

How User Acceptance Can Affect Government Website Efficiency

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Abstract

The Egyptian Government published several digital services through their websites; however, the number of interactive users is very limited compared to the country's population and the expected users. This research is intended to figure out the user experience design challenges impact on the end-user to improve the efficiency of the GOV's website, and this will help the government to improve the quality standard of the digital services before publishing the services to the Egyptian citizens. Through the collaboration between the three stakeholders (Government stockholders, The Implementing Companies, The End-users), we will develop hypothesis that will help the Gov to provide a successful product that meet the end-user expectation and improve the satisfaction level. in this research we will focus in phenomena of (Government website efficiency) figure the impact of the dependent variable (User acceptance) and its relation with the independent variables (User expectation, Software efficiency, Ease of use, and software efficiency) and the relationship with the mediating variable (remember flow). The primary data was collected through end-user Interviews that were conducted through the online questionnaire tool "surveymonkey" which resulted in the observation that " Customer acceptance is one of the major success roles in Government website efficiency".

Keywords: government websites, user experience design, user interface design, e-government, user expectation, software efficiency, ease of use, and flexible usability

1. Introduction

The strategic goals of Egypt's digital transformation are primarily focused on improving citizen lifestyles, through government services digitization; by presenting the government services through official websites. There has been a huge shift in recent years, as mobile phones and digital devices cleared the path for new e-business models to express and foster new magnitudes like digital services (Elsafty & Boghdady, 2022). Egypt's vision for digital transformation also relies on linking governmental digital platforms and internal systems and this will impact an efficiency and efficacy improvement of the state's administrative apparatus. The government will need to learn and develop the digital services and hire high-skills people with new job roles (El Safty & Elzeftawy, 2022) The government's websites became necessary for Egyptian citizens on a daily basis, they usually use the government's websites to finalize several government services easier and quicker such as (born certificates, death certificates, traffic services, national identification renewal, and a huge number of different services); The citizens finalizing these services from the online websites which help to save time and effort of going to the government entities, however, several users are complaining about the challenges they are facing while using the government websites such as usability complexity level, performance delay, and remember to use functions. "Policy Perspective," issued by the Information and Decision Support Center is dedicated to this vital topic (Ghoneim, 2021), it's focused on the efforts that have been exerted taking into consideration the position of Egypt in the international indicators in digital transformation and the impact for Egyptian citizens.

2. Problem Definition

Due to the interactive user rate for government websites being very limited compared to the country's population, this research will focus on the variables towards government's websites efficiency with main focus on the significant variable; Customer satisfaction, and the independent other variables that will have indirect effects such as (usability, ease of use, user expectation, and software efficiency), All these variables that affect the quality of government websites

and the different types of variables that can affect the success rate for government websites and the impact for citizens satisfaction toward the digital services for government. According to (KEMP, 2022) report, the total number of internet users is 59.19 million from a total population of 103 million which means the percentage is 57.3% as a percentage of the total country's population is using the internet, in addition to, the numbers for internet users is growing annual by +4.5 million with average +8.1% increasing annual, check (figure 1).

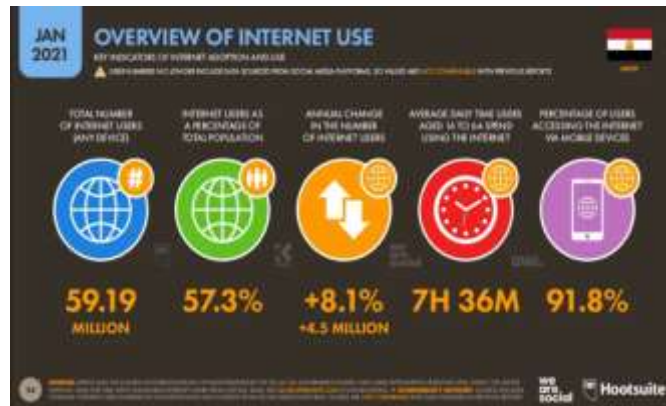


Figure 1. Overview of Internet Use

Source: Data Reportal

And these will cause high demand for digital transformation services in the future. Then user experience design is a vital component of a purchasing decision for the end-user through the digitalize, however, the majority of software companies that are providing software development solutions to the government don't care about the user experience design process in the software development life cycle. Several important products failed and did not meet the expected results for the government and caused revamping for the websites because of the complicated user experience design journey but Investing in digital transformation is growing rapidly in Egypt due to several factors such as Egypt vision 2030 and COVID-19 impact, Especially, Egypt's government vision lays the groundwork for Egypt's transformation into a digital society through websites and web applications, check expected investment plans till 2025 (Figure 2).

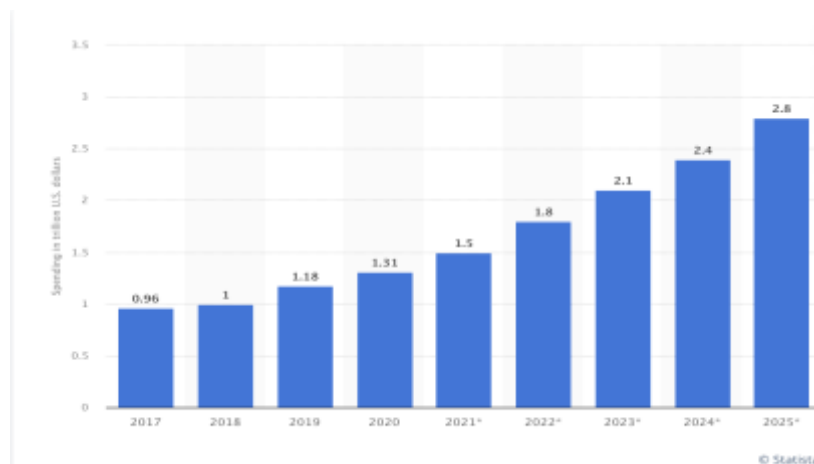


Figure 2. Expected investment plans till 2025

Source: Statista 2021

2.1 Business Model Analysis

In order to understand the root cause of user experience design challenges in the government websites, will focus on the business anatomy model (Figure 3) Business Anatomy Model (Elsafaty A. , 2018) because this explains how the organization elements can affect the final product that will deliver to the government and the level of quality, performance, and usability.

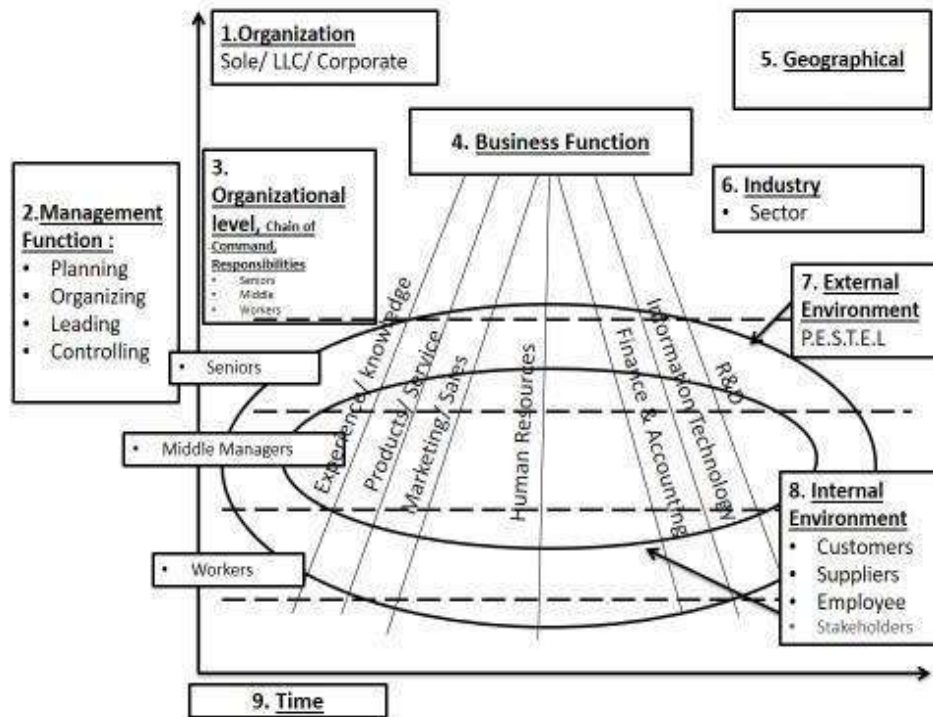


Figure 3. Business Anatomy Model

Source: Business Anatomy Model (Elsafty A. , 2018)

2.1.1 Organization Background

An Egyptian company operating in the market for several years, the company name will be anonymous due to the privacy policy, the company that is being evaluated is a well-known company in the software development industry in Egypt, and the company has provided different web applications and websites to the governments in the past 9 years.

2.1.2 Geographical, Industry and Legal Type

The company is located in Cairo, Egypt and the legal type is “LLC”. The company is specialized in telecommunication industry especially in “Software Development”

Business Functions & Organizational structure

The company’s experience and knowledge in software development is very good, however, their knowledge in user experience design is inappropriate because the company doesn’t have a research and development team, to explore the market need and customer behavior towards the websites or/and web.

The company organizational structure is hierarchical structure like any other big organization; this structure is based on having different degrees of authority within the organization, with a chain of command connecting multiple management levels. Even though the several benefits for the hierarchical structure (Clear objectives, Clear career path, and close supervision), however, one of the most important disadvantages are the inflexibility of development and the challenges for implementing updated techniques.

2.1.3 Internal Environment

The company management functions are well structured in “planning, organizing, and leading”; however, the company is not focusing in functions “control and analysis” which affect the final product result and the majority of websites and web application have critical usability mistakes cause of disengagement from the website’ users.

The core business function for the company is software development (Websites & Web Applications).

2.1.4 External Environment

Political: political stability allows the increase in the software industry based on Egypt company vision in 2030 for digital transformation.

Economical: According to (CAPMAS, Egypt, 2022) the spiked annual inflation rate Egypt's annual urban inflation rate increased to 13.1% in April 2022 is reserving locals to invest more in the real estate and software industries. Steady

economic reforms provide financial solutions/aid to small investors and start-ups who are interested to invest in Software Technology. Low and competitive labor costs.

Social: A growing generation of well-educated fresh graduates interested in the fields of information technology. Locals from various classes are keen on following trends; which are a gateway for passer-by advertisement opportunities

No shortage of entrepreneurs willing to take risks in the development of their businesses, allowing for increased market demand for custom-made software solutions, based on a flexible user journey.

Technological: The software industry is still in its first stages. Perhaps Internships and scholarships from software vendors both local and multinationals might be in need.

New Capital City's infrastructure has technology park which will help the firms in technology sector to grow and increase the software exporting which will help the Egyptian economy (Ghalib, El-Khorazaty, & Serag, 2021).

Environmental: Geographically well located for most African and European cities and some Asian countries, hence a good all year-round weather conditions source for continuous work flow.

Legal: Government support role needs to be more at the macro and micro levels - Vision 2030. Encouragement of the government by facilitating procedures and logistics related to the software industry both locally and internationally. Changes in tax treatment, reduction on telephone tariffs, and the introduction of new IP laws.

2.2 Stakeholders Analysis

Stakeholder analysis is an important step to help in identifying the relationship between the different stakeholders' roles and the impact in the phenomenon of user experiences (Varvasovszky & Brugha, 2000). The government's role is very important and efficient because they are taking the decision for approval or rejection; for the final product quality before publishing the digital services to the Egyptian citizens through their portal. On another hand, the software development companies who are responsible to develop and implement the digital services in the websites is one of the roots causes of issues because they are not considering the international quality standard or/and the best practice for user experience design journey; which cause of presenting a weak final product that not satisfying the end-user. The third and final role is the Egyptian citizen who is the most affected party and the most powerful party (check figure 4) in the stakeholder analysis because they facing several challenges such as (complex journey, performance issues, and not easy to remember) while using the digital government services through the official websites. Then the three roles of stakeholders should be collaborated together through applying several popular techniques such as (Usability testing, User experience interviews) and this collaboration will be between the development company and end-user. Also, as we mentioned before the government should implement the user experience quality standards and follow them by improving the quality standard through the results for cooperation between the software companies and end-users.



Figure 4. Stakeholder Analysis – Power-Interest Grid

Source: mindtools

Understanding the user behavior toward the websites is very important to continue developing the user experience journey by using TAM that was developed by (Fred D. Davis, 1989) and it was extended by improved model by (Elsafty, Elbouseery, & Shaarawy, 2020) UTAUT model (Viswanath, Michael G., Gordon B., & Fred D., 2003), in this research we will explain the impact of ‘user acceptance’ variable on “successful government websites”. Usability testing is gathering real users to interact with the website to observe the user behavior and reaction to the system which will increase the

interactivity rate and improve the performance rate for the final product.

3. Literature Review

User experience (UX) design has been defined in a variety of ways by different researchers but the majority of researchers agree that the UX main objective is to improve the interaction between the website and the end-user through continues development process (Kinuthia, 2013). User Experience (UX) abbreviation was developed to capture the behavior of the human interaction toward the product, and it was assumed that UX research would focus on design, However, it might be argued that the findings of UX research have not been easily translated into visual design but it will help us to design a better (UX) design to meet end-user's needs (Berni & Borgianni, 2021). Developing the user experience is not limited to the visual arts only but it's important to study the end-user and understand the system design and user-flow to provide a better usability (Lim, Park, & Cho, 2020). Using paper prototyping to draw the user experience journey, particularly from the lowest to the highest levels (low fidelity design), receives positive feedback from the participant's users, whatever, the advantages or disadvantages for the journey. Researchers like (Dabrowski & Munson, 2011) investigated into the correlation between HCI and personal performance and found that flow elicited the best results from users, with the fewest failures and the maximum pleasure with the systems. According to (Berni & Borgianni, 2021) Usability testing is one of the important techniques; the companies use this technique to explore the important information that should be implemented with high conversion for the end-user and can the company can determine the weakness area in the design journey and improve it check figure 6 to understand how user emotions and satisfaction can affect the experience.

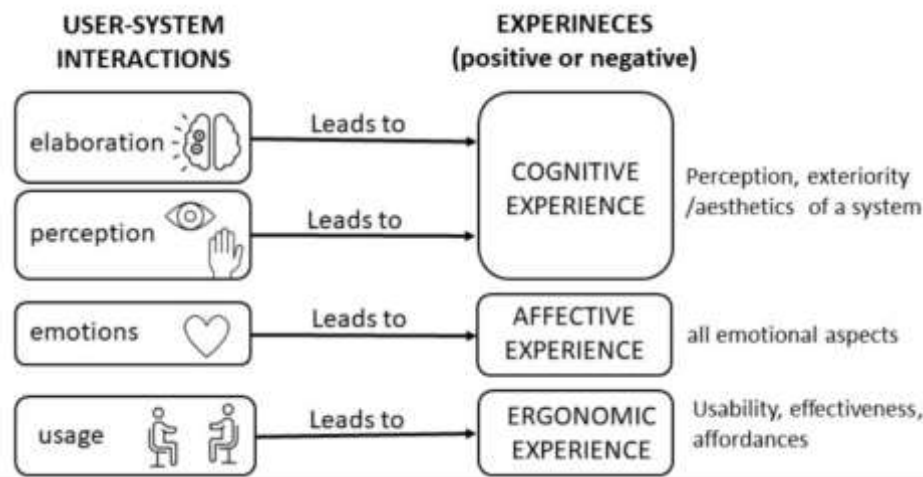


Figure 5. Representation of different experiences caused by different typologies of user-system interaction (Berni & Borgianni, 2021)

User experience prototyping is not the only technique to initiate a successful digital transformation (Henriette, Feki, & Boughzala, 2016), this is another point of view for the researcher and it's supporting the prototyping to initiate a successful digital transformation but not the only technique and it's should be supported by strategy from the design company to provide different type of techniques should help the company initiate a successful strategy such as big data analysis to understand more about the user behavior, also, this point of view has been previously supported by another research published by The Rady School of Management (Zhu, Dong, Xu, & Kraemer, 2006). Applying the technology can dramatically boost a company's performance in digital transformation (Westerman, Bonnet, & McAfee, 2014), improving the performance for digital transformation by the nine elements has been proof the efficiency of this model by implementing, however, after interviewing 157 executives in 50 companies, the researcher didn't found any company applying the nine elements; some companies implementing little elements in its process. Digital transformation can impact on the achievement of the Sustainable Development Goals (SDGs) and the country's vision to achieve the citizen's satisfaction, Digital transformation requires a review of institutional competence in dealing with information and data and the use of digital transformation for this purpose to provide better satisfaction level for the citizen (Suzanna & Mahmoud, 2020). Building an efficient website/application requires several steps to implement a successful solution with optimum clicks (Joshua, 2003), the researcher make analysis with 44 user through 620 tasks and counted the number of clicks and he conclude that any company want to help the end-user and meet the customer's expectations check (figure 7), they should focus on the customer expectation and customer acceptance level in design journey. Some researchers argue about how the customers become satisfied, but they agree that meeting the customer expectations, will generate the customer acceptance and the customers will interact with the website. In truth, the decision-making step through the website is influenced by customer behavior because users who is doing several clicks doesn't mean they find what they are looking

for. As we mentioned before (Srivastava, 2009) stated that increasing the efficiency of software testing by finding the program's most critical path clusters. This is accomplished by creating variable length Genetic Algorithms that optimize and choose software path clusters that are weighted according to the path's criticality.

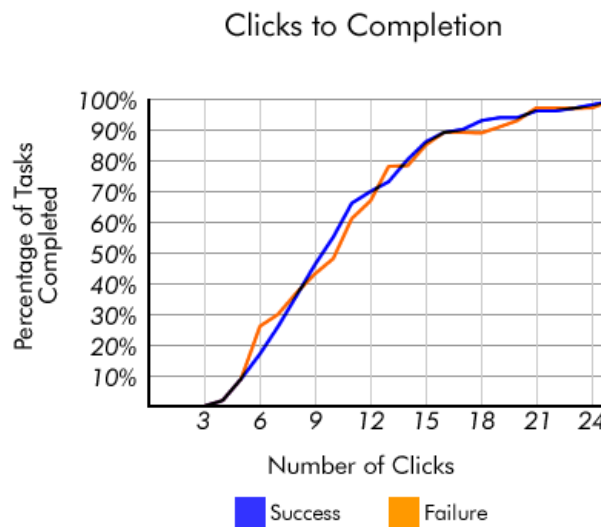


Figure 6. Three-Clicks Completion graph

Source: Center Centre uie

A user may be more or less tolerant of waiting for an operation to complete depending on how difficult interaction is judged to be (Rina A. Doherty, 2015), For example, the more the perceived complexity of user activity, the greater the possibility for lengthier delays. Also the studies have proven that users expect less waiting time for interact with the system compared to the actual results it's taking longer time for the websites to load and to be ready for user interaction (Dabrowski & Munson, 2011), in a positive way, when the user wait for less time, they feel more comfortable to deal with the website and improve the customer satisfaction level check (table 1).

Table 1. Experiment's Results

	FF Original	FF Refactored	TA Original	TA Refactored
Satisfaction	74.375	78.75	84.375	93.75
Efficiency	03'40"	02'57"	03'09"	02'36"
Effectiveness	100%	100%	83.33%	100%

Another point of view discussing the user satisfaction based on the user expectation for the response time when user trying to use a new system and how system flexibility can have big impact on the user satisfaction (Anderson, Rina, & Eric, 2011).

The websites have become increasingly common in today's business and government services, the website usability is frequently lacking and is even a determining factor in a website's success and customer satisfaction rate, usability testing issues are repeated in the websites, and many of these issues have been documented by digital tools, but usability testing and remediation are still costly for the companies, check figure 8 to understand how usability events logging can help the developer to generate better usability (Grigera, Garrido, & Rossi, 2017).

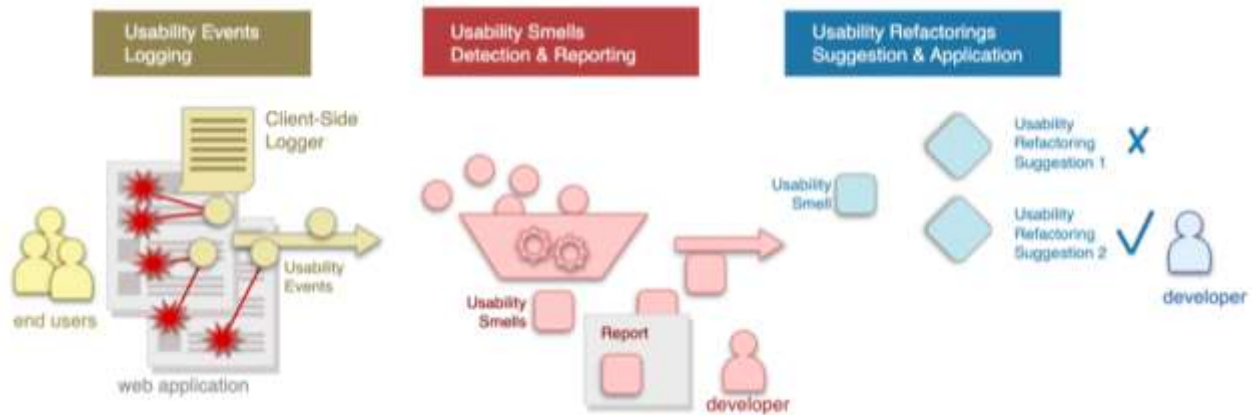


Figure 7. Steps of the automated approach for Web Usability improvement (Grigera, Garrido, & Rossi, 2017)

Both academia and industry are attempting to automate usability assessment and provide automatic data, but they rarely deliver tangible solutions (Norman & Panizzi, 2006). These tools appear in the form of manual rules or patterns that developers might follow. (Lewis J. R., 2006) stated that usability testing is a vital skill for usability practitioners, who are experts whose major purpose is to advise product creators on how to enhance their products easier to use. It is by no means the sole talent that usability professionals must possess, but it is a critical one, the technology acceptance model (TAM), which was first introduced in 1986, continues to be the most extensively used theoretical model in the field of information system. According to (Lee, Kozar, & Larsen, 2003) More than one hundred articles published by trusted journals and conferences in the past years, are focused to improve the enhance the TAM model to adapt the future needs and improve the customer experience through the technology. which means combining UTAUT model and TAM (Fred D. Davis, 1989) check Figure 9 model with focus in the significant variables and dependent variable can improve the user experience design that will improve the customer behavioral intention which means it’s will affect the customer satisfaction rate.

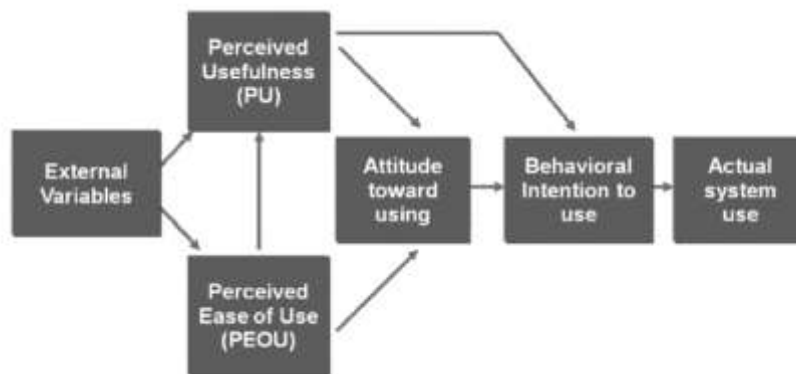


Figure 8. Technology of Acceptance Model Factors

Source: technology acceptance model (TAM) (Fred D. Davis, 1989)

4. Methodology

After our research, we found a significant variable (Customer Satisfaction) has the main impact in the phenomena (government’s website acceptance) Also we have independent variables such as (User, Acceptance, User expectation, and Software efficiency) that’s will affect the relationship between the significant variable and the phenomena and there was moderating variable “Remember User Journey flow” which will effect on the relationship between “Ease of use and Gov Website Acceptance” check figure 10.

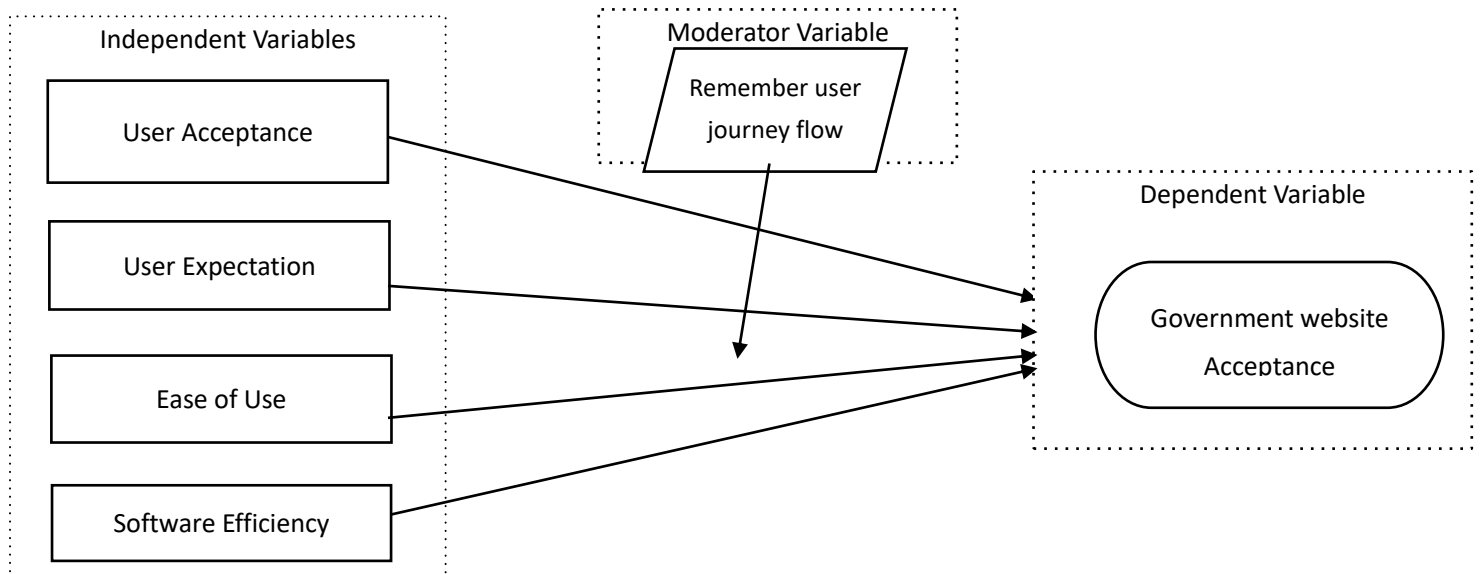


Figure 9. Relationship Between The Variables

The hypothesis and theoretical framework:

H1_a: The **User Acceptance** is a significant variable have directional relationship to measure the **government website acceptance** and success rate.

H2_a: **User Expectation** is an independent variable that can have indirectional relationship (positive/negative) between **user acceptance** and **government website acceptance**.

H3_a: The **Ease of Use** is an independent variable that have directional relationship with positive impact between **user acceptance** and **government website acceptance**.

H4₀: The **Remember User Journey Flow** doesn't have directional or/and directional relationship with satisfaction variable.

H5_a: **software efficiency Use** is an independent variable that have directional relationship with positive impact between **user acceptance** and **government website acceptance**.

Data collection and sample size:

Based on the literature review, the researcher found that several researchers developed a questionnaire method using the likely scale to provide accurate results to measure the acceptance of the software, in this research paper will use the same method of the questionnaire with some enhancement in the questions to adapt the questionnaire with the problem definition, also, these questionnaires were already implemented in 2016 by (Berkman & Karahoca, 2016) and it has been developed an updated version in 2018 by (Lewis & Sauro, 2018) and both methods have been adapted from (Fred D. Davis, 1989). We listed some structured interview questions based on techniques like funneling, unbiased, and clarifying the issues that can help us determine the impact of the research variables in the phenomena with unbiased opinion check Table 2 for the updated questionnaire that has been used in the data collection. The data collecting tool that has been addressed here is primary, which involves the use of a questionnaire with closed-ended questions through a rating scale for data collection through "Google Forms.

Table 2. System acceptance questionnaire based on TAM

		Strongly Disagree	1	2	3	4	5	Strongly Agree
Customer Acceptance								
1	Easier usability in GOV's website will accomplish me to reuse the website.							
2	I found the website very awkward to use							
3	I think that I would like to use this website frequently							
Software efficiency								
3	I found the system functions is well integrated							
4	I found the system unnecessarily is complex							
Remember user journey								
5	I think I can remember the user flow for GOV website							
Ease of use								
6	I think finding what I want via the website is easy							
7	I thought the GOV's website usability has too many challenges							
User Expectation								
8	I felt very confident using the GOV website							
9	I needed to learn a lot of things, before I could going to GOV's website							

The total population has used the Government website is more than 4,000,000, the researcher cannot collect data from all the users according to the limitation of data availability, then, the researcher calculated a sample for 68 respondents as stated in (Raosoft.com, n.d.) depend on confidence 90%, and error of 10%. The data collection is equally divided among (Highly educated people, Normal educated people, and Low educated people). The research approach used in this analysis is "Quantitative," in which the acquired data was quantified; The main reason for employing this research strategy is obviously: accurate quantification aids in obtaining the most valuable result that can affect our phenomenon "Gov's website efficiency".

Data Analysis:

The research uses a descriptive and inferential statistics method and conducted the following analyses on the data acquired using SPSS software:

Normality Test; The researcher used Shapiro-Wilk tests to determine the normality of the data gathered as stated on (Sekaran, 2003). As indicated in the table below, the significance threshold for Acceptance is ($p > .05$), indicating that this variable is normally distributed within the sample. Additionally, efficiency, Ease of use, User Expectations, and remembering user flow all have significant levels of ($p .05$), indicating that they do not follow a normal distribution within the sample. According to (Field, 2009) & (Ghasemi, 2012) The central limit theorem states that, regardless of the population distribution, for large samples (greater than 30 or 40), the sample of sample means can be regarded as normally distributed .

Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
User Acceptance	.966	46	.197
Software Efficiency	.906	46	.001
Ease_of_USE	.896	46	.001
User Expectations	.899	46	.001
Remember user flow	.762	46	.000

Cronbach Alpha: The researcher evaluated the research instrument's internal consistency throughout the preliminary analysis test. The following table displays the Cronbach's Alpha for the suggested model variables.

Variable	Cronbach's Alpha
Ease of Use	.602
User Expectation	.646
Software Efficiency	.618
website Acceptance	.543

Scales measuring ease of use (two items), user expectations (two items), software efficiency (two items), and website acceptance (three items) all exhibited satisfactory internal consistency reliability. The reliability score, Cronbach's alpha, was used to measure internal consistency for the variables, with a Cronbach's alpha of 0.50 signifying adequate dependability according to (Perry R. Hinton, 2014). The explanation that follows clarifies when to use the reliability scale is as follows:

- The reliability is great when it is (0.90 or above).

- High dependability is defined as (0.70 to 0.90).
- Moderate dependability is defined as (0.50 to 0.70).
- Low reliability is defined as (0.50 or less).

Moderation Test: Hierarchical multiple regression

A hierarchical multiple regression analysis was performed using the PROCESS version 3.4 macros plugin for SPSS software in order to test the hypothesis that "Remember User Journey" proposed as a Moderator Variable that moderates the relationship between the Acceptance as the Dependent Variable and all Independent Variables (Ease of Use, Expectations, and Software Efficiency) (Hayes, 2017).

The interaction between Ease of Use and Remember User Journey to Acceptance							
Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.4638	.2151	.4542	3.8362	3.0000	42.0000	.0163
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	3.4340	1.3683	2.5096	.0160	.6726	6.1954	
EaseUSE	-.1554	.5362	-.2898	.7734	-1.2374	.9266	
Rembrnce	-.2895	.4636	-.6245	.5357	-1.2250	.6460	
Int_1	.1615	.1689	.9557	.3447	-.1795	.5024	
Product terms key:							
Int_1	:	EaseUSE	x	Rembrnce			
Test(s) of highest order unconditional interaction(s):							
	R2-chng	F	df1	df2	p		
X*W	.0171	.9134	1.0000	42.0000	.3447		

It was determined that the interaction between the independent variable Ease of Use and the moderating variable Remember User Journey was not statistically significant [B=.1615, 95% CI (-.1795,.5024), p > 0.05]. With a P value of .3447 > 0.05 suggesting that Remember User Journey does not modify the link between **Acceptance** and **Ease of Use**, is supporting hypothesis $H4_0$.

The interaction between Expectations and Remember User Journey to Acceptance							
Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.3916	.1534	.4899	2.5361	3.0000	42.0000	.0696
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	4.0160	1.7347	2.3151	.0256	.5152	7.5167	
Xpctaton	-.3751	.5267	-.7121	.4803	-1.4380	.6879	
Rembrnce	-.3863	.5880	-.6571	.5147	-1.5730	.8003	
Int_1	.1850	.1726	1.0719	.2899	-.1633	.5332	
Product terms key:							
Int_1	:	Xpctaton	x	Rembrnce			
Test(s) of highest order unconditional interaction(s):							
	R2-chng	F	df1	df2	p		
X*W	.0232	1.1490	1.0000	42.0000	.2899		

It was determined that the interaction between the independent variable Expectations and the moderating variable Remember User Journey was not statistically significant [B=.1850, 95% CI (-.1633,.5332), p > 0.05]. With a P value of .2899 > 0.05 showing that Remember User Journey is not mediating the association between **Acceptance** and **Expectations**, which is supporting hypothesis $H4_0$.

The interaction between Software Efficiency and Remember User Journey to Acceptance							
Model Summary							
	R	R-sq	MSE	F	df1	df2	p

	.5987	.3584	.3712	7.8217	3.0000	42.0000	.0003
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	2.1503	1.1609	1.8522	.0710	-.1926	4.4932	
Efecincy	.4525	.4372	1.0349	.3066	-.4299	1.3349	
Rembrnce	-.0137	.3974	-.0344	.9727	-.8158	.7884	
Int_1	.0121	.1373	.0878	.9304	-.2651	.2892	
Product terms key:							
Int_1	:	Efecincy x	Rembrnce				
Test(s) of highest order unconditional interaction(s):							
	R2-chng	F	df1	df2	p		
X*W	.0001	.0077	1.0000	42.0000	.9304		

It was determined that the interaction between the independent variable of Software Efficiency and the moderating variable of Remember User Journey was not statistically significant [B=.0121, 95% CI (-.2651,.2892), p > 0.05]. With a P value of .9304 > 0.05 suggesting that Remember User Journey does not modify the link between **Acceptance** and **Software Efficiency**, which is supporting hypothesis $H4_0$.

Correlation Test Analysis:

According to the nature of the association between the two variables, the relationship between them in a correlation test can be either positive or negative. When two variables have a positive correlation, it implies they are moving in the same way, whether rising or dropping, whereas a negative correlation means they are moving in opposing directions, with one variable rising while the other is falling. According to Cohen standards, the effect size of the correlation coefficient has been compared to the behavioral sciences to provide the practical interpretation cutoffs of the correlation data. This test adhered to the cutoff intervals for the correlation coefficient's effect size, which are separated into four intervals in the table below (Cohen, 2003).

Cohen guidelines for effect size interpretation

Correlation coefficient value (r) Effect size

- (r) < .1 Negligible / Very small
- (r) = .1 to .3 Small
- (r) = .3 to .5 Medium
- (r) > .5 Large

Due to the fact that all correlation coefficients between independent variables are shown below, the table below displays the results of the bivariate test and the relevance of correlation on behavioural intention below .7 according to (Pallant, 2005) or .9 according to (Hair J F Jr, 2010) so this indicates there is a probability of the absence of multicollinearity

Correlation between Acceptance and other variables

According to the results in the table below, there is a statistically significant positive association between acceptance and software efficacy, meaning that in this sample, higher acceptance is linked to higher efficacy.

		Acceptance	Efecincy	Ease_USE	Expectations	Remeberance
Acceptance	Pearson Correlation	1	.598**	.421**	.246	.322*
	Sig. (2-tailed)		.000	.004	.100	.029
	N	46	46	46	46	46
Efecincy	Pearson Correlation	.598**	1	.685**	.454**	.509**
	Sig. (2-tailed)	.000		.000	.002	.000
	N	46	46	46	46	46
Ease_USE	Pearson Correlation	.421**	.685**	1	.508**	.461**
	Sig. (2-tailed)	.004	.000		.000	.001
	N	46	46	46	46	46
Expectations	Pearson Correlation	.246	.454**	.508**	1	.278
	Sig. (2-tailed)	.100	.002	.000		.061
	N	46	46	46	46	46
Remeberance_1	Pearson Correlation	.322*	.509**	.461**	.278	1
	Sig. (2-tailed)	.029	.000	.001	.061	
	N	46	46	46	46	46

Since the correlation coefficient (r =.598, p .05) is high, **acceptance** and **effectiveness** are thought to be related. According to the data in the table, there is a statistically significant positive association between **Acceptance** and **Ease**

of USE, meaning that in this sample, higher Acceptance is linked to higher Ease USE.

Since the correlation coefficient ($r = .421$, $p .05$) is moderate, the relationship between **acceptance** and **ease of USE** is also deemed to be moderate.

According to the data in the table, there is also a statistically significant positive association between **Acceptance** and remember user flow, meaning that in this sample, a higher Acceptance is linked to a higher KC. Since the correlation coefficient ($r = .322$, $p .000$) between acceptance and memory is moderate, this relationship is thought to exist. There is no statistically significant link, according to the statistics in the table.

Simple linear regression:

is a parametric statistical test that identifies the impact of a single independent explanatory variable on the dependent variable.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.421 ^a	.177	.158	.67417	2.555

a. Predictors: (Constant), Ease_USE

b. Dependent Variable: Acceptance

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.304	1	4.304	9.469	.004 ^b
	Residual	19.998	44	.455		
	Total	24.302	45			

a. Dependent Variable: Acceptance

b. Predictors: (Constant), Ease_USE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.397	.358		6.688	.000
	Ease_USE	.410	.133	.421	3.077	.004

a. Dependent Variable: Acceptance

The researcher performed a straightforward linear regression test to evaluate the impact on acceptance (outcome variable) based on Efficiency (predictor variable), the results shown in table 1 and 2 indicates a significant regression equation ($F(1, 45) = 24.526$, $p < .05$), and R^2 of .358. This value of R^2 means Efficiency can explain 35.8% of the variance occurred in Acceptance.

Table 3 displays the non-standardized regression coefficient ($B = .499$, $p < .05$) which indicates that for every one unit increase in Efficiency, there will be .499 unit increase in Acceptance in case we consider all other variables are constant, while the standardized regression coefficient ($\beta = .598$, $p < .05$) indicates that for every increase of one standard deviation in Efficiency, the Acceptance will increase by .598 standard deviation in case we consider all other variables are constant.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.421 ^a	.177	.158	.67417	2.555

a. Predictors: (Constant), Ease_USE

b. Dependent Variable: Acceptance

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.304	1	4.304	9.469	.004 ^b
	Residual	19.998	44	.455		
	Total	24.302	45			

a. Dependent Variable: Acceptance

b. Predictors: (Constant), Ease_USE

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.397	.358		6.688	.000
	Ease_USE	.410	.133	.421	3.077	.004

a. Dependent Variable: Acceptance

The researcher carried out a simple linear regression test to assess the effect on Acceptance (outcome variable) based on

Ease_USE (predictor variable), the results shown in table 1 and 2 indicates a significant regression equation ($F(1, 44) = 9.469, p < .05$), and R^2 of .177. This value of R^2 means Efficiency can explain 17.7% of the variance occurred in Acceptance.

As shown in table 3 the unstandardized regression coefficient ($B = .410, p < .05$) which indicates that for every one unit increase in Ease_USE, there will be .410 unit increase in Acceptance in case we consider all other variables are constant, while the standardized regression coefficient ($\beta = .421, p < .05$) indicates that for every increase of one standard deviation in Ease_USE, the Acceptance will increase by .421 standard deviation in case we consider all other variables are constant.

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	.322 ^a	.104	.083	.70356	2.252	
a. Predictors: (Constant), Remeberance_1						
b. Dependent Variable: Acceptance						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.522	1	2.522	5.096	.029 ^b
	Residual	21.780	44	.495		
	Total	24.302	45			
a. Dependent Variable: Acceptance						
b. Predictors: (Constant), Remeberance						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	2.666	.365		7.305	.000
	Remeberance	.269	.119	.322	2.257	.029
a. Dependent Variable: Acceptance						

The researcher carried out a simple linear regression test to assess the effect on Acceptance (outcome variable) based on Remeberance (predictor variable), the results shown in table 1 and 2 indicates a significant regression equation ($F(1, 44) = 5.096, p < .05$), and R^2 of .104. This value of R^2 means Efficiency can explain 10.4% of the variance occurred in Acceptance.

As shown in table 3 the unstandardized regression coefficient ($B = .269, p < .05$) which indicates that for every one unit increase in Remeberance, there will be .269 unit increase in Acceptance in case we consider all other variables are constant, while the standardized regression coefficient ($\beta = .322, p < .05$) indicates that for every increase of one standard deviation in Remeberance, the Acceptance will increase by .322 standard deviation in case we consider all other variables are constant.

Model Summary ^b						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	.246 ^a	.060	.039	.72039	2.430	
a. Predictors: (Constant), Expectations						
b. Dependent Variable: Acceptance						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.468	1	1.468	2.828	.100 ^b
	Residual	22.834	44	.519		
	Total	24.302	45			
a. Dependent Variable: Acceptance						
b. Predictors: (Constant), Expectations						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	2.672	.478		5.585	.000
	Expectations	.243	.145	.246	1.682	.100
a. Dependent Variable: Acceptance						

The researcher carried out a simple linear regression test to assess the effect on Acceptance (outcome variable) based on Expectations (predictor variable), the results shown in table 1 and 2 indicates a nonn-significant regression equation ($F(1, 44) = 2.828, p > .05$), and R^2 of .363

As shown in table 3 the unstandardized regression coefficient ($B = .243, p > .05$) is not statistically significant.

Multiple Regression

Table A - Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Efficiency		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
a. Dependent Variable: Acceptance			

Table B - Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.598 ^a	.358	.343	.59551	.358	24.526	1	44	.000	2.539
a. Predictors: (Constant), Efficiency										
b. Dependent Variable: Acceptance										

Table C - ANOVA ^a						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	8.698	1	8.698	24.526	.000 ^b
	Residual	15.604	44	.355		
	Total	24.302	45			
a. Dependent Variable: Acceptance						
b. Predictors: (Constant), Efficiency						

Table D - Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.083	.291		7.162	.000		
	Efficiency	.499	.101	.598	4.952	.000	1.000	###
a. Dependent Variable: Acceptance								

Table E - Excluded Variables ^a								
Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	Ease_USE	.020 ^b	.121	.904	.018	.530	1.886	.530
	Expectations	-.033 ^b	-.239	.812	-.036	.794	1.260	.794
	Remeberance	.023 ^b	.165	.870	.025	.740	1.351	.740

a. Dependent Variable: Acceptance
 b. Predictors in the Model: (Constant), Efficiency

In order to determine the best predictors in the model and evaluate the overall impact of all independent variables, the researcher used SPSS software to conduct a stepwise multiple regression analysis for the entire research model. Stepwise multiple regression begins with the best predictor of the dependent variable before gradually adding other independent variables to the reg. To assess the total model's goodness of fit and the amount of variance that the entire model can explain in terms of behavioral intention, stepwise multiple regression and analysis of variance (ANOVA) tests are employed together (Hair J FJr, 2010).

As shown in table B and C we have one model that can predict the Acceptance. The model has one independent variable which is Efficiency. Tables B and C indicates a statistically significant regression model between Efficiency and Acceptance where (F (1,44) = (24.526, p < .05), and adjusted R ²of .343. This means that KC can explains 34.3% of the variance in the Acceptance.

As shown in table D, from Model 1, Efficiency has a statistically significant regression coefficient (B = .599, p < .05) which indicates that for every one unit increase in personalization, there will be .599 units increase in behavioral intention in case we consider all other variables are constant.

From table D and E, it was found that variance inflation factor (VIF) for all independent variables is below the suggested cutoff by (Hair J F Jr, 2010) which ranges is 5. Thus, the assumption of presence of multicollinearity is rejected in this research. As shown in table E the excluded variables didn't show any statistical significance in the model despite showing statistical significance when using simple linear regression, this result can be interpreted as the excluded variables couldn't compete with Efficiency in the regression model. Consequently, Efficiency was considered the strongest predictor in this research model.

5. Conclusion & Recommendation

According to the research and the literature review in a similar environment, we believe customer acceptance is the significant variable that can affect the phenomena of government websites' efficiency with considering the independent variables that can affect the relationship; User expectation is an independent variable that will affect the relationship between the user acceptance DP and government website acceptance by negative or positive impact. And the ease of use is an independent variable that can affect the relationship with positive effectiveness, however, we remove (Software efficiency) because it's not an independent variable to measure the customer satisfaction level. Also, the (remember how to use) variable is a meditation variable and limited to a certain time because the end-user will not able to remember the user's journey after a while. Due to the analysis that we did for the company has been already developed the website for Egypt's government based on (Elsafty A. , 2018) we find how the business anatomy model can help us to understand the company can affect the final result for the software/website.

6. Recommendation

Focus in the company process

We should focus on the company's internal process who will develop the website for the government and evaluate and continue develop the internal process for the software development before going to life release.

Focus in user acceptance

Customer acceptance is the significant variable that needs the attention from the company to measure and enhanced during the development process because user acceptance is responsible for the phenomena of Government website efficiency.

Focus in moderation and mediation variables

User expectation, Software efficiency, Ease of use, and flexible usability is important variables can affect the relationship between the significant variable (User satisfaction) and phenomena (Government website efficiency) then, the companies should consider the impact of this variables for the final output.

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