sample size that is large enough. In this regard, the suitable sample size depends on the type of statistical analysis used in the study, the confidence level, the margin of error, and the population size (Saunders et al. 2009). Therefore, the population of this research is geographically dispersed and exceeds 100,000 items and the ideal sample shouldn't be less than 384 observations, consequently, the researcher collected 396 questionnaires through the Internet via Google Forms.

10.3 Sampling Technique

The current research depends on the Simple Random Sampling technique (SRS). Using a Google Form, the researcher created an electronic version of the questionnaire, which was distributed to customers of Egyptian public banks through Facebook Groups, Facebook Pages, and WhatsApp Groups.

11. Reliability

Cronbach's alpha is the most used measure to evaluate scale reliability; internal consistency can be estimated, and the questionnaire is considered reliable if the value of Cronbach's alpha is greater than or equal to 0.7 (Hair et al., 2010). One of the most widely used indicators of reliability is the value of corrected item-total correlations, which show how strongly each item on the scale is related to other items. When the corrected item-total correlation is greater than or equal to 0.3, the Cronbach reliability test indicates that there is good internal consistency (Pallant, 2007).

The following tables show that the value of the corrected item-total correlation for all items lies above 0.3 which constitutes good internal consistency. The researcher directed the questionnaire to a sample of 65 customers who were required to complete it through Google Forms on the Internet. The responses were utilized to assess the validity and reliability of the questionnaire. The results of both Cronbach's alpha and corrected item-total correlation for each construct are summarized in the following table as follow:

Table 1: Corrected Item-Total Correlation and Cronbach's Alpha for all variables

Dimensions	Measurement Item	corrected item-total	Cronbach's Alpha if	Reliability	
		correlation	item deleted	No. of Questions	Total Cronbach's Alpha
Perceived Usefulness	Q1	0.690	0.876	5	0.890
	Q2	0.854	0.836		
	Q3	0.854	0.836		
	Q4	0.733	0.867		
	Q5	0.541	0.905		
Perceived Ease of Use	Q6	0.752	0.886	5	0.905
	Q7	0.875	0.859		
	Q8	0.770	0.884		
	Q9	0.875	0.859		
	Q10	0.556	0.924		
Security, Privacy, and Trust	Q11	0.731	0.836	5	0.871
	Q12	0.728	0.837		
	Q13	0.669	0.853		
	Q14	0.719	0.840		
	Q15	0.651	0.855		
Cost Effectiveness	Q16	0.559	0.791	4	0.809
	Q17	0.692	0.730		
	Q18	0.616	0.768		
	Q19	0.645	0.752		
Awareness of Digital Banking Service	Q20	0.692	0.754	4	0.822
	Q21	0.787	0.703		
	Q22	0.491	0.840		

	Q23	0.624	0.785		
Web Features	Q24	0.819	0.913	5	0.928
	Q25	0.815	0.911		
	Q26	0.825	0.910		
	Q27	0.754	0.927		
	Q28	0.890	0.900		
Independent Variable: Digital Transformation in Banking				28	0.971
A Tendency to Spend	Q29	0.554	0.751	5	0.786
	Q30	0.555	0.749		
	Q31	0.658	0.718		
	Q32	0.530	0.759		
	Q33	0.546	0.751		
A Reactive Aspect	Q34	0.597	0.794	5	0.823
	Q35	0.713	0.764		
	Q36	0.597	0.794		
	Q37	0.590	0.800		
	Q38	0.608	0.791		
Post-Purchase Guilt	Q39	0.866	0.786	5	0.862
	Q40	0.559	0.872		
	Q41	0.462	0.885		
	Q42	0.719	0.826		
	Q43	0.866	0.786		
Dependent Variable: Compulsive Buying				15	0.935

Source: Prepared by the researchers according to statistical analysis.

13. Sample Description

Table 2: Description of the sample of customers (N = 396)

	Demographic Characteristics	Frequency	Percentage	Cumulative Percentage
Gender	Male	171	43.18%	43.18%
	Female	225	56.82%	100.00%
Age	Less than 21 years old	47	11.87%	11.87%
	From 21 years old to less than 40 years old	292	73.74%	85.61%
	From 40 years old to less than 60 years old	54	13.64%	99.24%
	From 60 years old and more	3	0.76%	100.00%
Marital status	Single	208	52.53%	52.53%
	Married and dependent	102	25.76%	78.28%
	divorced	7	1.77%	80.05%
	married and have no dependents	76	19.19%	99.24%
	Widower	3	0.76%	100.00%
Income	Less than 5000 Pounds	134	33.84%	33.84%
	From 5000 Pounds to less than 10000 Pounds	152	38.38%	72.22%
	From 10000 Pounds to less than 15000 Pounds	96	24.24%	96.46%
	From 15000 Pounds and more	14	3.54%	100.00%
Education	Diplom	43	10.86%	10.86%
	Bachelor	280	70.71%	81.57%
	Postgraduate studies	73	18.43%	100.00%
Place of residence	Rural	155	39.14%	39.14%
	Urban	241	60.86%	100.00%

Source: Prepared by the researchers according to statistical analysis.

14. Modeling

The structural equation model is a statistical methodology employed to analyze a structural theory based on some phenomena (Byrne, 2010). Additionally, this technique uses a confirmatory approach that depends on factor analysis and implies hypothesis testing. Therefore, the Structural equation model requires conducting two steps the measurement model and the structural model (Fornell & Lacker, 1981).

14.1 Measurement model

To measure construct validity, both convergent and discriminant validity should be investigated. Convergent validity was first tested using factor loadings, in which the values of loadings can be considered significant if they are equal to or greater than 0.5 (Hair et al., 2010). Furthermore, convergent validity is also measured by (AVE), in which the value can be accepted if it is higher than 0.5. Further, the reliability of the measurement model was measured using both Cronbach 's alpha and Composite Reliability (CR). Table 3 summarizes all the factors used to assess model validity:

Table 3: Loadings, Average Variance Extracted, and Composite Reliability.

Dimensions	Factor Loading and Reliability			Convergent Validity	
	Questions	Factor Loading	Cronbach's Alpha	AVE	CR
Perceived Usefulness	Q1	0.781	0.880	0.780	0.829
	Q2	0.858			
	Q3	0.844			
	Q4	0.696			
	Q5	0.721			
Perceived Ease of Use	Q6	0.768	0.900	0.807	0.860
	Q7	0.858			

	Q8	0.829			
	Q9	0.827			
	Q10	0.753			
Security, Privacy, and Trust	Q11	0.775	0.869	0.759	0.798
	Q12	0.748			
	Q13	0.713			
	Q14	0.796			
	Q15	0.764			
Cost Effectiveness	Q16	0.753	0.838	0.757	0.755
	Q17	0.803			
	Q18	0.767			
	Q19	0.703			
Awareness of Digital Banking Service	Q20	0.752	0.839	0.758	0.760
	Q21	0.805			
	Q22	0.671			
	Q23	0.804			
Web Features	Q24	0.744	0.897	0.798	0.850
	Q25	0.812			
	Q26	0.841			
	Q27	0.748			
	Q28	0.845			
A Tendency to Spend	Q29	0.666	0.786	0.692	0.692
	Q30	0.623			
	Q31	0.776			
	Q32	0.720			
	Q33	0.677			

A Reactive Aspect	Q34	0.646	0.854	0.734	0.762
	Q35	0.778			
	Q36	0.772			
	Q37	0.708			
	Q38	0.768			
Post-Purchase Guilt	Q39	0.832	0.863	0.757	0.797
	Q40	0.723			
	Q41	0.726			
	Q42	0.674			
	Q43	0.830			

Source: Prepared by the researchers according to statistical analysis.

According to Table 3, the values of Cronbach 's alpha are higher than 0.6, which is accepted. Further, the values of AVE are greater than 0.5, and composite reliability values are higher than 0.6, which can be accepted according to Fornell & Larcker (1981). Furthermore, discriminant validity is assessed in Table 4. This table presents the correlations between the factors and the square roots of AVEs and shows that the values of the square root of AVE are higher than the inter-construct correlations (Fornell & Larcker, 1981). Therefore, discriminant validity is achieved. Finally, the measurement model has satisfied all factors used to assess validity and reliability.

**Table 4: Construct Correlations and Square Root of Average Variance
Extracted**

	Perceived Usefulness	Perceived Ease of Use	Security, Privacy, and Trust	Cost Effectiveness	Awareness of Digital Banking Service	Web Features	A Tendency to Spend	A Reactive Aspect	Post-Purchase Guilt
Perceived Usefulness	0.883								
Perceived Ease of Use	0.806	0.898							
Security, Privacy, and Trust	0.790	0.793	0.871						
Cost Effectiveness	0.771	0.796	0.775	0.870					
Awareness of Digital Banking Service	0.787	0.801	0.764	0.754	0.871				
Web Features	0.802	0.779	0.777	0.768	0.815	0.893			
A Tendency to Spend	0.772	0.793	0.797	0.757	0.789	0.782	0.832		
A Reactive Aspect	0.784	0.779	0.801	0.754	0.766	0.773	0.803	0.857	
Post-Purchase Guilt	0.776	0.754	0.813	0.756	0.804	0.763	0.755	0.757	0.870

Source: Prepared by the researchers according to statistical analysis

15. Testing Hypotheses

15.1 Assessing the correlation coefficients among variables' dimensions:

In statistics, the Pearson correlation coefficient (PCC), also known as Pearson's, the Pearson product-moment correlation coefficient (PPMCC), the bivariate correlation, or colloquially simply as the correlation coefficient, is a measure of linear correlation between two sets of data. It is the ratio between the covariance of two variables and the product of their standard deviations; thus, it is essentially a normalized measurement of the covariance, such that the result always has a value between -1 and 1. As with covariance itself, the measure can only reflect a linear correlation of variables and ignores many other types of relationships or correlations. In this study, Pearson's r correlation among variables' dimensions can be shown in Table (5).

The results included in this table ensure a positive significant relationship among all dimensions for each variable. Additionally, the results ensure a positive significant relationship between Digital Transformation in Banking, Compulsive Buying. In addition, the strongest relationship between the Digital Transformation in Banking dimensions and Compulsive Buying dimensions is the relationship between (perceived usefulness & and a tendency to spend, where $R = 0.474$). Therefore, H1 which represents the relationship among dimensions of the Research Variables (Digital Transformation in Banking, Compulsive Buying) was totally accepted because of the positive significant relationship among all variables.

Table 5: Pearson Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11
1	Perceived Usefulness	1										
2	Perceived Ease Of	.775**	1									
3	Security, Privacy, and Trust	.749**	.774**	1								
4	Cost Effectiveness	.643**	.736**	.741**	1							
5	Awareness of Digital Banking Service	.713**	.721**	.793**	.756**	1						
6	Web Features	.661**	.801**	.753**	.724**	.792**	1					
7	Independent Variable: Digital Transformation in Banking	.855**	.903**	.904**	.868**	.899**	.888**	1				
8	A Tendency to Spend	.474**	.402**	.473**	.406**	.430**	.429**	.492**	1			
9	A Reactive Aspect	.400**	.424**	.443**	.467**	.404**	.385**	.475**	.785**	1		
10	Post-Purchase Guilt	.405**	.448**	.425**	.419**	.423**	.396**	.474**	.772**	.797**	1	
11	Dependent Variable: Compulsive Buying	.459**	.459**	.482**	.466**	.452**	.435**	.518**	.916**	.933**	.927**	1

Source: Prepared by the researchers according to statistical analysis

15.2 Assessing the model and hypotheses testing.

In this section, the results of testing the research hypothesis among study constructs are presented. Such hypotheses were tested using SEM with AMOS 22. Hypothesis H2 (a: r) proposed that Digital Transformation in

Banking has a direct impact on Compulsive Buying. Table 6 illustrates the total effects and P value for total effects, as follows:

Table 6: total effects and P value for total effects

Total effects						
	Perceived Usefulness	Perceived Ease Of Use	Security, Privacy, and Trust	Cost Effectiveness	Awareness of Digital Banking Service	Web Features
A Tendency to Spend	0.304	-0.175	0.216	0.072	-0.022	0.172
	Perceived Usefulness	Perceived Ease Of Use	Security, Privacy, and Trust	Cost Effectiveness	Awareness of Digital Banking Service	Web Features
A Tendency to Spend	0.000	0.055	0.012	0.338	0.797	0.047
Total Effects						
	Perceived Usefulness	Perceived Ease Of Use	Security, Privacy, and Trust	Cost Effectiveness	Awareness of Digital Banking Service	Web Features
A Reactive Aspect	0.077	0.074	0.156	0.286	-0.012	-0.040
	Perceived Usefulness Total	Perceived Ease Of Use	Security, Privacy, and Trust	Cost Effectiveness	Awareness of Digital Banking Service	Web Features
A Reactive Aspect	0.322	0.424	0.073	0.000	0.889	0.650

Source: Prepared by the researchers according to statistical analysis

Total effects						
	Perceived Usefulness	Perceived Ease Of Use	Security, Privacy, and Trust	Cost Effectiveness	Awareness of Digital Banking Service	Web Features
Post-Purchase Guilt	0.056	0.215	0.071	0.112	0.121	-0.044
	Perceived Usefulness	Perceived Ease Of Use	Security, Privacy, and Trust	Cost Effectiveness	Awareness of Digital Banking Service	Web Features
Post-Purchase Guilt	0.474	0.022	0.421	0.143	0.176	0.620

Source: Prepared by the researchers according to statistical analysis

According to Table (6), it is clear that the Perceived Usefulness dimension, Security, Privacy, and Trust dimension, and Web Features dimension have a significant direct positive impact on the A tendency to Spend Dimension ($\beta = 0.304, 0.172, 0.216$ $P < 0.05$) respectively. Additionally, Cost Effectiveness also has a significant direct positive impact on A Reactive Aspect dimension ($\beta = 0.286$, $P < 0.05$). Finally, the Perceived Ease Of dimension also has a significant direct positive impact on the Post-Purchase Guilt dimension ($\beta = 0.215$, $P < 0.05$). Therefore, H2 which represents the effect of digital transformation in banking on compulsive buying was partially accepted.

15.3 Testing the differences between the views of customers of banks:

For testing differences between the views of customers of banks, the researcher used non-parametric tests such as the Kruskal-Wallis test and the Mann-Whitney test. In addition, using parametric tests such as MANOVA, the researcher can illustrate these tests as follows:

Table 7: differences test results for demographic variables of customers

	Gender		Age		Marital status		Income		Education		Place of Residence	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Perceived Usefulness	0.545	0.461	0.480	0.696	0.609	0.657	0.674	0.569	0.450	0.638	0.285	0.594
Perceived Ease Of Use	0.596	0.441	0.158	0.925	0.725	0.575	2.646	0.049	2.723	0.067	1.084	0.298
Security, Privacy, and Trust	0.164	0.686	0.164	0.920	0.178	0.950	2.505	0.059	1.265	0.283	0.108	0.743
Cost Effectiveness	0.269	0.604	0.284	0.837	0.585	0.673	0.713	0.545	2.624	0.074	0.138	0.711
Awareness of Digital Banking Service	1.485	0.224	0.398	0.754	0.635	0.638	0.338	0.798	0.108	0.898	0.204	0.652
Web Features	1.056	0.305	0.212	0.888	0.199	0.939	1.266	0.286	0.920	0.399	0.489	0.485
A Tendency to Spend	10.754	0.001	4.254	0.006	3.190	0.013	1.470	0.222	0.674	0.510	0.001	0.973
A Reactive Aspect	10.728	0.001	2.217	0.086	1.227	0.299	0.869	0.457	2.654	0.072	2.964	0.086
Post-Purchase Guilt	9.838	0.002	1.838	0.140	0.742	0.564	1.015	0.386	1.196	0.303	0.175	0.676

Source: Prepared by the researchers according to statistical analysis.

Therefore, I can assure the results of the parametric tests of H3, which indicate this hypothesis can be partially accepted because there are significant differences between the views of customers in Egyptian public banks about some demographic variables

16. Discussion

H1: There is a significant correlation between the research variables dimensions (Digital Transformation in Banking, Compulsive Buying).

The study's findings revealed that there is a positive and significant relationship among all dimensions for each variable. Additionally, the results ensure a significant positive relationship between Digital Transformation in Banking and Compulsive Buying. The strongest relationship between the Digital Transformation in Banking dimensions and Compulsive Buying dimensions is the relationship between (perceived usefulness & and a tendency to spend, where $R = 0.474$). The researcher couldn't reach previous studies that covered the relationship between Digital Transformation in Banking and Compulsive Buying.

H2. There is a significant effect of the dimensions of digital transformation in banking on compulsive buying on Customers of Egyptian Public Banks.

The perceived Usefulness dimension, Web features dimension, and Security, Privacy, and Trust dimension have a significant direct positive impact on the A tendency to Spend Dimension ($\beta = 0.304, 0.172, 0.216, P < 0.05$) respectively. Additionally, Cost Effectiveness also has a significant direct positive impact on A Reactive Aspect dimension ($\beta = 0.286, P < 0.05$). Finally, the Perceived Ease Of dimension also has a significant direct positive impact on the Post-Purchase Guilt dimension ($\beta = 0.215, P < 0.05$). Therefore, H2, which represents the effect of digital transformation in banking on compulsive buying was partially accepted.

H3. There are significant differences in customers' perceptions of the study variables (digital transformation in banks, compulsive buying) with different demographic variables.

Findings showed that demographic differences had no significant differences in respondents' opinions regarding research variables (digital transformation in banks, compulsive buying). Therefore, I can assure the results of non-parametric tests of H3 which indicate this hypothesis can be partially accepted because there are significant differences between the views of customers of banks about some Demographic Variables.

17. Theoretical Implications

The current research contributes to the body of knowledge of the existing literature on digital transformation in banking, and compulsive buying. In addition, the research aimed to fill the knowledge gap by focusing on the effect of Digital transformation in banking on compulsive buying. Therefore, researchers summarize the theoretical implications as follows:

1. The current Research contributes to a more comprehensive understanding of digital transformation in banking and knowing the extent of its effect on compulsive buying.
2. The current research gives a deeper analysis of the effect of Demographic differences on the differences in respondents' opinions about research variables.

18. Practical Implications

Based on the present research findings, the researchers summarized the practical recommendations in Table 8 as follows:

Table (8): Research recommendations for the sector of practice

Practical Recommendations	Notes for application	
Non-digital banks must accelerate digital transformation in all their operations and services, and digital banks must expand in introducing digitization into all their banking services.	Who	Top Management in cooperation with IT Departments.
	How	Depending on secured Software and Applications available for this issue
	When	Along the service cycle.
	Where	In all branches, streets, rural areas, mob Apps, and online.
	Cost	Digital processes cost less than Paperwork (Zhai et al., 2022).
Awareness of the danger of compulsive buying.	Whom	Customers.
	How	By occupying your free time and staying away from shopping centers and shopping sites.
	When	All the time they feel an unjustified desire to purchase.
	Where	TV Programmers, sites.
Developing guidance and awareness programs to reduce compulsive purchases.	who	Experts of Marketing.
	How	Create guidance and awareness programs on social media, and post ads in education departments, companies, and streets.
	When	All The Time.
	Where	Web sites, private and public departments, streets.

Source: By Researcher based on Literature.

19. Conclusion

The research model of this study assesses the relationship between Digital transformation in banking and Compulsive Buying. Results revealed that Digital transformation in banking dimensions has a significant positive impact on Compulsive Buying. Furthermore, research results indicated that Demographic differences don't have significant differences in respondents' opinions regarding research variables (Digital transformation in banking and Compulsive Buying).

20. Limitations and Future Research

This research has some limitations which the researcher summarizes as follows:

People: These research results are limited to Customers of Egyptian Public Banks.

Place: This research results are limited to Egyptian Public Banks.

Time: These research results are limited to the cross-sectional period in which the questionnaire was shared with customers of the Egyptian Public Banks during the period from October 2023 to November 2023.

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