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Sugbo Negosyo Program Digital Card Implementation: Technology Acceptance and Satisfaction among Microentrepreneur-Beneficiaries

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Abstract

The COVID-19 lockdowns upended business operations, impacting microenterprises which prompted the Cebu Province to implement a stimulus grant to revive existing and encourage start-up microenterprises known as the Sugbo Negosyo program. A digital card system (DCS) with a quick response (QR) code payment was utilized to facilitate the disbursement of financial assistance and to enable real-time monitoring of the program beneficiaries' expenditure transactions. This study evaluates the effectiveness of the DCS, investigating how the perceived ease of use, perceived usefulness, and attitude towards its use have influenced the actual use and satisfaction of the DCS use by the beneficiaries. The research, a mix of quantitative and qualitative methods, was participated by 212 beneficiaries through face-to-face surveys. With the Technology Acceptance Method (TAM) as the study's framework, the partial least squares structural equation modeling (PLS-SEM) results show that the DCS is evaluated as useful and easy to use and satisfied the beneficiaries.

Keywords: e-payment system, COVID-19 pandemic, technology acceptance model, PLS-SEM, Cebu, Philippines

1.0 Introduction

The Philippine enterprise survey conducted by the Asian Development Bank in April-May 2020 on the impact of COVID on businesses reports the closures of many enterprises along with limited access to credit (p. 9). In response to the COVID-19 health crisis that resulted in the extensive loss of income due to operational stoppages among micro-enterprises in the province of Cebu, the provincial government launched the Sugbo Negosyo livelihood assistance program for micro-entrepreneurs in partnership with the Department of Trade and Industry Cebu Provincial Office (DTI CPO) and the Mandaue Chamber of Commerce and Industry (MCCI). In late 2020, a PhP100 million budget allocation was approved for the unprecedented Cebu province-led economic stimulus program intended to resuscitate and encourage the opening of new microentrepreneurial activities in the countryside. The financial grants were for the beneficiaries to purchase materials and inventory to rev up their respective businesses.

Instead of providing cash as the medium of grant disbursement, the Sugbo Negosyo program (SNP) used digital cards with specific digital quick response (QR) codes for the beneficiaries to purchase simple equipment and raw materials from

accredited partner suppliers through the digital payment system. To ensure the success of the SNP, the DTI CPO conducted a series of Enterprise Development Seminars for the beneficiaries. The MCCI likewise initiated mentoring sessions to assist the beneficiaries in developing practical and effective strategies to improve their sales, widen their market reach, and sustain their operations.

The SNP and the utilization of the digital payment system fall within the UN (n.d.) Sustainable Development Goal TARGET 9.3 which espouses to "increase the access of small-scale industrial and other enterprises, particularly in developing countries, to financial services including affordable credit and their integration into value chains and markets." Because of the pioneering digital card utilization in a government financial assistance program, there is no available information on the beneficiaries' experiences as users of the e-payment system. This study's objectives are thus to investigate the technology acceptance levels of the beneficiaries on the use of DCS as well as to evaluate the effectiveness of the DCS as experienced in the SNP. The success of such digital payment adoption in the SNP augurs well for future similar government undertakings where the digital card system payments may be patterned after.

The implementation of the DCS addresses the aim of the Philippines' Department of Information and Communications Technology (DICT) of digitally transforming government operations for efficiency, transparency, governance, and citizen participation (DICT, 2019, p.22). Moreover, the use of the mobile QR code payment is aligned with the strategic thrust of the Bangko Sentral ng Pilipinas (n.d.) requiring payment service providers to adopt National QR code standards. The findings of this study provide information to improve the SNP and educate other local government units and line agencies intending to introduce similar e-payment technology involving citizen engagement. To investigate this study's objectives, the beneficiaries' experiences and perceptions were examined in terms of the ease of use, usefulness, attitude towards, actual use, and satisfaction with the digital card use in the latter's purchase transactions and in keeping track of their purchases. The study further evaluates how the beneficiaries' age and competence in the use of electronic gadgets moderate the relationship between their perception of the: a) ease of use of the digital card their attitude toward the digital card, and b) usefulness of the digital card towards their attitude toward the digital card.

The Technology Acceptance Model (TAM) serves as this study's theoretical framework. Introduced by Davis (1989), TAM is considered to be one of the most influential and prominent models examining technology acceptance (Charness & Boot, 2016; Mois & Beer, 2020; Purnamasari et al., 2020). In its inception, the main objective of the TAM framework was to understand the users' intent when adopting specific technologies (Wibowo, 2019). As a model, TAM is used to predict the antecedents influencing technology use behaviors (Al-Qaysi et al., 2020, p. 4963). The original TAM framework has since evolved with a couple of models and theories developed (Al-Emran et al., 2018). In the seminal model of technology acceptance, Davis (1989) proposed two main theoretical constructs for exploring the influence on the adoption, acceptance, and use of information systems. These constructs, namely, perceived ease of use (PEOU) and perceived usefulness (PU), are used to investigate the extent of the user's acceptance with the technology (Bvuma & Marnewick, 2020, p.6). Davis (1989) operationalized perceived ease of use as the degree to which "the potential user expects the target technology to be effortless" (Bvuma & Marnewick, 2020, p. 6). Similarly, Ali et al., (2020) describe PEOU as "the extent to which novelty in technology is considered to be easy to understand

and use" (p. 4). The construct perceived usefulness (PU) on the other hand, is operationalized by Davis (1989) as the "degree to which a person believes that a particular technology would increase his or her utility" (Ali et al., 2020, p. 4). Yuen et al. (2020) characterizes PU as how a user deems that the use of the innovation enhances his or her performance (p. 507); likewise, Mois and Beer (2020) describe PU as "the extent to which a technology is expected to improve a potential user's performance" (p. 8). Deloritos (2021) in a study on the factors that affect mobile payments in the Philippines reports that the TAM is the framework used in the previous studies on e-payment. In the original TAM framework, Davis (1989) conjectured that there may also be other external variables that influence both the main constructs PEOU and PU. Other variables that have been measured along with PEOU and PU in the TAM are subjective norms, attitudes, intentions, the ability of attitudes to influence intentions, and other related variables (Wibowo, 2019, p. 2). Davis (1989) hypothesized that attitude towards using the technology is influenced by PEOU and the PU and that PEOU has a direct influence on PU. Finally, the construct attitude towards using the technology is hypothesized to determine whether or not the user will use the technology.

This study utilizes TAM in investigating the SNP participants' experiences and perceptions of the use of digital card payment, as implemented in the program. While not in the original TAM framework, this study also explores whether age moderates the relationship between a) perceived ease of use and attitude towards use, and, b) perceived usefulness and attitude towards use. In a study on the resistance to the use of online banking, Chaouali and Souiden (2019) report significant differences across different age groups. Earlier on, Morris and Venkatesh (2000) report the negative moderation of the increase in age to the attitudes to technology adoption.

This study likewise investigates the moderating effect of gadget use competence on the relationship between the a) perceived ease of use and attitude towards use, and, b) perceived usefulness and attitude towards use. Cognizant of technology diffusion and the ubiquity of gadget use, participants who may have been exposed to such may have a favorable predisposition to adapt to the use of digital payments. Anshari et al. (2021) in their study on the factors that influence the adoption of eWallet report that the "constant interaction of various types of technology, paired with the rising Internet connectivity" (p.10) has resulted in the "minimal impact of the digital wallet adoption" (p. 10) among the millennials.

In the Philippines, digital payments, particularly those involving government transactions have made their inroads, albeit in incremental diffusion. The BSP (n.d.) formulated the Digital Payments Transformation Roadmap 2022-2023, outlining the country's online and digital money applications for digital payments, with the thrust of promoting financial inclusion as well as the digitalization of payments. The BSP discloses that lower transaction costs and the elimination of barriers to ownership of transaction accounts are the benefits of such digital payment innovations. The BSP roadmap likewise suggests that "the shift towards digital payments has become an imperative as physical distancing rules become the norm..." (p.1).

Government digital payment has been implemented in the country's social welfare amelioration program by way of partnering with financial service providers. Estioko et al. (2021) attribute the improvements in the 4Ps transfers and the SSS benefits disbursements to the increase and value of these government digital payments. At present, the BSP requires payment service providers to adopt a National QR Code Standard, enabled by the emerging ubiquitous application of the QR code in the country. In digital payments

through machine-readable QR codes, smartphones are used for transactions by scanning the QR codes provided by the merchants. The BSP envisions this regulation to be beneficial, "leveraging on the efficiency, safety, and affordability of the QR technology," by "enabling micro and small merchants to accept digital payments which were meant for well-established businesses..." (p.14).

Meanwhile, embodied in the Philippines' E-Government Masterplan 2022, the DICT articulates its commitment to push the country's development to a digital economy (DICT, 2019, p. 4). The same document declares the overall objective of e-government which is to "improve public administration by building the infostructure and shared services, automating processes, and providing online portals to citizens and businesses" (p. 4). Specifically, the DICT identifies the following strategic objectives which may be achieved through the digital transformation of government, to wit: optimize government operations; engage citizens; transform services and empower government employees. Thus, the potential of digital payment technology as implemented in the SNP may provide opportunities for the challenging transition to the above-espoused process of e-government.

The United Nations General Assembly recognizes the potential of e-Government in promoting transparency, accountability, and citizen engagement in public service delivery (United Nations, 2016). Huffman (2017) defines e-government as "the use of ICTs by government agencies to improve the delivery of information and public services to its citizens through transparent and accountable means" (p.27). According to the World Bank (2015), the benefits of e-government include: a) less corruption, b) increased transparency, c) greater convenience, d) revenue growth, and/or e) cost reductions (p. 1). The intent of the implementation of the DCS in the SNP was that of convenience and safety amidst the COVID-19 circumstances and revenue generation among the affected microentrepreneurs. The DCS likewise was envisioned for the SNP administrators to monitor not only the real-time purchase transactions by the beneficiaries but also the tracking of appropriate merchandise purchases meant for the enterprises. These intentions find alignment with the benefits of e-government identified by the World Bank.

This study assesses the effectiveness of the DCS e-payment as implemented in the SNP. The research objective is thus to evaluate the digital card system, specifically investigating the impact of perceived ease of use, perceived usefulness, and attitude towards use, the actual use of, and the satisfaction with the digital card system among the program beneficiaries. This study adopts the basic constructs of the Technology Acceptance Model (TAM), inspecting the relationships of the antecedents to test the actual use and satisfaction of the participants with the implementation of the DCS.

Figure 1 shows the conceptual framework of the study, illustrating the relationships of variables to be investigated, namely Perceived Ease of Use as well as the endogenous variables Actual Use, Perceived Usefulness, Attitude towards Use, and Satisfaction. Two moderating variables, Age, and Use of Gadget Competence are likewise investigated in terms of their respective moderating influence on the relationship between Perceived usefulness and Perceived ease of use on the Attitude toward using the digital card.

In the seminal technology acceptance model (TAM), Davis (1989) investigated the influence of perceived usefulness and perceived ease of use on the attitude toward the use of the technology. The original TAM also evaluated the contribution of perceived ease of use to perceived usefulness. Thus, for this study, the following hypotheses are presented:

H1: ***Perceived usefulness*** has a significant positive effect on ***Attitude*** toward using the digital card

H2: ***Perceived ease of use*** has a significant positive effect on ***Attitude*** toward using the digital card

H3 ***Perceived ease of use*** has a significant positive effect on ***Perceived usefulness***

In addition, the TAM examines the impact of attitude towards using the technology on the actual use of the technology. Thus, the following hypothesis is presented:

H4: ***Attitude*** towards using the digital card has a significant positive effect on the ***Actual use*** of the digital card

This study extends the investigation of the actual use of the technology and its impact on the satisfaction of its use. Thus, the following hypothesis is also presented:

H5: ***Actual use*** of the digital card has a significant positive effect on ***Satisfaction***

Moreover, the age of the participant and the participant's exposure to it and the competence in gadget use are two variables tested to evaluate the moderating influence on attitude towards using technology. Thus, the following hypotheses are presented:

H6a: ***Age*** moderates the effect of ***Perceived usefulness*** on the ***Attitude*** toward using the digital card

H6b: ***Age*** moderates the effect of ***Perceived ease of use*** on the ***Attitude*** toward using the digital card

H7a: ***Gadget-use competence*** moderates the effect of ***Perceived usefulness*** on the ***Attitude*** toward using the digital card

H7b: ***Gadget-use competence*** moderates the effect of ***Perceived ease of use*** on the ***Attitude*** toward using the digital card

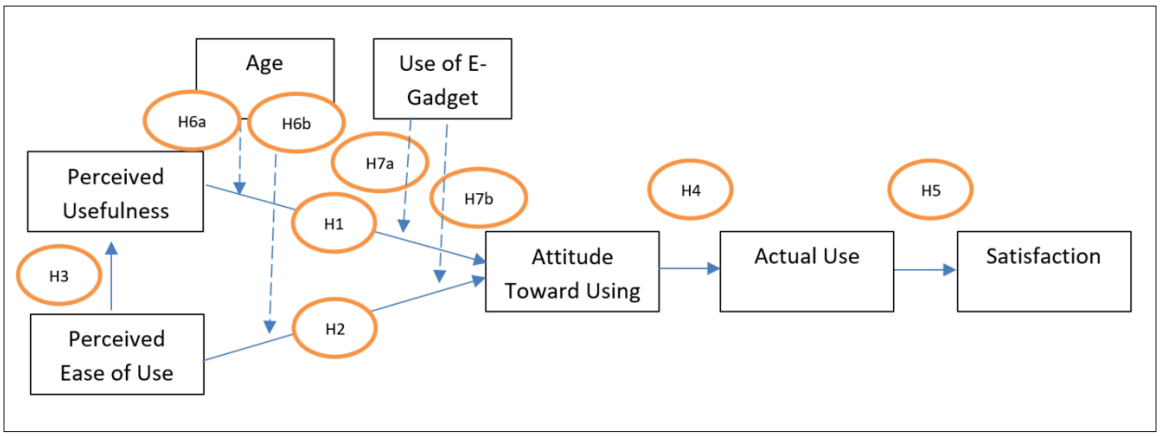

Figure 1. *Study Framework*

2.0 Methods

The research is a mix of quantitative (causal) and qualitative methods. The quantitative approach is designed to evaluate the hypothesized TAM constructs, while the qualitative approach is to assess the participants' experiences in the SNP. The mixed method is intended to confirm the values of both approaches. Data were collected ex-post-facto from the program beneficiaries through face-to-face surveys conducted from November to December

2021, towards the phasing out stage of the program. The study was granted a research ethics clearance from the author's university Research Ethics Committee. Prior to the data collection, the participants were oriented with the nature of the study and were asked for their consent to participate in the survey. The sampling frame used was the list of the beneficiaries selected by the respective local government unit's program point persons. A total of 232 participants were interviewed and obtained informed consent before the interviews. However, only 212 questionnaire responses were considered valid. One of the limitations of the survey is the number of respondents. This was due to the rise in the incidents of COVID during the time of the interviews. While the sample size of 200 through sample size of proportions computation, the number of respondents may have been increased.

The survey instrument consisted of three sections, namely, the classification questions, the scale items questions, and the open-ended questions. The scale item questions constitute the core questions of the constructs in Figure 1 designed to measure the technology acceptance model, including Perceived ease of use (PEOU), Perceived usefulness (PU), Attitude toward Using (A) as well as the constructs of Actual use (AU), and Satisfaction (S). In addition, the participants' Age (AG) and self-assessment of their competence level of Use of e-gadget (EG) were also obtained. The questions were in the Cebuano Visayan dialect and were back-translated before the interviews. The participants were asked to rate on a five-point Likert scale their agreement/disagreement with the scale items (SA = Strongly Agree; A = Agree; NAND = Neither Agree nor Disagree; D = Disagree; SD = Strongly Disagree). The corresponding scores of SA, A, D, and SD were 4, 3, 2, and 1, respectively. Since the partial least squares structural equation modeling (PLS-SEM) required summarization of the scales through the average scale items, the transmutation of the scores of the scale means was generated, where SA scores are from 3.26 to 4.0 while A scores were 2.51 to 3.25.

Based on this study's hypotheses, the following endogenous variables were investigated in the relationships of their respective independent variables: Actual Use (AU), Attitude toward Use (A), Perceived Usefulness (PU), and Satisfaction (S). The variables Age (AG) and Use of e-gadget (EG) were also tested for their moderating effects on the relationships between Perceived usefulness (PU) and Attitude Toward Use (A) as well as on the relationships between Perceived ease of use (PEOU) and Attitude toward the Use (A). The hypotheses were tested using partial least squares structural equation modeling (PLS-SEM) through the SmartPLS software. The procedure was reiterated until the values indicated the acceptability of the model. The items in the scales were tested for internal consistency and Cronbach Alpha was used to test for reliability. The factor loadings were obtained to evaluate the convergent validity of the variables' scales and the significant correlations of the variables investigated indicate PLS-SEM fit for analysis.

For the qualitative part, an open-ended question asked the participants' impressions of the Sugbo Negosyo experience. The NVivo software was used to summarize the open-ended answers and the thematic coding analysis framework of Harding (2015) was used to categorize the open-ended responses.

3.0 Results and Discussion

Table 1 shows the survey participants' Age and self-assessment of their Use of Gadget Competence. The mean age is 46.25 years, while the mean number of years of gadget use is 10.12. Also shown are the years of gadget use. Only 11% assessed themselves to be "not competent" in gadget use.

Table 1. *Participants' Age and Self-Assessment of Gadget Use Competence*

Age	n	%	Years of Gadget Use	n	%	Self-Assessment of Gadget Use Competence	n	%
23 - 32	32	15.1	0 - 5	64	30.2	Not competent	23	10.8
33 - 42	51	24.1	6 - 10	82	38.7	Not so competent	108	50.9
43 - 52	63	29.7	11 - 15	30	14.2	Competent	81	38.2
53 - 62	45	21.2	16 - 20	31	14.6			
63 - 73	21	9.9	21 - 24	5	2.4			
Total	212	100.0	Total	212	100.0	Total	212	100.0

The scales of the variables Perceived Usefulness, Perceived Ease of Use, Attitude Toward Use, Actual Use, and Satisfaction were tested for factor loadings and internal consistency. Table 2 shows the factor loadings of the scale items as well as Cronbach's alpha of variables. The values are greater than 0.07, which are assessed as "satisfactory to good" thresholds of reliability (Hair et al., 2019). Also presented in Table 2 are the values of the mean and standard deviation of the scale items of the variables. The scale means scores range from 3.33 to 3.36, with the transmutation equivalent to "strongly agree."

Table 2. *Scale Description, Factor Loadings, and Reliability*

Scales and Items	Mean	Standard Deviation	Factor Loadings	Cronbach Alpha
Perceived Usefulness				0.917
1. Using the Digital Card for my Sugbo Negosyo purchase transactions is easy to learn	3.42	.614	0.885	
2. The instructions and interactions when using the Digital Card are clear and easy to follow	3.43	.506	0.917	
3. I find using the Digital Card useful and helpful for my purchasing and recording for my Sugbo Negosyo business	3.30	.704	0.895	
4. Using the Digital Card did not make me think hard on how it is used	3.30	.698	0.878	
Scale Mean	3.36			
Perceived Ease of Use				0.887
1. Using the Digital Card made me shop more efficiently for my Sugbo Negosyo business	3.30	.827	0.872	
2. Using the Digital Card made my purchasing and recording for my Sugbo Negosyo business productively and quickly	3.28	.775	0.885	
3. The Digital Card is simple to use when purchasing for my Sugbo Negosyo business requirements	3.40	.603	0.898	
4. Using the Digital Card made it easier for me to do the purchasing for my Sugbo Negosyo business	3.30	.787	0.804	
Scale Mean	3.32			

Table 2. *Continued*

Scales and Items	Mean	Standard Deviation	Factor Loadings	Cronbach Alpha
Attitude toward Use				0.913
1. I am happy using the Digital Card for my purchases for my Sugbo Negosyo business	3.39	.696	0.909	
2. Using the Digital Card is beneficial, providing convenience for purchasing and recording for my Sugbo Negosyo business	3.31	.707	0.890	
3. Overall, I find the Digital Card for my Sugbo Negosyo business favorable	3.34	.681	0.884	
4. Using the Digital Card is valuable; it helped me track my purchases for my Sugbo Negosyo business	3.34	.645	0.878	
Scale Mean	3.35			
Actual Use				0.909
1. I used the Digital Card for my Sugbo Negosyo business as soon as it was available	3.34	.598	0.916	
2. I used the Digital Card in my purchases for my Sugbo Negosyo business	3.39	.602	0.900	
3. I used the Digital Card in my purchases until I reached my grant limit	3.41	.605	0.862	
4. I intend is to share my knowledge about the Digital Card for my purchases for my Sugbo Negosyo business	3.27	.701	0.866	
Scale Mean	3.35			
Satisfaction				0.931
1. I have achieved my purchase objectives using the Digital Card for my Sugbo Negosyo business	3.30	.787	0.892	
2. I find using the Digital Card for purchases very helpful for my Sugbo Negosyo business	3.40	.611	0.882	
3. I am satisfied with using the Digital Card for my purchases for my Sugbo Negosyo business	3.35	.683	0.936	
4. Using the Digital Card helped in my purchases for my Sugbo Negosyo business	3.38	.688	0.928	
Scale Mean	3.36			

Transmutation Scores of Scale Means: Strongly Agree: 3.26 – 4.0; Agree: 2.51 – 3.25

Table 3 shows the "R-square values" of the endogenous latent variables, namely, Actual Use, Attitude toward Use, Perceived Usefulness, and Satisfaction. The R-square statistics refers to the variance in the endogenous variable as influenced by the exogenous variable(s). The threshold values of 0.25, 0.5, and 0.7 are typically used to characterize a weak, moderate, and strong coefficient of determination, respectively (Hair et al., 2016). Figure 2 shows the graphical R^2 values.

Table 3. *Coefficient of determination (R^2)*

R-Square of the Endogenous Latent Variables		
Construct	**R^2**	**Result**
Actual Use	0.789	Strong
Attitude toward Use	0.809	Strong
Perceived Usefulness	0.497	Moderate
Satisfaction	0.744	Strong

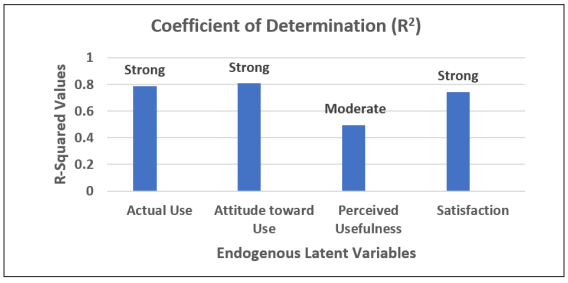

Figure 2. *Endogenous R^2 Values*

Table 3 shows that the R-square value of Actual Use (AU) is 0.789 which means that 78.90% of the change in AU can be explained by Attitude toward Use (A). The table also shows the R-square value of Attitude toward Use (A), 0.809, which means that 80.9% of the change in A can be explained by Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Similarly, the R-square value of Satisfaction (S), 0.744, means that 74.4% of the change in Satisfaction (S) can be explained by Actual Use (AU). The R-square value of Perceived Usefulness (PU) is 0.497, which is considered moderate in strength. Only 49.7% of the change in Perceived Usefulness (PU) can be explained by Perceived Ease of Use (PEOU).

Figure 3 shows the structural model after running the PLS-SEM analysis.

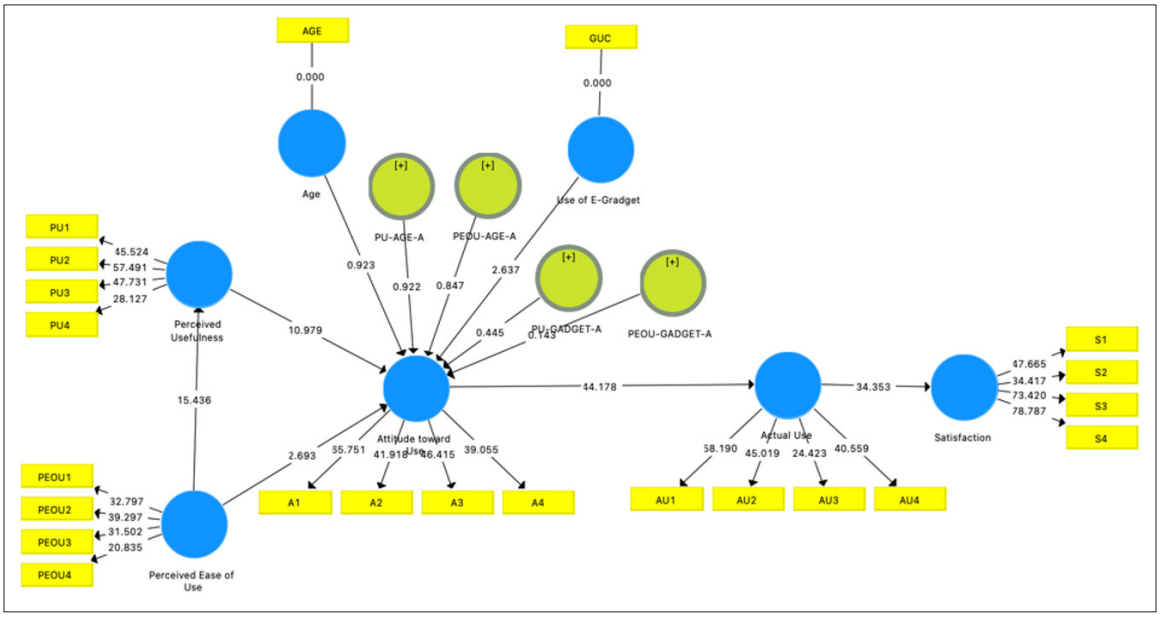

Figure 3. *Structural model*

Table 4 summarizes the results of the path coefficients of all the hypotheses tested in the structural model, with their t-values with the associated p-values. The results show significant correlations at a 5% level of significance between:

a. Perceived Usefulness (PU) and Attitude toward Use (A), supporting Hypothesis 1;
b. Perceived Ease of Use (PEOU) and Attitude toward Use (A), supporting Hypothesis 2;

c. Perceived Ease of Use (PEOU), and Perceived Usefulness (PU), supporting Hypothesis 3;
d. Attitude toward Use (A) and Actual Use (AU), supporting Hypothesis 4; and,
e. Actual Use (AU) and Satisfaction (S), supporting Hypothesis 5.

However, both Age (AG) and Use of e-Gadget (EG) did not moderate the relationships between Perceived Usefulness (PU) and Attitude toward Use (A) as well as between Perceived Usefulness (PU) and Attitude toward Use (A). Thus, Hypotheses H6a, H6b, H7a, and H7b are not supported.

Table 4. *Significant individual path coefficients in the structural model*

Path	Original Sample (O)	Path Coefficient (t value)	*p values	Hypothesis Test Results
Perceived Usefulness → Attitude toward Use	0.725	10.979	**0.000**	H1 is supported
Perceived Ease of Use → Attitude toward Use	0.208	2.693	**0.007**	H2 is supported
Perceived Ease of Use → Perceived Usefulness	0.705	15.436	**0.000**	H3 is supported
Attitude toward Use → Actual Use	0.888	44.178	**0.000**	H4 is supported
Actual Use →Satisfaction	0.863	34.353	**0.000**	H5 is supported
PU-AGE → Attitude toward Use	0.059	0.922	**0.357**	H6a is not supported
PEOU-AGE → Attitude toward Use	-0.059	0.847	**0.398**	H6b is not supported
PU-E-Gadget → Attitude toward Use	-0.028	0.445	**0.657**	H7a is not supported
PEOU-E-Gadget → Attitude toward Use	0.011	0.143	**0.886**	H7b is not supported

p<0.05p<.01*

The descriptive summary results show that the means of the scales (perceived usefulness, perceived ease of use, attitude toward use, actual use, and satisfaction) are equivalent to "strongly agree." These results suggest that the DCS is perceived by the beneficiaries as easy to use and useful. Specifically, the actual use and satisfaction reveal the beneficiaries' high satisfaction levels with the use of the DCS.

The results of the hypotheses testing sustain Hypotheses 1 and 2, indicating how each of the variables perceived ease of use and perceived usefulness significantly contributes to the attitude towards the use of the DCS. Also, the path analysis supports Hypothesis 3, showing the significant contribution of perceived ease of use to perceived usefulness. This result finds consistency with the original technology acceptance model which proposed that perceived usefulness is influenced by perceived ease of use. These findings suggest that the beneficiaries' assessment of the ease of use and usefulness of the DCS have influenced their favorable predisposition toward the DCS. The results further show how the attitude towards the use significantly affects the actual use of the DCS, supporting Hypothesis 4. In turn, the actual use reveals its significant contribution to the satisfaction of the DCS use, supporting Hypothesis 5.

Also tested in this study are the moderating effects of age and competence in gadget use between the relationships of perceived ease of use and attitude towards the use of the DCS as well

as the perceived usefulness and attitude toward the use of the DCS. Approximately 60% of the participants' age ranges from 43 to 73, indicating a wide age gap. The results of the path analysis show that age fails to moderate the relationships between both the perceived ease of use and attitude towards the use of the DCS as well as perceived usefulness and attitude toward the use of the DCS. Thus, Hypotheses 6a and 6b are not supported. The impact on the attitude towards the use of the DCS in terms of the participant's perception of the ease of use and usefulness is similar regardless of age range.

Similarly, the results of the path analysis show that the beneficiaries' competence in gadget use also fails to moderate the relationships between both the perceived ease of use and attitude towards the use of the DCS as well as perceived usefulness and attitude toward the use of the DCS. Thus, Hypotheses 7a and 7b are not supported. This lack of moderating effect of the competence of gadget use suggests that attitude toward the use of the DCS is not influenced by the participants' level of competence in the use of common electronic gadgets. Thus, the results of investigating the moderating effect of age and gadget use indicate that use of the DCS has no difference regardless of age range and gadget use competence, suggesting the usability of the DCS across a variety of participants' ages and levels of competence.

This study's results demonstrate the predictive strength of the TAM on the attitude towards the use and the actual use of the DCS. The success of the use of the DCS as implemented in the SNP hinges on the favorable attitude of the beneficiaries towards its use. The study's outcomes indicate the participants' perception of the DCS as easy to use and useful, influencing their favorable assessment of the actual use of the DCS. The beneficiaries were able to use the DCS for its intended purpose and the results further reveal that they were satisfied with the use of the DCS.

Table 5 summarizes the participants' open-ended responses to the question "Please share your experiences on your participation in the Sugbo Negosyo program." The outcomes generated six thematic categories, namely: the usefulness of the DCS, the ease of use of the DCS, the attitude of the participants towards the use of the DCS, their satisfaction and dissatisfaction with the use of the DCS, and some participants' suggestions. Except for the last category on suggestions, the first five thematic categories find similarities with the TAM variables tested in this study.

The first category is on the perceived usefulness of the DCS, with the responses focusing on how the DCS facilitated the purchase transactions and in keeping track of their business requirement spending. The second category is on the perceived ease of use of the DCS and how convenient it was for the beneficiaries to have done their purchases. The third category is on the beneficiaries' attitude toward the attributes of the DCS use, citing that such a system is a great idea and that the DCS carries features that safeguard their purchases. The fourth and fifth categories present the participants' satisfaction and dissatisfaction, respectively, with the use of the DCS in their purchase transactions. The participants' articulation of their appreciation of having been exposed to different suppliers is considered as the satisfaction of the DCS use.

Most of the dissatisfaction responses, on the other hand, include the limited number of suppliers, with some accredited vendors not carrying the merchandise and/or raw materials required for the beneficiaries' business operations. The other sources of disappointment include the in-store delays due to the long queue of beneficiaries shopping at the same time, as well as the cashiers' "learning curve" on the DCS transactions due to the novelty of the system. Finally, one of the articulated recommendations is to have the partner suppliers prepare the beneficiaries' database information to expedite point-of-sale transactions.

Table 5. *Open-ended responses on the Sugbo Negosyo Program experiences*

1. **Usefulness of the digital card system**
A. Facilitated Purchase Transactions
• *The digital card facilitated transactions; no hassle – we only had to present the digital card for the purchases; the digital card gave convenience*
• *I was surprised and happy with how digitally innovative the use of the digital card was in terms of claiming our grant; I had no problem with the entire process and everything went smoothly; the use of the digital card facilitated my purchases and is appropriate with the new technology*
B. Easy to Track Expenses
• *The digital card made it easy for me to track my spending*
2. **Ease of Use of the digital card system**
A. Easy to Use
• *The use of the digital card was easy, contrary to what I earlier thought*
B. Convenient to use; special beneficiaries' lane in SM Seaside
• *I used my Sugbo Negosyo digital card at the <<name of the retailer>> and it was very convenient since they have an allocated cashier that caters only to the Sugbo Negosyo beneficiaries; there was no hassle in using the card since the cashier is well informed as well*
3. **Attitude toward the Sugbo Negosyo digital card system**
A. Safe to Use
• *The use of the digital card is safe, we did not have to bring cash*
• *The use of the digital card limits our purchases to the needs of the business; it is good that the QR code was used so that it cannot be used by others*
B. Great Idea
• *The digital card with QR Code and OTP is such a great idea*
4. **Satisfaction with the Sugbo Negosyo digital card system**
A. Introduced me to new suppliers
• *The use of the digital card introduced me to new suppliers after meeting and visiting Sugbo Negosyo company partners; I had the chance to speak with the different suppliers and this gave me more idea about what they are selling*
5. **Dissatisfaction with the Sugbo Negosyo digital card system**
A. Transaction In-store delay due to long queue of beneficiaries
• *There were times of inconvenience because some beneficiaries purchased their goods at the same time from the same suppliers, causing delays*
• *I experienced inconvenience as many beneficiaries purchased at similar times; some partner stores had to schedule our purchases*
B. Problems encountered during purchase transactions
• *Because the digital card was new, there were slight delays with the cashiers during the purchase transactions*

Table 5. *Continued*

5. **Dissatisfaction with the Sugbo Negosyo digital card system**
C. Limited purchases of business requirements due to limited supplier stocks
• *Not all items needed for my business were available from partner suppliers; most of the items were "goods" for retail; I had to look for other partner suppliers for my needs*
• *I wish more partner stores sold goods for baking*
• *I could not use the Digital Card in the discount stores that I frequent*
• *My purchase requirements were not the quality offered by the partner suppliers*
• *We encountered problems with no accredited suppliers for our business requirements*
• *It would have been more helpful in meeting the shop's requirements in procuring supplies and equipment if there were more available partnerships with stores selling items relevant and helpful for an auto repair shop*
6. **Suggestions for the Subgo Negosyo digital card system implementation**
A. Suggestion to facilitate in-store purchase transactions: prepare the database of beneficiaries
• *Please prepare the beneficiaries' information in the database in the system to facilitate the purchase transactions*

4.0 Conclusion and Recommendations

While unprecedented, the implementation of the digital card payment system in the Sugbo Negosyo program was able to deliver its intent in facilitating the distribution of the financial grant as well as in monitoring the grant's appropriation. Despite its nascent stage, the technology acceptance model path analyses reveal encouraging outcomes; the findings reveal how the beneficiaries assess the digital card system as useful, easy to use, and has provided them the satisfaction of its use in their purchase transactions, regardless of age difference and competence in gadget use. The qualitative results of the participants' experiences in the SNP support the quantitative findings. Among the qualitative findings were the participants' sentiments of dissatisfaction with the SNP implementation as well as some suggestions, providing practical and useful guidance to the SNP administrators for program reforms.

The study results suggest compatibility of the DCS use with the aim of the DICT's E-Government Masterplan 2022 on the digital transformation of government. The findings also show how the DCS provides some of the benefits of e-government as outlined by the World Bank including greater convenience, increased transparency, and fewer opportunities for corruption. Moreover, the study's outcomes are aligned with the thrust of the BSP as embodied in its Digital Payment Transformation Roadmap of promoting "financial inclusion and digital system of payments." The DCS facilitated the participation of the beneficiaries to the SNP including those without bank accounts. The perceived ease of use and the perceived usefulness of the DCS contributed to the success of the beneficiaries' participation in the SNP. This study shows the theoretical applicability of TAM in a government e-payment program.

For a government-initiated digital payment system, the results of the SNP DCS implementation bode well for future similar projects. If the intention is to facilitate digital payments among citizens, particularly where financial inclusion for the

unbanked is concerned, and in the current situation where physical payment transactions remain a challenge, then the prospect of adopting a digital payment system similar to the SNP implementation is auspicious. Future government projects involving citizen participation with e-payments may be informed by this study's results.

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