

# Measuring the Relationship Between the Utilitarian Self-service Technology Performance and the Customer Hedonic Experience

<sup>[1]</sup>Fouad Gamal Luxor, <sup>[2]</sup>Aisha El Meniawy, <sup>[3]</sup>Azza El Borsoly

<sup>[1]</sup> Doctor of Philosophy Business Administration

<sup>[2]</sup> Professor of Marketing

<sup>[3]</sup> Professor of Business Administration

Corresponding Author Email: <sup>[1]</sup> fouadluxor@gmail.com, <sup>[2]</sup> aishaelmeniawy971@gmail.com, <sup>[3]</sup> Azza.elborsoly@gmail.com

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**Abstract**— *The relation between the practical self-service technology enactment and the customer hedonic involvement without going deeper towards the impact of the self-service technology performance on the customers shopping experience. This examination is focusing on two perspectives the utilitarian self-service technology performance (Task Uncertainty, service escape, perceived control, and the time pressure) and the customers hedonic experience to evaluate the web-based shopping practice with the brief look at fun and happiness.*

*Many flourishing online organizations have made adaptable applications and viable portable sites to enhance this growing business sector, for example, Talabat, Noon, UBER, Online Banking and have created viable business systems and promoting methods.*

*This research is focusing on the hedonic experience connected with utilitarian self-service technology, a utilitarian part cannot be discounted nor ignored. In this way, we explore the role of delight and usefulness in a hedonistic situation.*

**Keywords:** *Utilitarian Self-Service Technology, Hedonic Customer Experience, Task Uncertainty, Service Escape, Perceived Control, Perceived Time Pressure, Efficiency, Fun, Customer Delight.*

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## I. INTRODUCTION

Self-Service technologies advancements are implemented by companies to increase their profitability while improving client fulfilment by providing fresh and helpful provision platforms (Demoulin 2022). Utilitarian Self-services technologies are defined as: "innovative interfaces that empower clients to deliver a facility autonomous of uninterrupted service representative inclusion" (Blut, 2021).

In order to incorporate self-examining or self-checkout (SCO), traders have extended their self-service technology reach, whereby customers filter their purchases themselves and make instalments afterwards. Through using Self-Service technologies, consumers accomplish the facility or a portion of the operation, typically performed by the facility supplier (Taylor et al., 2021).

In some shops, Albertsons and Jewel-Osco have eliminated Utilitarian Self-service Technology to improve customer service and offer more personalized assistance by fostering more human connections. (Demoulin 2022).

Past examinations have recognized some particular variables affecting Self-Service technologies use, for example, the requirement for cooperation with representatives, technology anxiety (Meuter et al., 2021), pleasure (Collier et al., 2021), self-viability, dependability (Demoulin 2020) and saw control. No examinations have proposed a general model coordinating the individual, framework and situational determinants of Utilitarian Self-service Technology Performance.

Self-service can be defined as inspired interfaces that allow clients to build a facility free of direct facility representative association. (Demoulin 2020)

Internet shopping is developing and has significantly decreased traditional stores' pie. The world-wide web trade marketplace is becoming strikingly quick, and deals have expanded from \$694 in 2020 to \$1155 billion worldwide (Gefen, 2021). Subsequently, web-based retailing has become a dynamic network for organizations worldwide to support and sell their items and facilities. (Grewal, & Levy, 2020)

Web-based spending is a kind of spending in which merchants and consumers are found on organizations' websites. The World Wide Web (self-service technology) appearance has changed the strategies for buying products and ventures by permitting the organizations to do the commerce all the more straightforwardly in a hyper-associated world. As Web clients' quantity expands, online merchants' chances are likewise creating (Overby and Lee, 2021).

Different attitude/social prototypes such as technology accepted models and the arranged action hypothesis have been widely used in web-based shopping (Ketabi et al., 2022). Nevertheless, these models have been complained by a few scientists for being too restrictive in terms of clarifying the emotional side of the action, and the expansion of full of feeling factors has been suggested as a major increase in the hypotheses (Nejad et al., 2020).

## II. LITERATURE REVIEW

Past investigations have been incredibly inspired by conduct aim and general use (recurrence or portion of utilization) of Utilitarian Self-service Technology Performance, yet not many have taken a gander at real use, (Wang et al., 2021) anticipated the advanced utilization of Self-service Technology without seeing situational issues. Different researches (Wang et al., 2021) distinguished many situational features in a further subjective exploration. Along these defences, an exploration model coordinates the genuine relationship between Utilitarian Self-service Technology and situational factors.

Utilitarian Self-service Technology for example, automatic teller machines (ATMs), computerized registration, phone banking, and Internet exchanges, are getting generally acknowledged with the improvement of Internet-based application frameworks.

Self-service can be defined as inspired interfaces that allow clients to build a facility free of direct facility representative association. (Demoulin & Djelassi, 2020).

Previous research has recognized different variables that decide clients' appropriation of Utilitarian Self-service Technology and their resulting fulfilment; these incorporate mechanical and individual customer attributes. Specialized highlights that appeal to clients' expectations to acknowledge or utilize the Utilitarian Self-service Technology incorporate apparent handiness, usability, oddity, cost, advantage, accommodation, risk, and fun. (Wang, et al., 2021)

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## III. THE RESEARCH HYPOTHESIS

**H:1 Utilitarian Self-Service Technology Performance have A positive relationship With Customer Hedonic Experience.**

The first hypothesis will be focusing on the Utilitarian Self Service Technology performance (Task Uncertainty, Service escape, Perceived time pressure, and Perceived control) and its relationship with the customer hedonic experience (Efficiency, Fun and Customer Delight).

## IV. EXPLORATORY STUDY

Since the current research aims to measuring the relationship between the utilitarian self-service technology performance and the customer hedonic experience, the pilot study was designed to:

1. Explore the relationship between variables.
2. Investigate how Utilitarian self-service technology

performance might affect the customer hedonic experience.

3. Explain the most important elements in measuring Utilitarian self-service technology performance.
4. Describe the most important elements in measuring Customer hedonic experience.
5. Enlighten the most important elements in measuring Utilitarian self-service technology performance.

A Focus group has been steered, which gathered seven lecturers and fresh graduate students interested in sports and fitness. They were asked about to what extent they rely on their sports mobile application in their daily workout schedule.

### The Results from the Exploratory Study:

1. After finishing the Focus group that gathered seven lecturers and fresh graduate students that were interested in the field of sports and fitness, that were asked about to what extent do they rely on their mobile application in their daily workout, all companions positively perceived the realization of sports and fitness mobile application with the previous background. They considered it as a useful tool for both parties (service provider and customer).
2. Therefore, the subject is that sports and fitness mobile application is a business opportunity for marketers to reach a wide range of customers. Nowadays, it affects the Core business functionality as it allows the customer to receive the service provided not just efficiently but in a more pampered way for simplification.
3. Moreover, the respondents mentioned that they rely on their mobile application when providing functional training online sessions, via communicating with their coaches, taking from them nutrition plans, evaluating their performance, giving back comments and feedback for the athlete's performance based on the Body mass index that the athlete should input to his app.
4. When the respondents were asked about the features and benefits of the mobile applications that they would prefer to find on a daily usage, they stated that the mobile application that has an ease of use (User friendly), up-to-date with frequent interesting, new, and creative features for trainers and trainees would make them happier and feel delighted while using such an app.
5. Most of the respondents agreed on the following statements that describe the mobile application they are willing to use (free of charge, easy to use, adaptive, and reliable). All these pillars would allow them to continue using the app to facilitate the service provided within the cost attribution elements (Cost, benefit, Convenience, and risk risks).

**V. RESEARCH PROBLEM**

**Is there a relationship between Utilitarian self-service technology performance and customer hedonic experience?**

Previous examinations on utilitarian data frameworks have explored what the segment components of Internet clients mean for their utilitarian and social cooperation points of view. They find that clients in the big-time salary bunch utilize the Web for utilitarian purposes (Fiore et al., 2022).

Results led from the exploratory research that the connection between the utilitarian self-service execution and the client hedonic experience should be furtherly concentrated inside the directing variable's presence, which is the buying decision attribution.

**VI. RESEARCH QUESTIONS**

Is there a relationship between utilitarian self-service technology performance and customers hedonic experience?

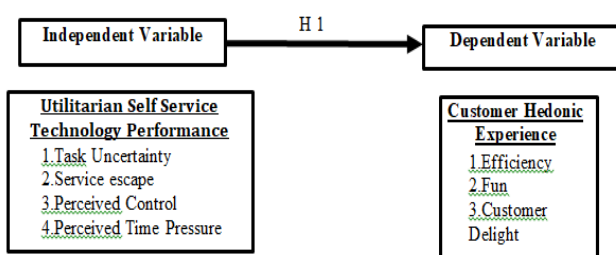
**VII. RESEARCH OBJECTIVES**

To Investigate the relationship between utilitarian self-service technology performance and customers hedonic experience.

**VIII. CONCEPTUAL FRAMEWORK OF THE RESEARCH**

This part of the investigation explains the relationships between the variables under focus in the study.

H 1



**Figure (1).** Research framework.

The conceptual structure of the analysis discusses one independent and one dependent variable. The independent variable sub-variables are Task Uncertainty, Service escape, Perceived Control, and Perceived Time Pressure, while the dependent variable's sub-variables are Efficiency, Fun, and Customer Delight.

**IX. RESEARCH METHODOLOGY**

Research Methodology is "a contextual framework' for research, a coherent and logical scheme based on views, beliefs, and values, that guides the choices researchers make". (Henseler et al., 2021)

It comprises the theoretical analysis of the body of methods and principles associated with a branch of

knowledge such that the methodologies employed from differing disciplines vary depending on their historical development. This creates a continuum of methodologies that stretch across competing understandings of how knowledge and reality are best understood. (Henseler et al., 2021)

**1. Research Method**

This study will depend on quantitative research method.

**2. Data Collection**

Data collection is the process of gathering and measuring information on targeted variables in an established system, which then enables one to answer relevant questions and evaluate outcomes. (Stan, & Saporta, 2015)

Data collection is a research component in all study fields, including physical and social sciences, humanities, and business. The goal for all data collection is to capture quality evidence that allows analysis to lead to the formulation of convincing and credible answers to the questions that have been posed that consists of Secondary data and primary data.

**3. Questionnaire Design**

The questionnaire is adopted from several literature reviews; the content validity and the constructs validity will be conducted. All the statements in the questionnaire will be measured by using a Five-point Likert –type scale anchored at (1 = Strongly Disagree to 5 = Strongly Agree).

**4. Research population**

The research population will be all online e-commerce platform users who previously had the chance to go online and purchase any product or service (Bookings / Shopping / Payment gateway etc..) from an online e-commerce platform (web site or a mobile application) in The University of Arab Academy For science, technology and maritime transport. The sampling unit for the research were students, teachers and Administrative employees of the University of Arab Academy For science, technology and maritime transport.

The University of Arab Academy For science, technology and maritime transport is represented considerable authority in the maritime transport", and its declarations have been made identical to those allowed by Egyptian colleges. Their number is around 10,000 employee and understudies with a base age of 18 years of age, for the two genders (Males and females) who possess Smart cell telephones and used Utilitarian Self-service technology (Mobile application), at least once in the last six months.

**5. Sampling method**

For the purpose of this research, probability sampling is used, as probability sampling leads to higher quality findings because it provides an unbiased representation of the population. also When the population is usually diverse: Researchers use this method extensively as it helps to create samples that fully represent the population.

**6. Sampling type**

Stratified Random Sampling will be used in the current study as it involves dividing the population into sub-population (strata) by ensuring every sub-group is properly represented in the sample.

**7. Sample size**

For descriptive analysis, a sample size of 6 percent of the total population 10,000 in this case is measured satisfactory (Bostley, 2021).

The sample size is constructed of 600 applicants selected

according to stratified probability sampling technique within the university of Arab academy for science, technology, and maritime transportation within its two branches Cairo and Alexandria.

**8. Sampling procedure**

The sample will be divided into three groups (Students, Teachers, and Administrative employees) and they are all being sent a link via the internal communication network via the student portal “Moodle” or through the employees Staff Portal.

**Table I.** The following table previews all the Conceptual and Operational Definition for the research Variable

Variables	Conceptual Definition	Constructs	Items- refereed to
Independent Variabl	Self-service technologies are defined as: “technological interfaces that enable customers to produce a service independent of direct service employee involvement” (Meuter et al., 2000, p. 50). Target population	1.1 Task Uncertainty	I clearly understood how the self-serve process worked within the mobile application I understand the sequence of steps to complete the transaction within the mobile application I understand what was required from me during the transaction to complete the purchase within the mobile application
		1.2 Service escape	I liked the layout of the web site / mobile application In general, the environment of the web site / mobile application is appealing
		1.3 Perceived Control	I felt in control with the self -service option (doing the transaction without any help or support from the service provider)
		1.4 Perceived Time Pressure	I had the feeling that I need to hurry to complete the checkout process
Dependent Variables	Customer Hedonic Experience, Forsythe et al. 2006 indicated that experiences as benefits of the online shopping is defined as hedonic, and the enjoyment aspects such as enjoyable, pleasant, and interesting experience over new experience	3.1 Efficiency	It allowed me to quickly get my good/service It requires little effort to complete my purchase transaction I find it an enjoyable experience
		3.2 Fun	I find it an entertaining experience I find it an interesting experience I find it fun while placing my order
		3.3 Customer Delight	I felt delighted after placing my order I felt happy after placing my order I felt excited after placing my order

**X. RESEARCH FINDINGS**

It was found that there is a positive relationship amid the Self-Service Technology Performance and the Consumer’s Hedonic Experience through the effect of both Service Escape and Perceived Control on the intervals. The Customer’s Hedonic Experience; therefore, the following was shown:

**H1.a There is a positive relationship between utilitarian Self-Service Technology Performance and Efficiency.** Therefore, the first sub-hypothesis was accepted.

**H1.b There is a positive relationship between Self-Service Technology Performance, and Fun.**

Therefore, the second sub-hypothesis was accepted.

**H1.c There is a positive relationship among Self-Service Technology Performance, and Delight.**

Therefore, the third sub-hypothesis was accepted.

**Main Findings**

The structured model valid for use and has the following advantages:

1. The reliability of all constructs of the model measured by Cronbach's alphas has a higher degree.
2. All variables are positively correlated to each other, and there was a significant Relationship between all constructs at 0.01 level.
3. The value of both parameters of reliability and validity is more than 0.6. This means that the expressions of each variable are stable and the survey list measures what was intended to be measured and therefore well reflects the population subject to the analysis, so in the subsequent work it is possible to rely on the data. Analysis and statistical tests.
4. By measuring the median and the standard deviation, descriptive statistics of the study variables were performed to understand the general direction of the opinions and the knowledge of those variables by the respondents. The median was also calculated, and the Wilcoxon test was applied to confirm those opinions' general direction.
5. The general trend of the study sample's opinions tends to agree with all the intervals of Self-Service Technology Performance, as the values of all calculation means exceed 3.
6. The result of Wilcoxon's Test confirms this, as it was shown that the Median value of those intervals is greater than 3, and the Probability Value of the Wilcoxon test is less than the value of the significance level  $p - (\alpha 50.0 = \text{value} = 0.000 < \alpha)$ , which confirms that the median value is more than three which expresses neutrality. Therefore, we conclude from the Wilcoxon Test that the study sample's opinions approve of Self-Service Technology's performance.
7. The general trend of the opinions of the study sample tends to agree on all the intervals of the Attributions of the Purchase Decisions, as the values of all arithmetic means exceed 3, and the results of the Wilcoxon test confirm this, as it was found that the median value of those intervals exceeds 3.
8. The Wilcoxon test's probability value is less than the value of the level of significance  $p\text{-value} = (\alpha 50.0 = \alpha < 0.000)$ , which confirms that the median value is more than three, which expresses neutrality.
9. The general trend of the study sample's opinions tends to agree with the Customers 'Hedonic Experience, as the Arithmetic Mean's value exceeds 3, and the result of Wilcoxon's Test confirms this, as it was found that the value of the mediator exceeds 3.
10. The Wilcoxon test is smaller than the moral value ( $p\text{-value}=0.000 < \alpha=0.05$ ) alpha, which confirms that neutrality is represented by a median value greater than 3. therefore, infer from the Wilcoxon Test that the views of the research sample approve of the Hedonic Experience of the Consumer.

## XI. PRACTICAL IMPLICATIONS

The findings of this research also provide important evidence for managers when creating and implementing utilitarian mobile apps to improve the service being provided for the clients with best delightful level of experience.

The examination gives a few functional consequences to online retailers. First, online retailers should highlight the utilitarian parts of their shopping sites contrasted with passionate viewpoints. Online retailers ought to give an agreeable and easy to use site interface. A site design that is not difficult to work on urges buyers to create buy inclinations as buyers need to cash. Essential data is likewise a fundamental part of web-based shopping conduct. Definite data about the items diminishes the equivocalness that the buyers may have about the item's exhibition.

- Besides, essential data likewise urges shoppers to embrace useful assessments of the item. Saving or markdown plots upgrade the positive assessments of an item in financial investment funds, which is perhaps the primary driver of internet shopping.
- Retailers should focus on the internet shopping stages for their business that gives time and area convenience. By consolidating these practical credits, online retailers can pull in a few online customers to their web-based shopping sites to acquire an upper hand over their adversaries. Second, albeit the effect of hedonistic ascribes of internet spending sites is less noticeable than that of utilitarian credits, online traders ought not to overlook the effect of hedonic ascribes on customers, driving them to buy on the web. A few purchasers deliberate spending an agreeable encounter and concentrate happiness and fun out of this movement. In this manner, online retailers should give social communication, limited arrangements, costs, and job shopping on their shopping sites to pull in more clients.

This current examination's outcomes offer significant down-to-earth and administrative ramifications to comprehend the client's demeanour towards using Utilitarian Self-Service Technology Performance regarding Loyalty and Behavioural Intentions. In such manner, the service associations need to pay serious actions to comprehend the elements that may fulfil or disappoint customers utilizing structures.

Businesses should retain up exclusive risk and security procedures to accomplish more projecting inevitability over the mechanical interface. The more the self-service worth, the greater the customers' prospects of receiving the Utilitarian Self-Service Technology Performance This research's also gives bits of knowledge to Egypt's service firms to put more in new advances. As the service firms' future generally relies upon mechanical advancement, they serve their client better. As the coming time is innovative, the organizations should give escalated consideration to improve their client experience utilizing the high-level automatic

interface. This would be a fundamental factor for that company's prosperity, and it will likewise improve client faithfulness and positive conduct expectations.

## XII. CONCLUSION

This research supports the critical and positive association between Utilitarian Self-Service Technology Performance service value and social expectations. These results are reliable, with past observational investigations introducing the positive association amid self-service worth and social expectations. The consequences are likewise sure and huge in the association among Utilitarian Self-Service Technology Performance worth and consumer reliability.

The outcomes show that data satisfaction and social advantage are the huge variables influencing a purchaser's website responsibility in a web-based shopping setting. This outcome is reliable with the earlier research on duty in the assistance setting, which recognizes fulfilment, trust, and social advantages as predecessors of responsibility. Also, data fulfilment strongly affects responsibility; along these lines, this outcome brings up the significant part of data fulfilment to building purchaser responsibility in an internet shopping setting comparative with this present reality administration.

This stretches beyond research, suggesting that fun may be a fundamental predecessor to self-service insight mentalities. Organizations have started to take advantage of implanting fun into a self-service experience, for instance, Talabat is an online application for self-serve food where customers can order their food from different options and Restaurants for others to try. The request works to make the food requesting measure enjoyable while allowing customers to trial and give companions as well.

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