Public Value and Level of e-Government in Sri Lanka: Problems and Prospects

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Achieving public value and maintaining a higher public value in e-Government is considered as the ability of e-Government systems to provide efficient and better services to the citizens. The government of Sri Lanka has started e-Government developments since early 2000 investing more than 2000 million Sri Lanka rupees annually on e-Government implementation and adoption, but the level of e-Government and public value of some websites must be further improved for a better service delivery. This study examines public value and level of e-Government in Sri Lanka based on selected ten government websites which provides most essential services to the public. The level of e-Government has been examined by using criteria of the UN-ASPA model and the public value of the selected websites has been examined through a survey. Among 1200 final year undergraduates for the year 2023, 75 of them were selected from a purposive sample who are following e-Government subject as a part of their degree program at the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Sri Lanka. Data were collected from a structured questionnaire to examine the public value of the websites and used descriptive statistics to analyze the data. The level of e- Government has been examined using the UN-ASPA model and results were analyzed based on a scoring method. The study revealed that the selected government websites have a relatively higher level of public value and e- Government level. Accordingly, the highest scored e-Government website is the Central Bank (23 scoring marks out of 25), and the least scored website is the Department of Registration of Persons (19 scoring marks). The public value of all the selected websites ranges from a high level to a moderate level. The Ministry of Education has scored the highest public value (the mean value is 4.2) among the ten-government websites and the Ministry of Higher Education has the lowest public value (3.8). The study observed that a higher level of public value tends to have a higher level of e-Government. A further study is necessary however, to confirm this relationship. This study contributes to the existing body of knowledge on e-Government services on Value and concludes that a higher level of public value represents a higher level of e-

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Government services based onSri Lankan government websites. Finally, the study proposed recommendations to further improve public value level and e-Government level of the websites in Sri Lanka.

Key words: Public value, e-Government, Sri Lanka

1. Introduction

E-Government has rapidly increased around the world, due to many government departments recognizing the importance of providing quality services to citizens' online (Shackleton, 2006). The use of information and communication technologies in public governance and public administration processes is an essential element in building public value within the boundaries of the government (Bojang, 2021). The creation of public value for individuals/citizens through services depends on quality standards such as service availability, satisfaction levels, priority, equity issues, and cost (Karkin & Janssen, 2014). Properly planned and implemented e-Government can improve the efficiency of government service delivery, simplify compliance with government regulations, strengthen citizen participation and trust in government, and save costs for citizens, businesses, and the government itself (Karkin & Janssen, 2014). Therefore, it is not surprising that policymakers and managers are looking to adopt e-Government in countries around the world, from the most developed to the least developed (Ntulo & Otike, 2019).

The Sri Lankan government sector also started shifting to e-Government practices since 2000. With the rapid advance in ICT, the Government of Sri Lanka recognized the need for effectively adopting latest technologies for improving the delivery of public services (Karunasena et al., 2011a). Supported by several major international funding organizations, the Government of Sri Lanka launched a program of e-Sri Lanka in 2002, and millions of dollars have been invested in implementing numerous e-Government practices there onwards (Karunasena et al., 2011a). Through the implementation of such a program, the government aims to foster social and economic developments to improve the quality of life of its citizens (Hanna, 2008).

E-Government is projected as means to determine and increase the public value created by public management systems which indirectly means that e-Government strategies can be measured better as per their potential to intensify the public governance capacity of generating public value (Lindgren & van Veenstra, 2018).

There is a problem with the level of e-Government involvement and the public value of the service delivery in the country. E-Government in Sri Lanka is unsatisfactory in all the dimensions of public value generation and developments in government are at a crucial stage, due to the lack of e-services, the security threat to public information in public organizations, the low adoption of information and

communication technologies in government, and the low uptake of available e-Government initiatives (Karunasena et al., 2011a). However, as there is a lack ofrecent surveys conducted regarding this, the level may be improving in 2023 due to the increasing government investment towards the e-Government infrastructure. Sri Lanka has a low rank in Online Service Index due to the inability to identify the exact website of a national portal, the lack of accessibility or usability features, the weaknesses in the active maintenance of the "contact us" feature, service-delivery capability features, citizen participation and interconnectedness features (Rajapaksha & Fernando, 2016).

There is a lack of research on the public value of e-Government, especially, in the context of developing countries and more importantly a total absence related to the least developed countries (LDCs) (Twizeyimana & Andersson, 2019). Public value of e-Government in Sri Lanka is far from satisfactory exemplified by the lack of e-transaction services and the low uptake of available e-Government initiatives (Karunasena & Deng, 2012). Sri Lanka has a lack of rigorous assessment of the public value of e-Government, with the huge investment from government and aid organizations; there is an urgent need for the timely evaluation of the performance of various e-Government initiatives (Karunasena & Deng, 2012). Such an investigation helps the government to justify its investment in e-Government and provides aid organizations with convincing arguments on the value for their money (Karunasena & Deng, 2012). ICTA (2012 as cited in Sufna & Fernando, 2015) reported that the Sri Lankan government invests more than 2000 million Sri Lankan rupees annually on e-Government implementation and adoption; these expenditures are incurred from the taxpayers' money.

In addition to that e-Government Development Index 2023 highlights the status of the Sri Lanka e-Government level. "The e-Government Development Index (EGDI) presents the state of e-Government Development of the United Nations Member States. Along with an assessment of the website development patterns in a country, the e-Government Development index incorporates the access characteristics, such as the infrastructure and educational levels, to reflect how a country is using information technologies to promote access and inclusion of its people. The EGDIis a composite measure of three important dimensions of e-Government, namely: provision of online services, telecommunication connectivity and human capacity" (United Nations, 2023).

In 2020 Sri Lanka was ranked in the 85th place and in 2022 it has shifted down to the 95th place. The ranking of this index indicates the e-Government status of a country and Sri Lanka has been lower ranked compared to previous years which portrays the problem of e-Government status of the country.

Table 01: e-Government Development Index ranking – Sri Lanka

e-Government Development Index	2018	2020	2022
Sri Lanka (Rank)	94	85	95
Sri Lanka (Value)	0.57510	0.67080	0.62850

Source: United Nations, (2023)

"Public value of e-Government has a direct influence on the behavioral intention to adopt e-Government services. The managerial and practical implications of these research findings on the public value of e-Government and the acceptance of e-Government services are dissected meticulously" (Mensah et al., 2022). The deep relationship between ideals of public value and e-Government has been vividly discussed by scholars (Bouaziz, 2020; Chohan et al., 2020 as cited in Mensah, et al., 2022).

Sri Lankan e-Government status has been identified as crucial and requires a special attention. Therefore, this study will conduct an examination of the public value and the level of e-Government in Sri Lanka, based on selected most frequently used ten government websites which provide essential government services to the public particularly, for university students have been selected in this study. These websites are University Grants Commission (UGC), Ministry of Education (MoE), Ministry of Higher Education (MoHE), Department of Examination (DoE), Department of Registration of Persons (DRP), Department of Immigration and Emigration (DIE), Department of Motor Traffic (DMT), Department of Census and Statistics (DCS), Department of Labour (DoL), Central Bank websites (CB).This study conducted to assess the e-Government level and public value of the Sri Lanka government websites to address the following research objectives:

- To identify the level of e-Government and the level of the public value of the selected government websites in Sri Lanka.
- To examine whether a higher level of e-Government represents a higher level of public value.
- To identify issues and problems of the e- Government development in Sri Lanka
- To provide recommendations to improve the level of e-Government and public value of the selected websites in Sri Lanka.

2. Literature Review

2.1. E-Government

E-Government is described as any kind of use of information and communication technology within the public sector (Bhatnagar & Singh, 2010). Governments use ICT to modernize and increase internal efficiency as well as improve Service Delivery (Bhatnagar & Singh, 2010). Electronic government is commonly referred to as the delivery of government information and services using information and communication technologies (ICT) (Akman et al., 2005; Horan & Abhichandani, 2006 as cited in Karunasena et al., 2011a). E-Government describes the legacy of any kind of use of information and communication technology within the public sector (Bhatnagar & Singh, 2010) and it is the application of information technologies to provide higher standards of innovation in the administration of government operations and systems (Mouna et al., 2020). E-Government activities should have the capacity to enhance the comprehensive and totality of government and public sector performance (Mensah et al., 2022).

2.2. Public Value

The public value concept is that the value to citizens should guide the operations of public services (Moore, 1995). Public value is derived from three dimensions of trust, services, and desirable outcomes (Moore, 1995 as cited in Grimsley & Meehan, 2007) and it has been seen as a source of critical factors, benchmarking, and analytical frameworks to evaluate public services and the impact of technologies on service production and provision (Panagiotopoulos et al., 2019). Public value is considered as the value produced by government through services, laws, and regulations, and can be an important factor in determining the performance of activities such as government programs and e-Government programs (Criado & GilGarcia, 2019). It can be used broadly to measure results, the means utilized to provide them, in addition to confidence and lawfulness, and tackles matters like ethos, parity, and responsibility (Mensah et al., 2022).

2.3. Relationship between Public Value and e-Government Level

Public value has emerged as a new dimension in e-Government (Mensah et al., 2022). Public value is considered as the value produced by the government via services, laws, and regulations, and can be a vital factor in determining the performance of government programs and activities such as e-Government programs (Savoldelli, 2013; Faulkner & Kaufman, 2018; Criado & Gil-Garcia, 2019as cited in Mensah et al., 2022). The effect of e-Government on public administration effectiveness can

best be demonstrated through the public value generated for citizens and the general public (Castelnovo & Simonetta, 2008 as cited in Mensah et al., 2022).
The deep relationship between ideals of public value and e-Government has been vividly discussed by scholars (Bouaziz, 2020; Chohan et al., 2020 as in Mensah et al., 2022). It has been stated that public value-based e-Government systems can be examined by looking at the value that people/citizens believe or perceive to get as they consume services delivered by such systems of e-Government services (Luna-Reyes et al., 2016; Roy, 2019; Bouaziz, 2020 as cited in Mensah et al., 2022).
It is expected that higher the public value created through e-Government in terms of open data, data privacy, and anti-corruption measures, tends to higher the adoption of e-Government services (Valle-Cruz, 2019 as cited in Mensah, et al., 2022). Thereis a lack of empirical work exploring the relationship between the level of public value and level of e-Government is based on Sri Lanka. Research has indicated that public value created through e-Government has a direct significant impact on citizens adopting e-Government and mobile government services (Li & Shang, 2020; Wang et al., 2020 as cited in Mensah et al., 2022). The quality of information of e-Government services such as accuracy, timeliness, relevance, and precisionwill enhance the citizens' comprehension of the public value of e-Government and the public value of e-Government has a direct influence on the behavioral intention to adopt e-Government services, the openness and responsiveness of e-Government (Mensah et al., 2022).

2.4. Concepts and Theories

2.4.1. Ndou's e-Government framework

Ndou's e-Government framework (2004 as cited in Twizeyimana & Andersson, 2019) elaborates and expands models of e-Government. Ndou's framework was developed from an in-depth analysis of the basic definitions of e-Government available in the literature. According to Ndou, the existing definitional network of the state is subject to three main components that characterize a state framework. Those are: (i) transformation areas; (ii) users, stakeholders, and their interrelationships, and (iii) e-Government application domains (Twizeyimana & Andersson, 2019).

2.4.2. E-Government systems success model

Wang and Liao (2008 as cited in Omar et al., 2011) proposed an e-Government systems success model, including six success variables: information quality, system quality, service quality, use, user satisfaction, and perceived net benefit. Wang and Liao's model does not take a public value perspective of e-Government into considerations. However, there is a need for a public value perspective as evaluating the success of e-Government initiatives (as cited in Omar et al., 2011).

2.4.3. Public value theory

Public value theory directs public sector management within organizational boundaries to society from how to better produce public services to how to deliver public services that best satisfy those who consume them (Panagiotopoulos et al., 2019). The proliferation of digital technologies has fueled this transition and created a strong argument for public value creation as the goal of digital government initiatives (Panagiotopoulos et al., 2019). Public value theory has been particularly successful in providing an alternative to the narrative of new public management that conceives of digital technologies as tools of administrative efficiency (Bannister & Connolly, 2014; Cordella & Bonina, 2012 as cited in Panagiotopoulos et al., 2019).

2.4.4. UN-ASPA's five-stage model

United Nations Division for Public Economics and Public Administration (2001 as cited in Al-Hashmi & Darem, 2008) identifies the five stages for analyzing the progress of e-Government. This study identified e-Government stages as representative of the government's level of development based primarily on the content and deliverable services available through official websites (Al-Hashmi & Darem, 2008). The proposed five stages are (i) Emerging presence; (ii) Enhanced presence; (iii) Interactive presence; (iv) Transactional presence; and (v) Seamless or fully integrated presence.

According to the United Nations Division for Public Economics and Public Administration (2001 as cited in Al-Hashmi & Darem, 2008) the emerging presence, is the stage where an official government online presence is established through a few independent official sites, information is limited, basic and static. The enhanced presence is the stage where government sites increase information and it becomes more dynamic, while content and information are updated with greater regularity. Through the interactive presence, users can download forms, e-mail officials, interact through the web and make appointments and requests. The transactional presence is users can pay for services or conduct financial transactions online. Seamless or fully integrated presence is the full integration of e-services across administrative boundaries. There is a total integration of e-functions and services across administrative and departmental boundaries (Al-Hashmi & Darem, 2008).

2.5. Empirical Review

Karunasena et al., (2011b) investigated the public value of the service delivery through e-Government and revealed that most of the respondents are satisfied with the government effort on the delivery of public services though e-Government in Sri Lanka. The quality of information, e-services, user-orientation of information and services, efficiency, openness and responsiveness of public organizations, equity, self-development of citizens, trust, and contributions of public organizations to the environmental sustainability are identified as the critical factors for evaluating the public value of e-Government in Sri Lanka (Karunasena & Deng, 2011 & 2012). In addition to the above-mentioned factors noted by Karunasena & Deng (2011 & 2012), Karunasena et al., (2015) revealed that functionalities of electronic services, provision of information and services through e-enabled counters, ensuring confidentiality of citizens' information, achieving social equity, are critical for evaluating the public value of e-Government in Sri Lanka. Mensah et al., (2022) reveled that information quality, service parameters, user orientation, efficiency, openness, and responsiveness were significantly related to the public value of e-Government. Based on the Ministry of Public Administration and Home Affairs in Sri Lanka, Sufna and Fernando (2015) revealed that the most significant determinant of the public value was identified as service delivery and efficiency, user friendliness, quality and content are the four dimensions of the service delivery.

Public value of e-Government needs to be clarified and adequately measured and observed the necessity of in-depth comparative studies at very strategic levels of national, regional, provincial, institutional, and project levels and public awareness, ICT infrastructure, availability of budgets, and interconnectivity of public servicing organizations in delivering successful e-Government initiatives are some factors which determine public value (Hettiarachchi & Lakmal, 2023).

There is a lack of research on a general framework of the stages of e-Government development. Zhang and Kimathi (2022) introduced a general framework of three stages of e-Government development to investigate e-Government evolution approach, which consists of information stage, transaction stage, and engagement stage. According to the author, every stage of e-Government development aims at providing different focus of public value. Rajapaksha and Fernando (2016) also identified several weaknesses of the online services of the government websites of Sri Lanka. Those major reasons are the lower rank of the Sri Lankan Online Service Index, the inability to identify the exact website of the national portal, the lack of accessibility or usability features, the weaknesses in the active maintenance of the "contact us" feature, service-delivery capability features, citizen participation and interconnectedness features.

3. Methods

The study was conducted mainly based on quantitative and qualitative data using a scoring method and descriptive analysis. Ten government websites which provides essential government services to the public were used to identify the level of e-Government and public value of the websites. University Grants Commission (UGC), Ministry of Education (MoE), Ministry of Higher Education (MoHE), Department of Examination (DoE), Department of Registration of Persons (DRP), Department of Immigration and Emigration (DIE), Department of Motor Traffic (DMT), Department of Census and Statistics (DCS), Department of Labour (DoL), Central Bank websites (CB). Initially the level of e-Government of the selected websites was examined.

Selected ten websites were evaluated based on UN-ASPA five-stage model suggested by the United Nations (UN) and American Society for PublicAdministration. The total score of the model consists of 25 scores and the observation method was used to collect the data and scoring method was used to examine the level of e-Government of each website. The observation has been done using the ASPA Model during a three-month period from 01st of May to 31st of July 2023. Based on the given scores, the websites were ranked and identified as the highest to the lowest in the e-Government level.

To identify the level of public value, the same ten government websites were used. The term public value was operationalized, and a questionnaire was developed with a five-point Likert scale questions based on the definition of "public value" which derives from three dimensions (a) trust, (b) service delivery, and (c) desirable outcomes (Moore, 2015; Grimsley & Meehan, 2007 as cited in Sufna & Fernando, 2015). The questioners were distributed among the sample of 75 undergraduates selected among 1200 of the fourth-year undergraduates of the year 2023 at the Faculty of Management Studies and Commerce in the University of Sri Jayewardenepura, Sri Lanka. The sample was selected purposively, including the undergraduates who follow "e-Government" subject in their degree program. The collected data were processed by using SPSS statistical software and analyzed usingdescriptive statistics. Based on the findings of e-Government level and public valueof the selected websites, the study concluded that a higher level of e-Government represents a higher level of public value in Sri Lanka.

4. Analysis and Discussion

The following section presents analysis and discussion of the study. In the analysis, the level of e-Government of the ten websites has been initially identified based on the UN-ASPA model and then the public value and level of the public value has been presented.

4.1. Level of e-Government

Table 02: Evaluation of the websites based on the UN-ASPA model

UN-ASPA Stage Description	Specific Characteristics	Availability "Yes = 1/No = 0"									
		UGC	**MoE**	**MoHE**	**DoE**	**DRP**	**DIE**	**DMT**	**DCS**	**DoL**	**CB**
Stage One - Emerging Web Presence • Sites serve as a public information source. • Static information on the government is provided. • FAQs may be found. • Contact information is provided	• Telephone Numbers	1	1	1	1	1	1	1	1	1	1
	• Postal Address	1	1	1	1	1	1	1	1	1	1
	• Email Address	1	1	1	1	1	1	1	1	1	1
	• Services Offered	1	1	1	1	1	1	1	1	1	1
	• Mandate, Organizational Structure, FAQs, Related Ras	1	1	1	1	1	1	1	1	1	1
Stage Two - Enhanced Web Presence • Access to specific information that is regularly updated.	• Updated in the past 1.5 months	1	1	1	1	1	1	1	1	1	1
	• Forms are available (html, word, sometimes zip, pdf)	1	1	1	1	1	1	1	1	1	1
	• Search function / Site Map	1	1	1	1	1	1	1	1	1	1

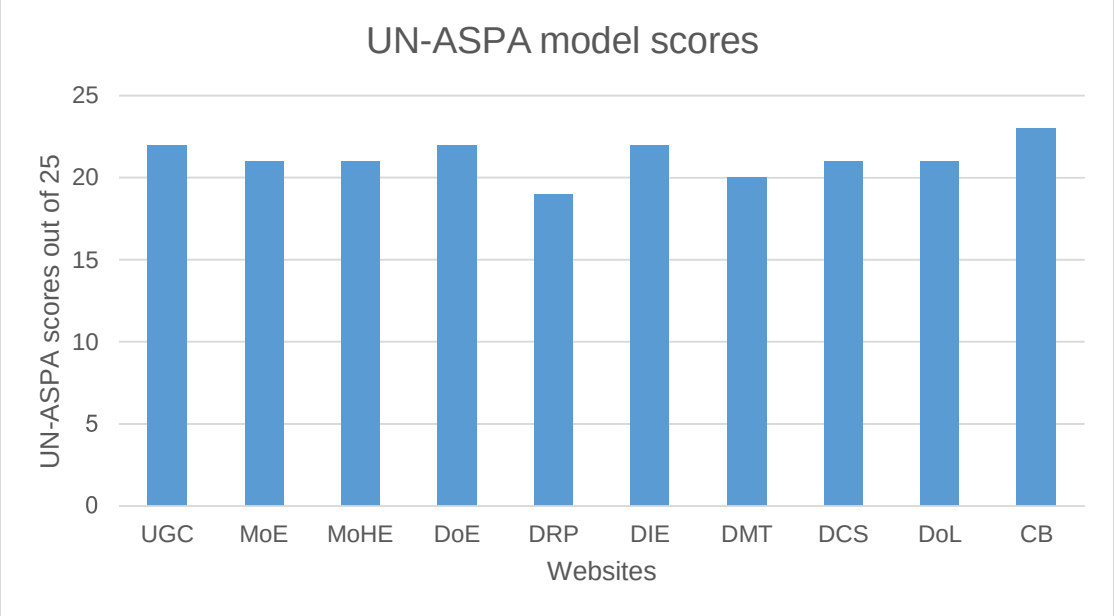
• A central government homepage may act as a portal to other department sites. • Useful documents may be downloaded or ordered online. • Search features, e-mail and areas for comments are accessible.	• Message Board / Feedback Form	1	1	1	1	1	1	1	1	1	1
	• Newsletters or Publications / Purchase Information	1	1	1	1	1	1	1	1	1	1
Stage Three - Interactive Web Presence • A government website frequently acts as a portal • Users can search specialized databases • Forms can be downloaded/submitted online • Secure sites and passwords begin to emerge	• Downloadable Forms (pdf, zip)	1	1	1	1	1	1	1	1	1	1
	• Specialized Databases	1	1	1	1	1	1	1	1	1	1
	• On-Line Forms Submission	1	1	1	1	1	1	1	1	1	1
	• Interactive Elements e.g. Chatroom / Forum / Discussion Board	0	0	0	0	0	0	0	0	0	1
	• User Log-in and Password (internal use or public)	1	1	1	1	0	1	0	1	1	1

Stage Four - Transactional Web Presence • Users will be able to conduct complete and secure transactions online. • The government website allows users to customize - to directly access services based on needsand priorities • Sites will be ultimately secure	• Public Use Log-in and Password (NOT exclusive for internal use)	1	1	1	1	0	1	0	1	1	1
	• Secure	1	1	1	1	1	1	1	1	1	1
	• On-Line Payment	1	0	0	1	0	1	1	0	0	1
	• Confirmation of request (e-mail confirmation/acknowledgment receipt)	1	1	1	1	1	1	1	1	1	1
	• Display of Security and Privacy Policy	1	1	1	1	1	1	1	1	1	1
Stage Five - Fully Integrated Web Presence • Country provides all services and links through a single portal • No defined demarcation between various agencies and departments • All transactional services	• All Department Information and Services accessed through the Portal	1	1	1	1	1	1	1	1	1	1
	• Cohesive interface covering all attached agencies, concerned agencies and all services	1	1	1	1	1	1	1	1	1	1
	• Frontline Services are fully transactional online	0	0	0	0	0	0	0	0	0	0
	• User may Customize his Department Portal page	0	0	0	0	0	0	0	0	0	0

offered by government will be available online	• Search Engine Encompasses attached Websites	1	1	1	1	1	1	1	1	1	1
Total score – out of 25		22	21	21	22	19	22	20	21	21	23

Source: Field data

Figure 01: UN-ASPA model scores of the websites



Source: Field data

The UN-ASPA model presents five stages of e-Government development of the websites. Each stage provides unique features. Stage 1: Emerging web presence presents dissemination of administrative information. Stage 2: Enhanced web presence presents the provision of facilities for two-way communication through email, useful information or the application can be downloaded. Stage 3: Interactive web presence presents there is an improvement of value and detail of information, forms can be downloaded, and submission can also be done online. Stage 4: Transactional web presence means that users can conduct a complete and secure online transaction. Stage 5: Fully interacted web presence presents that all the services and links are provided through a single portal.

According to the observations, the availability of the features has been identified and scored. With reference to the UN-ASPA model the highest scored website is Central Bank website, which scored 23 out of 25. Next most scored websites are University Grants Commission (UGC), Department of Examinations, Department of Immigration and Emigration, which scored 22 out of 25. According to the criteria,the next scored websites are Ministry of Education, Ministry of Higher Education, Department of Census and Statistics, Department of Labor, which scored 21 out of 25. The other scored websites are Department of Motor Traffic, which scored 20 out of 25. The least scored website is Department of Registration of Persons, which scored 19 out of 25. Accordingly, all ten websites have performed well in e-Government development as nine websites have scored at least 20 marks or above and only one website scored 19 marks.

4.2. Public Value of the Websites

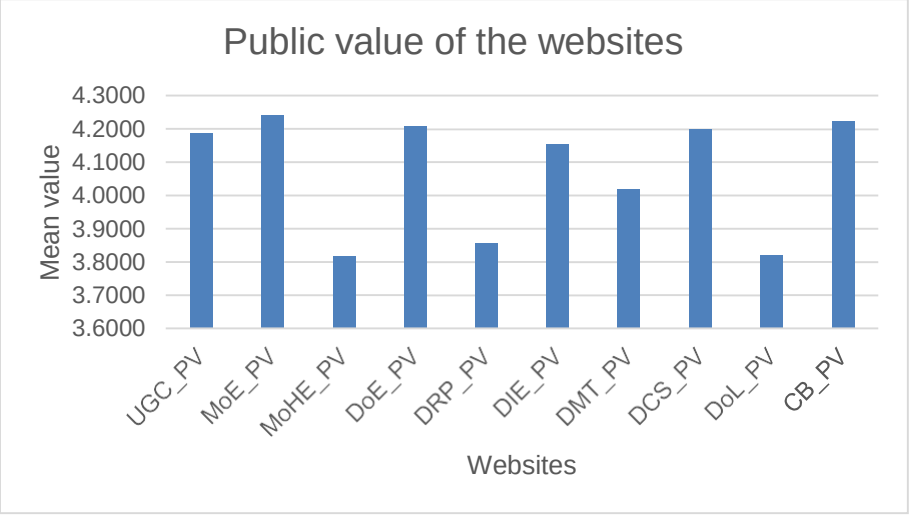
The public value was operationalized and developed using five-point Likert scale questions to identify the level of public value of the selected ten government websites and the responses were analyzed descriptively. Composite mean values for each website were taken to identify the public value of the websites. The composite mean value of each website is presented in the following table.

Table 03: Public value - Composite Mean Value

Website	Mean value
University Grants Commission (UGC_PV)	4.1877
Ministry of Education (MoE_PV)	4.2410
Ministry of Higher Education (MoHE_PV)	3.8174
Department of Examination (DoE_PV)	4.2082
Department of Registration of Persons (DRP_PV)	3.8554
Department of Immigration and Emigration (DIE_PV)	4.1549
Department of Motor Traffic (DMT_PV)	4.0195
Department of Census and Statistics (DCS_PV)	4.1979
Department of Labour (DoL_PV)	3.8215
Central Bank websites (CB_PV)	4.2246

Source: Field data

Figure 02: Public value of the websites – composite mean



Source: Field data

Accordingly, the Ministry of Education has the highest mean value among the ten-government website and the highest to lowest public value of the websites could be ranked consequentially as, Central Bank websites, Department of Examination, Department of Census and Statistics, University Grants Commission, Department of Immigration and Emigration, Department of Registration of Persons, Department of Labor, Ministry of Higher Education.

To identify the level of public value, that composite mean value, which ranges from 5 to 1 (5 - "Highly Agree," 4 - "Agree," 3 - "Neutral," 2 - "Disagree," 1 - "Highly Disagree") was divided into five equal intervals and named those intervals from very high-level public value to very low-level public value.

- From 1 to 1.80 – Very low-level public value
- From 1.81 until 2.60 – Low level public value
- From 2.61 until 3.40 – Moderate level public value
- From 3.41 until 4.20 – High level public value
- From 4.21 until 5.00 – Very high-level public value

The responses were analyzed under the above mentioned five intervals and are presented in the Table 04.

Table 04: Level of the public value

Websites	**Public value scale – responses (%)**				
	Very high Level	**High level**	**Moderate level**	**Low level**	**Very low level**
University Grants Commission	61.3	25.3	13.3	-	-
Ministry of Education	49.3	50.7	-	-	-
Ministry of Higher Education	36.0	50.7	13.3	-	-
Department of Examination	61.3	38.7	-	-	-
Department of Registration of Persons	36.0	37.3	26.7	-	-
Department of Immigration and Emigration	24.0	76.0	-	-	-
Department of Motor Traffic	49.3	24.0	26.7	-	-
Department of Census and Statistics	50.7	49.3	-	-	-
Department of Labour	12.0	88.0	-	-	-
Central Bank websites	60.0	40.0	-	-	-
All government websites	24.0	76.0	-	-	-

Source: Field data

Table 04 illustrates the respondents' ranking on the public value of the ten websites. According to the table, 61% of the respondents ranked UGC Sri Lanka to have a very high-level public value, and about 51% ranked the Ministry of Education Sri Lanka to have a high-level public value. About 51% of the respondents ranked the Ministry

of Higher Education at a high-level public value and about 61% of the respondents ranked the Department of Examination having a very high-level public value. Also, about 37.3% of the sample ranked the Department of Registration of Persons as a high-level public value, and 36% of the sample ranked it as a very highlevel (36%). Referring to the Department of Immigration and Emigration 76% ranked the website as a high-level public value, and 24% of them ranked it as a veryhigh-level public value. About 49% of the sample ranked the Department of Motor Traffic as a very high-level public value, while rest of the respondents ranked it as amoderate level (27%) and also 24% of them ranked the website as a high level. About 51% of the respondents ranked Department of Census and Statistics Sri Lanka to have a very high-level public value, and 49% ranked it as a high-level public value. Most of the respondents (88%) ranked the Department of Labor as a place of high-level public value, while rest of the respondents (12%) ranked it as a place of high-level public value. About 60% of the sample ranked the Central Bank Sri Lanka to have a very high-level public value, while 49% of them ranked it to have a high-level public value. Majority of the respondents (76 %) ranked the government websites of Sri Lanka having a high-level public value, while 24% of the sample ranked it as a very high-level public value.

4.3. A Higher Level of e-Government Represents a Higher Level of Public Value

Based on the findings from e-Government level and public value, the study examined whether a higher level of government represents a higher level of public value in Sri Lanka. Accordingly, mean public value and the value of the e- Government level (UN-ASPA model scoring) of the ten websites were converted intothe percentages and compared as shown in the below table and the figure.

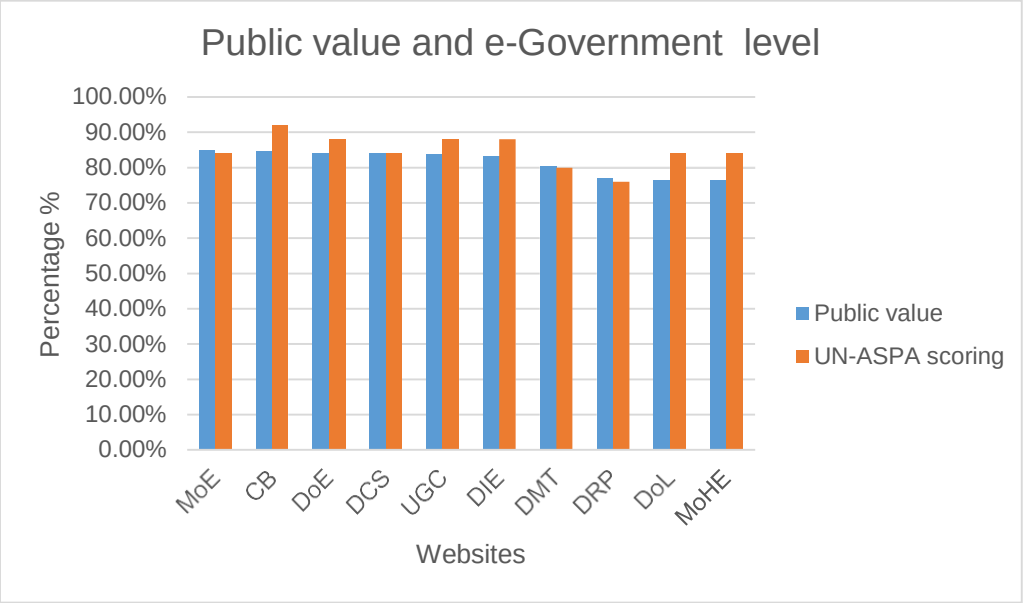
Table 05: Public value and level of e-Government of the websites

Website	Public value		e-Government level - UN-ASPA Model	
	Mean value	**Percentage**	**Scoring**	**Percentage**
Ministry of Education	4.241	84.82%	21	84.00%
Central Bank	4.2246	84.49%	23	92.00%
Department of Examination	4.2082	84.16%	22	88.00%
Department of Census and Statistics	4.1979	83.95%	21	84.00%
University Grants Commission	4.1877	83.75%	22	88.00%

Department of Immigration and Emigration	4.1549	83.09%	22	88.00%
Department of Motor Traffic	4.0195	80.39%	20	80.00%
Department of Registration of Persons	3.8554	77.10%	19	76.00%
Department of Labour	3.8215	76.43%	21	84.00%
Ministry of Higher Education	3.8174	76.34%	21	84.00%

Source: Field data

Figure 03: Public value and level of e-Government of the websites



Source: Field data

According to the comparison of the percentage values of the e-Government level and public value of the websites, the study indicated that a higher e-Government level, and a higher public value in Sri Lankan government websites. Thus, it could be argued that when the level of e-Government is high, the level of public value also represents a higher level.

According to the analysis, the study identified the level of public value and level of e-Government services in the Sri Lankan government websites. The UN-ASPA model analysis revealed that all ten websites have performed well in e-Government development due to the nine websites having scored at least 20 marks or above and only one website scoring 19 marks out of 25. According to the level of public value of the websites, all the selected websites have a higher-level of public value to a moderate level public value and no institute bears a value of low or a very low-level.

public value. Thus, it could be concluded that a higher level of e-Government of the selected websites could generate a higher level of public value.

4.4. Problems and Issues of the Selected Websites

According to the UN-ASPA Model e-Government development stages, Ministry of Education, Ministry of Higher Education, Department of Registration, Department of Immigration and Emigration, Department of Motor Traffic, Department of Census and Statistics, and Department of Labor websites have fully completed only the stage one and two. Some of the features are not completed in other stages. Accordingly, the website has no interactive elements like chatroom / forum / discussion board (under the stage three), no on-line payment methods (under stage four), the frontline services are not fully transactional online, and the user may not be able to customize the ministry website (under stage five). Therefore, the website is lacking Interactive Web Presence, Transactional Web Presence and Fully Integrated Web Presence in e-Government development.

University Grants Commission and Department of Examination websites have fully completed its development stage one, two and four. Some features are not completed in the third and fifth stages. Accordingly, the website has no interactive elements like chatroom / forum / discussion board (under the stage three), the frontline services are not fully transactional online, and the user may not be able to customize the commission website (under stage five). Therefore, the website is lacking Interactive Web Presence and Fully Integrated Web Presence in the e- Government development.

Central Bank website has totally completed stage one, two, three, and four while some of the few features have not been completed in stage five. Accordingly, the frontline services are not fully transactional online, and the user may not be able to customize the commission website (under stage five). Therefore, this website is lacking only a Fully Integrated Web Presence in the e-Government development.

4.5. Discussion

The study revealed that the selected ten websites have a satisfactory level of public values and e-Government level in Sri Lanka. All the selected websites' public value level ranges from high level to moderate level and majority of the respondents ranked Sri Lankan government websites to have a high-level public value. Accordingly, the study found that the Sri Lankan government websites have a higher public value level and a higher e- Government level.

Similarly, previous scholars have revealed that the prime objective of e-Government is to provide public value (Yu, 2008). In Sri Lanka, the level of citizens' satisfaction on the available e-Government services is very high (Karunasena & Deng, 2011).

Although the availability of e-services and the level of information provided to the citizens are inadequate, nearly 70% citizens are satisfied with services offered (ICTA, 2008 as cited in Karunasena & Deng, 2011). Majority of the respondents are satisfied with the government effort on the delivery of public services through e- Government in Sri Lanka (Karunasena et al., 2011b; Karunasena et al., 2015;Karunasena & Deng, 2012). The public value of e-Government has a direct impact on the behavioral adoption of e-Government services (Mensah et al., 2022). The relationship between public value and e-Government has been vividly discussed by many scholars (Bouaziz, 2020; Chohan et al., 2020 as cited in Mensah et al., 2022). The supply of public services via e-Government services has been greatly boosted by the growing usage of ICTs by organizations (Kumar et al., 2020). The creation of public value is highly dependent on the level of quality of a service delivered by a public organization (Omar et al., 2011).

5. Conclusion and Recommendations

5.1. Recommendations

The study proposes the following recommendations to increase the level of public value and e-Government of the country. Recommendations to increase the level of the e-Government of the country are as follows:

1. Improve interactive web presence of the e-Government websites.

Majority of the websites does not have interactive elements such as chatroom / forum /discussion board and user log-in and password for internal or public users.It is essential to develop interaction between customer and the organization for providing the service. Therefore, the websites should establish some kind of interactive communication elements between the customer and the organization which gives quick response such as chat rooms, forums, and discussion boards. Furthermore, there should be user login at least for internal users such as staff to access the data and information individually.

2. Improve transactional web presence of the e-Government websites.

Majority of the websites lack public user log-in/ password and on-line payment methods. Today online transactions are essential for a best customer service. Therefore, the websites should facilitate public user logins to provide access to the data and information personally. Furthermore, it is very important of provide online payment methods directly with the website instead of bank payment or post office payments which is currently practicing in majority of the Sri Lankan government organizations.

3. Improve fully integrated web presence.

All of the selected websites' frontline services are not fully transactional online, and the users cannot customize the website portal page. If the government expects to provide services through websites, then all the services should be provided via online, and the users should have the ability to use the website customized as per their requirement and convenience. Therefore, websites of the Sri Lankan government should facilitate and provide all the services virtually through thewebsites and the user should have the ability to customize website access and get their services directly from their own login while maintaining a continuous linkwith the website.

Recommendations for enhancing the level of public value of the government websites are presented in the below.

To increase the public value of government websites, major three components which are service delivery, desirable outcomes and the trust of the websites should be strengthened. Accordingly, the websites should be developed with an efficient service delivery process, which delivers desirable outcomes to the citizens, while ensuring the trust of the citizens.

Accordingly, the websites should be developed to perform as a platform of efficient public service delivery of the country. That efficiency should be catered with the performance of the websites. Therefore, the websites should be developed to respond to the users' request on time and the websites should provide up to date and relevant information as per the request of the users.

Furthermore, the websites should deliver the desirable outcomes to the users who are the citizens of the country. Accordingly, the service delivery process should facilitate to fulfill users' desired needs and to satisfy the end users' while reducing corruption through the service delivery via online platforms.

Hence, the websites should enhance the trustworthiness of the users. Accordingly, the website should provide accurate and valid information, and the information should be reliable and trustworthy for the users, the website should ensure the confidentiality of the users.

As per the suggested recommendations, the level of e-government and public value of government websites could be further enhanced.

5.2. Conclusion

The study was conducted to examine the level of e-Government and public value of the government websites in Sri Lanka based on ten selected government websites. The study used the quantitative research method, scoring methods with descriptive data analysis. E-Government level of the websites was identified according to the

UN-ASPA model criteria. Public value of the government websites was examined by descriptively and analyzed the data collected among a purposively selected sample from management undergraduates of the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Sri Lanka.

According to the UN-ASPA model analysis, the study identified that all the selected ten websites maintained a higher level of e-Government (nine websites having scored at least 20 marks or above and only one website scoring 19 marks). Among the ten websites, the highest scored e-Government website was the Central Bank. The next scored websites are respectively: University Grants Commission, Department of Examinations, Department of Immigration and Emigration, Ministry of Education, Ministry of Higher Education, Department of Census and Statistics, Department of Labor, Department of Motor Traffic. The least scored website is Department of Registration of Persons. Accordingly, all ten websites have been performed well in e-Government services.

According to the public value of the selected websites, the Ministry of Education has been identified as the highest public value website in Sri Lanka. Among the other websites, the highest to lowest public value of the websites have been identified as, Central Bank, Department of Examination, Department of Census and Statistics, University Grants Commission, Department of Immigration and Emigration, Department of Registration of Persons, Department of Labour, Ministryof Higher Education. Accordingly, the selected websites public value level ranges from high level public value to moderate level public value. Finally, the study revealed that the government websites in Sri Lanka indicates a higher public value and a higher level of e-Government. This study contributes to the existing body of knowledge on e-Government and describes the e-Government and public value interaction to each other, when the level e-Government involvement is higher the public value of the service delivery also reaches a higher level.

6. Limitations and Further Research

The study was conducted with a smaller sample and the analysis was conducted with descriptive statistics. Therefore, the relationship with the public value and e-Government level cannot be determined and the generalizability of the findings of the study are very limited. Accordingly, the study proposes to conduct future research with a larger sample representing a wider context and inferential statistics to confirm the causal relationship with the public value and e-Government level and to increase the generalizability of the findings.

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