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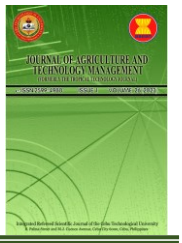

Web mobile technology application for market operation

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ABSTRACT

Using different constructs and applications of the technology acceptance model (TAM), this research developed a web mobile technology application and determined its level of acceptability for market operation. The attributes of acceptability of the generated information system (IS) were analyzed using correlation. Findings revealed that web mobile technology application for the market operation was acceptable, user-friendly, and increased performance and productivity. In totality, the attributes of acceptability point out the quality of using the technology according to user-friendliness, providing convenience and comfort in seeking and deploying information leading to total productivity of the operations.

KEYWORDS: *Technology Management, Web Mobile Technology Application, Technology Acceptance Model, Public Market Operations, Acceptability*

1 INTRODUCTION

Mobile technologies are constantly expanding, and it has played a significant role in managing relationships between people in social, economic, and everyday life (Bond, 2014; Donner, 2008; Caron & Caronia, 2007; Lyons, 2018). People have always needed easy access to knowledge throughout history. Mobile applications are having a growing impact on the dissemination of information and the conduct of businesses (Moreno-Munoz et al., 2016; Nosratabadi et al., 2019).

Marketing products and services (Andreassen et al., 2015) in today's world most likely happens through the internet. The Internet of Things (IoT) era opens varied business opportunities, customer services, data access and storage, innovation models, and increased revenues (Vermesan & Friess, 2013). These new IoT-based solutions increase mobility, the value of time, and the need to use time efficiently, reflecting future consumer preferences and ventures necessary for business development. Recently, private and government entities have provided considerable resource allocation to information systems investments geared towards efficient and effective means in areas responsive to customer needs and satisfaction (Lipsky, 2010; Ravichadran, 2000). Understanding the factors influencing usage that predicts, explains, and controls information systems facilitates greater use and full benefits.

The usability and ubiquity of mobile devices have resulted in significant interest in the development of features for apps (Woodcock et al., 2012). To date, management and education are areas with potential for apps in which mobile devices could enhance the quality of life for people. For example, well-designed mobile apps with decision support features such as personalized education have demonstrated the potential to improve self-management outcomes as figures for body parts exercises (Plaza et al., 2013; Joorabchi et al., 2013). For instance, using SMS based systems were used in real-time and had varied use according to the needs of the users in different environments and necessities, the way it was introduced, what the market was, and the advantages in various settings for varied users (Kaasinen, 2005; Magnusson, 2003). Moreover, mobile marketing using SMS-based systems were used in real-time and had mixed use according to the needs of the users in different environments and necessities, the way it was introduced, what were the condition and the advantages in various environments for varied users (Hyun et al., 2009).

The system developed using produces coherent classification that reveals more accessible data ensuring the traceability of meat from the farm through to the system designed in use, making coherent classification that reveals more accessible data ensuring the traceability of meat from the farm through to abattoirs. The major activities pursued by research organizations in the meat industry may be production optimization and monitoring systems, Labelling and standardization of tracking systems in the meat supply chain, Application of information technology, and Internet-based systems (Islam & Cullen, 2021; Verdouw et al., 2016).

New product features and services supplied to different consumer's needs were developed with active and significant involvement in the felt experience of evolving technology in many sectors of the products and services business (Meyera & Detoreb, 2001; Ordanini et al., 2011; Tidd & Bessant, 2020). Acknowledging and

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utilizing new technology requires people to have specific skills, experiences, and attitudes. Also, the behavioral tendency to resist change among individuals stands in the way of accepting the use of new technology (Sanford & Oh, 2010). These days, people can quickly and easily gather, share, and receive data from any location. The conductor's wireless device's range One of the rising study areas and a new communications network is mobile business, especially in developing nations. As a result of technological characteristics (Keen and Mackintosh, 2001), mobile value-added services and applications are becoming popular. Speaking and SMS (text messaging) are expected to persist, but new kinds of use are emerging and expanding at an alarming rate.

The need to access meat vendors' transactions anywhere, anytime, remains (Lee & Clark, 2003). Personal data access to every individual help overcome the issues of corporate-to-corporate data movements. Current processing capabilities do not allow users to run and handle applications accordingly. The existing setup leads to writing the information in the logbook that delivers unmanageable errors considering the following capabilities of receiving the type of meat, outgoing, sending to the corrals, releasing of certification, conveyance, and payment of fees (Bundschuh & Dekkers, 2008). By these measures, the Web mobile technology application provides the end user its competencies in gathering information like registration, incoming transactions, outgoing transactions, corrals, meat inspection reports, and permit/collection of fees. The acquired knowledge will deploy to the end user by receiving a Short Message Service (SMS) for informing those transactions. Short Message Service is referred to as text messaging or for sending short messages to end users. The end user will receive messages and updates after they input the required data provided in the system. The common functions of Web mobile technology applications are to provide updates to end users like the received quantity of meat and the current balance inside the slaughterhouse (Handfield, 2017; Mohan, 2018). For outgoing transactions, the data will send to the stall holder and staff in the public market for the permit, which provides the breakdown of fees (Tamilia et al., 2020). The conveyance information provides the pieces being carried. Lastly, it gives a detailed report on transactions per day. Meat Vendors' transactions may vary in many ways, from packages that are implemented in relatively small organizations' size, scope, and capability.

SMS-based e-government uses the technology to provide information and public services to citizens (G2C), businesses (G2B), and government employees or other government organizations (G2G) and has recently become popular due to the availability of services (Susanto, Goodwin, & Calder, 2008) as notification, pull-based information, communication, transaction, and integration. Also, it has reduced time and cost for public services.

New information-accessing technologies have made it simpler for individuals to hold their government accountable while improving communication and trust. Many systems (Bremer & Prado, 2006; Lallana, 2004; Rannu & Semevsky, 2005) enhanced the district's political image, boosted citizen involvement, and promoted e-Democracy, scaling different activity levels and structuring organizations to fit local requirements and desires. As an alternative, the Meat establishment's staff may access, monitor, and be notified of any information needed in regards to the restriction of users' access using Web-Mobile-based systems. Meat Inspector regularly monitors the system to ensure the storing of data is accurate and consistent as Butcher, conveyor, supplier, Market officer, and Stall Holder receive the data privately. Formulate an effective system that covers three aspects as to; Web, Mobile, and SMS that provides continuity to communicate respondents' systematic approach thus, becomes efficient in terms of data consistency, an equivalent amount of fees as stipulated in the Market Code of the Municipality of Consolacion (Ordinance No. 01 Series 2002) and End user can receive or be notified by the system. Furthermore, provide a full package intended to help Meat Vendors satisfy the needs of being transparent by providing information like incoming, outgoing, Butcher, breakdown of calculation for the payment, conveyor and supplier transactions in the slaughterhouse.

Developing a mobile government system is both challenging and time-consuming. One has to know that these systems were acceptable to the intended users to prevent wasted design and implementation efforts and thus, ably predict users' response to new technology. Envisioned in finding ways to improve the current setup, this study introduces a technology acceptance model for assessing its acceptability, which is intended to be used by the clientele and Meat Vendors domain in Consolacion Public Market, specifically receiving the type of meat, outgoing, sending to the corrals, releasing of certification, conveyance, and payment of fees. By these measures, the Web mobile technology application provides the end user its competencies in gathering information like registration, incoming transactions, outgoing transactions, corrals, meat inspection reports, and permit/collection of fees using mobile devices.

TAM Constructs and Measures

Compatibility with work expects that a new system will fit well with both the way users like to work and the various aspects of their work. It demonstrates the importance of incorporating work compatibility in models of IT usage as exposed (Yi et at., 2006; Brown et al., 2010). Some studies describe compatibility construct as "technical compatibility," that measures how a technology functions with existing software and hardware systems (Yang et al., 2016; Cheng et al., 2019). Kanchanatanee et al., (2014) emphasized that technical

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compatibility was a factor influencing perceived usefulness as determinants of intention to use a mobile multimedia service. Prior study of IDT in IS research shows that compatibility is the other important factor in predicting and explaining technology acceptance (Karahanna et al. 2006, Hsu et al. 2007, Ryu et al. 2009). Empirical evidence depicted a causal link between compatibility and IT usage intention (Wu and Wang 2005, Hsu et al. 2007, Liao and Lu 2008).

In the diffusion context, the use of the system is treated as a work-related technological innovation having knowledge workers apply to their daily activities the creation, storage, retrieval, diffusion and application of such. Conceivably, if the use of system is compatible with the work practices of the users, it would be expected also to enhance their intention to use. In addition, extensive research in the IS literature demonstrates the significant influence of compatibility on PU and PEOU (Shih et al., 2008, Gumussoy and Calisir 2009, Ryu et al. 2009).

Wu et al. (2007) suggested that if mobile health care system is more consistent with health care professional practice compatibility, these professionals will not only need less effort to learn it, but also have a higher perception of its advantages. Shih also found that users tend to perceive usefulness and ease-of-use in learning when the utilization of an online portal was consistent with their existing values, needs and past experiences in daily activities and that, if the system is compatible with the users' habits and preferred work style, it can be expected that the system is useful and offer ease-of-use for their jobs.

Scholars defined perceived ease of use is a person's belief in how easy it will be to use a certain system (Nunkoo et al 2013). Self-efficacy and instrumentality are two important processes Davis (1989) proposed to explain how perceived ease of use affects attitudes of individuals. Bandura (1982) coined the phrase "Self-efficacy," which states that the more user-friendly a system is, the better the user's perception of efficacy should be. Researchers (such as Aladwani, 2002; Moon & Kim 2001) have investigated the connection between perceived ease of use and utility, according to Nunkoo et al. (2013). An individual's performance can be boosted by their perception of the system's simplicity of use. To save time and effort, utilize an easy-to-use tool like this one. Depending on the mobile experience, the degree to which a customer is affected by a mobile experience varies and it is a subject that is being explored in terms of specific technical assistance, as stated by Alsamydai et al. (2014). The usage of mobile devices is determined by the quality of the technical assistance provided and the amount of experience of the users. To be sure, users with little or no prior experience with mobile services will be more likely to find the service beneficial (2009). As a result of the experience, users' attitudes, intentions, and mobile service usage change (Asamydai et al., 2014).

According to this definition, perceived usefulness refers to how much a person feels utilizing a mobile service would benefit him or her (Alsamydai et al 2014). The significance of perceived utility in electronic services has long been acknowledged (Laforet & Li, 2005, Liao Cheung 2002). Research in the past has repeatedly claimed that the perceived utility of mobile services has a positive link with mobile service intention and attitude, as well as the usage of mobile services (Alsamydai et al 2014, Bhatti 2007, Pavlou, 2003, Venkatesh 2000) When Chau and Lai (2003) studied the variables that contribute to internet mobile adoption, they discovered that perceived utility was a key component in encouraging customers to embrace the services. The perceived usefulness is an important component to develop a technology acceptance model (TAM), according to several studies (Davis, 1993, Taylor & Todd 1995). This is in line with Chau and Lai's (2003) study, which looked at the variables that contribute to consumers adopting internet mobile and showed that perceived utility (PU) had a favorable effect on the attitude towards accepting internet mobile services. This is consistent with the study's findings.

Attitude is defined as a positive or negative evaluation of people, objects event, activities, ideas, or just about anything in environment. Attitudes are generally having positive or negative views of a person, place, thing, or event. The original TAM (Davis & Venkatesh, 1996), and the models of Taylor and Todd (1995, Morris and Dillon (1997) indicated that attitude exerts a positive effect on the behavioral intention (Nunkoo,etal.2013).

According to a survey of the literature, mobile service research has gotten a lot of attention over the last few decades. A customer's attitude and behavioral intention towards adopting the proposed mobile services were required at practically every stage of the process (Moon & Kim, 2001; Pavlou, 2003; Alsamydai et al., 2014) Since consumer attitudes and intentions regarding mobile banking have a big impact on how customers use mobile services, it's important to have a lively debate about this topic.

According to Lee et al. (2011), Web Mobile Application of technology has become a widely acknowledged umbrella word to cover applications which utilize computer hardware and software to collect, process, analyze and disseminate Meat Vendor information. Consolacion Public Market's particular Meat Section's acceptance and involvement are critical to the success of IT's Web Mobile Technology Application. As a result, both from research and a practical standpoint, it is important to examine the type and determining variables that impact IT adoption. A number of theoretical models, including as TRA, TPB, and TAM, have been established to explore the primary problem of IT adoption. TAM is a paradigm that has seen extensive use in IS research. 57 TAM is the most frugal approach, according to Lee et al. (2011) and Mathieson et al. (2001). Even if it is used in multiple research, it may not

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require re-operationalization of its variables and notions. One of the most popular models is the well-organized one with high acceptance across many different studies, such as healthcare information systems (Pai and Huang, 2011), social networking sites, and educational settings (such as schools and colleges) (Kim, Lee, & Law, 2008). Gentry and Calantone (2002) discovered that TAM had the best match in explanation for behavioral intention among TRA, TPB, and TAM, with an overall variance of 81.1 percent. Despite the fact that TAM has been extensively used and recognized to understand the adoption of technology by consumers. This study by Aggelidis and Chatzoglou (2009) emphasizes the uniqueness of each person's character traits. Because everyone lives in a separate place with a different culture and structure, no two people are the same. This study found that when an environment supports and facilitates IT use, user acceptability increases (Venkatesh, Morris, Davis, and Davis 2003).

Objectives of the Study

This research developed a web mobile technology application for market operation and determined its acceptability. The study conveys the management to upkeep the implementation of the system for the monitored transactions where it can be used for the liquidation of certain receivables in every transaction in Consolacion Public Market. Moreover, the research findings guide them on how they are going to improve the manual process in terms of receiving the weight to each stall holder transaction, delivering the breakdown of computations as to the use of getting the payment from the Stall Holder accurately without failures of calculations.

2 MATERIALS AND METHODS

The study uses inductive and deductive approaches by collecting empirical data on individuals' motivations for using or not using the Web Mobile Technology Application for Market Operation and the acceptance factors theoretically from the TAM model of individual acceptance of technologies and user acceptance of the system, respectively. Data collection was done by combining a paper questionnaire and an interview to improve the validity and reliability.

The respondents of this study were taken based on purposive sampling: staff who is the source of information of incoming and outgoing transactions in which the data being stored will be sent to the following end users: Supplier/Dealer which supply products/meat to the stall holder. Meat Vendors/Stall Holder who sell meat where incoming and outgoing transactions are being notified and sent to them. Butcher who processes and assists the incoming and outgoing transactions, and Conveyor who will transport/send the meat to Consolacion Public Market. The study used a survey questionnaire based on instrumental scales constructed by other researchers to measure specific factors, namely, work compatibility, perceived usefulness, perceived ease of use, behavioral intention to use, and attitude towards service.

3 RESULTS AND DISCUSSION

The findings of the study, as presented in Table 1, reveals that under work compatibility of Web Mobile Technology Application for Market Operation, the respondents agree that using the app in seeking information on end user, operations and services and other related queries is acceptable. This was supported by Sun et al. (2009), which states the importance of incorporating work compatibility in models of IT usage as exposed and user do most of their task in the system.

Table 2 reveals that under perceived usefulness in the acceptability of Web Mobile Technology Application for Market Operation, the respondents agree that such enhances the productivity in having the information at hand. In a study, it was shown that incentives such as increases, promotions, and bonuses encourage excellent performance inside the workplace. When a system's perceived usefulness is high, a user is more likely to assume that there is a positive link between usage and performance.

Table 3 shows that under perceived ease of use in the acceptability of Web Mobile Technology Application for Market Operation, the respondents agree that such app is flexible and user friendly and can interact with clarity. 85 Such concept was supported by an investigation on the impact of perceived usefulness and ease of use on consumer use of the internet (Moon and Kim, 2001).

Table 1. Work Compatibility

Work Compatibility	**Mean**	**SD**	**VD**
Application is compatible	3.99	0.6535	A
Application fits my need (Getting information and related queries)	4.00	06574	A
Application fits my need (Operation and services)	3.98	0.6456	A
AWM	3.99		A

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Table 2. Perceived Usefulness

Perceived Usefulness, using the Web Mobile Technology application….	Mean	SD	VD
It enables me to accomplish required information more than using the traditional process (manual).	3.82	0.7533	A
Improve my performance in seeking information (save time).	3.81	0.7393	A
Increase my productivity in seeking information/track end user information within the shortest time frame.	3.95	0.6321	A
Enhance my effectiveness in seeking information (find the most information about Meat vendors).	3.94	0.6232	A
Make it easier for me to find information.	3.93	0.6267	A
I find the Web Mobile Technology Application for Meat Vendors very useful in information seeking.	3.98	0.6456	A
AWM	3.90		

Table 3. Perceived Usefulness

Perceived Usefulness	Mean	SD	VD
Learning to use Web Mobile Technology Application for Meat Vendors is easy for me.	3.77	0.7049	A
I find it easy to use Web Mobile Technology Application for Meat Vendors to find what I want.	3.79	0.7319	A
My interaction with Web Mobile Technology Application for Meat Vendors is clear and understandable.	3.74	0.6888	A
I find Web Mobile Technology Application for Meat Vendors to be flexible to interact with.	3.72	0.6414	A
I find myself become adept at using Web Mobile Technology Application for Meat Vendors	3.75	0.7053	A
I find myself become adept at using Web Mobile Technology Application for Meat Vendors	3.83	0.7509	A
AWM	3.77		A

Table 4. Behavioral Intention to Use

Behavioral Intention to Use	Mean	SD	VD
I intend to use Web Mobile Technology Application for Meat Vendors to track data resources.	3.86	0.5495	A
I intend to use Web Mobile Technology Application for Meat Vendors disseminate data resources.	3.59	0.6739	A
AWM	3.72		A

Table 4 described the acceptability of Web Mobile Technology Application for Market Operation in that aspect of behavioral intention to use. Accordingly, the end users' willingness to deploy Bamberg et al. 2003) or not to deploy specific information affects future behavior. It shows that respondents agree that the Web Mobile Technology Application for Market Operation is acceptable, as described in their willingness to adopt the technology.

Table 5 shows differing perceptions in the acceptability of Web Mobile Technology Application for Market Operation in terms of attitude towards use, although, in general, the end users agree that the apps have a larger selection of information and that it saves time. End users were apprehensive of the privacy risk and insecurity on the part of personnel directly involved in the operation.

Table 6 reveals that on the five aspects of acceptability, the respondents (end users) choose work compatibility as the highest component, followed by perceived usefulness. This indicates the importance of the technology apps (Sun 88 et al., 2009) in incorporating IT usage in doing most of the tasks in the market meat section operation. Moreover, providing a better perception of the use of technology raises individual performance and reinforces an organization's productivity (Pfeffer, 1982) within the context of high positive use – performance relationship.

As presented in Table 7, the relatedness of work compatibility to the other attributes is very high and significant. It can be deduced that using the technology in seeking market operations answers the end users need easy and reliable. On the market meat section personnel, the technology positively affects the actual use of the system. This further indicates that using the technology in tracking and disseminating data and resources is done accordingly to how the market personnel implement the operations at the point of service.

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Table 5. Attitude Towards Use

Attitude Towards Use	Mean	SD	VD
Using Web Mobile Technology Application for Meat Vendors is convenient.	4.01	0.6649	A
Using Web Mobile Technology Application for Meat Vendors save me time.	4.23	3.6656	A
The fact that I cannot see the actual information makes me think twice about using Web Mobile Technology Application for Meat Vendors.	3.84	0.5513	A
Using Web Mobile Technology Application for Meat Vendors is not secured (insecurity of persons being involved as to information and transactions.	3.31	0.7791	A
Using Web Mobile Technology Application for Meat Vendors puts my privacy at risk.	3.32	0.7994	A
Using Web Mobile Technology Application for Meat Vendors makes me lose social contact (can be a positive belief or a negative belief.	3.43	0.6375	A
Using Web Mobile Technology Application for Meat Vendors saves me money.	3.90	0.6543	A
The Web Mobile Technology Application for Meat Vendors has a larger selection of information of end user transaction than traditional method.	4.02	0.6758	A
AWM	3.76		A

Table 6. Summary on Acceptability

Constructs	WM	VD
Work Compatibility	3.99	A
Perceived Usefulness	3.90	A
Perceived Ease of Use	3.77	A
Behavioral Intention to Use	3.72	A
Attitudes Towards Use	3.76	A

Table 7. Correlations Matrix (Level of Acceptability

		Work Compatibility	Perceived Usefulness	Perceived Ease of Use	Behavioral Intention to Use	Attitude towards use
Work Compatibility	Pearson r	1	.956”	.825”	.814”	.879”
	Sig. (2-tailed)		.000	.000	.000	.000
	N	200	200	200	200	200
Perceived Usefulness	Pearson r	.956”	1	.906”	.851”	.879”
	Sig. (2-tailed)	.000		.000	.000	.000
	N	200	200	200	200	200
Perceived Ease of Use	Pearson r	.825”	.906”	1	.797”	.804”
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	200	200	200	200	200
Behavioral Intention to Use	Pearson r	.814”	.851”	.797”	1	.838”
	Sig. (2-tailed)	.000	.000	.000		.000
	N	200	200	200	200	200
Attitude towards use	Pearson r	.879”	.879”	.804”	.838”	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	200	200	200	200	200

Consequently, the perceived usefulness of the Web Mobile-based system significantly affects the end users and market personnel’s perceived ease of use, behavioral intention to use, and attitude towards use. This means that the technology to track and disseminate the resources enhances job performance and increases productivity and the willingness to do the tasks accordingly. Perceived ease of use of the technology positively and significantly influences the behavioral intention to use and attitude towards use. Being adept in using the technology allows flexibility and clarity in using the system at convenience. 90 Behavioral intention relates highly and significantly with attitude towards use. This means that using the technology allows the end users to perform one’s specific task conveniently, saves time, money allows comfortability. In totality, the attributes of acceptability

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point out the quality of using the technology in accordance with user-friendliness provides convenience and comfort in seeking and deploying information leading to total productivity of the operations.

4 CONCLUSIONS

Based on the findings of the study, it was found that the Web Mobile Technology Application for Market Operation is agreeably acceptable and that consider the system is easy to use, convenient, and has the ability to enhance effectiveness, increase performance, and high productivity. Likewise, after testing the correlation between Web Mobile Technology System and acceptability attributes, the following hypothesis was found: The relatedness of work compatibility to the other attributes is very high and significant. It can be deduced that using the technology in seeking market operations answers the end users' need is easy and reliable. On the market meat section personnel, the technology positively affects the actual use of the system. This further indicates that using the technology in tracking and disseminating data and resources is done accordingly to how the market personnel implements the operations at the point of service. Consequently, the perceived usefulness of the Web Mobile-based system significantly affects the end users and market personnel's perceived ease of use, behavioral intention to use, and attitude towards use. This means that the technology to track and disseminate the resources enhances job performance and increases productivity and the willingness to do the tasks accordingly. Perceived ease of use of the technology positively and significantly influences the behavioral intention to use and attitude towards use. Being adept in using the technology allows flexibility and clarity in using the system at convenience. Behavioral intention relates highly and significantly with attitude towards use. This means that using the technology allows the end users to perform one's specific task conveniently, saves time, money allows comfortability. In totality, the attributes of acceptability point out the quality of using the technology in accordance to user-friendliness, provides convenience and comfort in seeking and deploying information leading to total productivity of the operations.

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