USER'S PERSPECTIVE OF E-GOVERNMENT PRACTICES IN NIGERIA'S IMMIGRATION SERVICE

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ABSTRACT

This study investigated user's adoption and perception of impact of e-government services in the Nigerian immigration service. The research adopted survey method and employed a multi-stage sampling technique to select 280 users of the Agency's Southwestern regional offices. The data collected were analysed using both descriptive and inferential statistical techniques. The result showed that a good proportion of the respondents indicated that they mostly use the platform for passport application (88.5%), passport renewal (73.2%) and for related enquiries (51.7%). The result further revealed that the use of the e-platform resulted in reduction in waiting time, increased efficiency, and reduction in transportation costs among others. The study recommends the creation of more awareness to further increase the rate of adoption as well as improved quality of services provided. In addition, further improvement is required in order to enhance the e-government platforms to militate the bottlenecks of partial online processing of passports.

Keywords: usability, web-technology, Internet, services, e-government, resources,

1.0. INTRODUCTION

The growth of the Internet has revolutionised our activities and way of life (Awoleye *et al*., 2014). Its advent has disrupted innovatively the way citizens interact and communicate with the government. Efforts have been made whereby services have been created electronically to ease the process of communication, other than the traditional means (Dodd, 2000). The rate of Internet penetration as well as the adoption of the mobile telephone is unprecedented. The Internet has disrupted government activities thereby bringing innovativeness and development to service delivery (Gil-Garcia, Helbbig and Ojo, 2014). The adoption of the Internet has affected not only the way people communicate with one another, it has also affected positively the rate at which businesses connect to other businesses (B2B) and their customers (B2C) (Putra and Santoso, 2020; Bharosa *et al., 2013*). This has also assisted governments to have bi-directional communication with their citizens (G2C) (Awoleye, 2008). For instance, businesses now leverage the use of the Internet to sell their goods and services and to reach more customers without any need for physical presence. In a study conducted by Al-Rajehi (2007), it was found that the benefits derived from the use of ICTs, especially the Internet has put pressure on the public sector to facilitate their services using electronics means.

There are many ways by which Governments all over the World are introducing e-government platforms into their public sector activities. It has been noted that the drivers of these innovations in government processes are cost reduction, quality service delivery, increased effectiveness and efficiency at all levels of government. For example, in the United Nation's report, it was reported that out of the 192 UN members, 179 have reported the implementation of e-government systems. To this extent, e-government has been identified as one of the top

priorities for governments across the nations of the world (UN, 2008). In the same vein, in some developed countries, specifically in the United States of America, the Internal Revenue Service (IRS) was noted to have assisted in saving costs, which could have been expended on sorting, printing, and mailing tax materials. These services have been redirected online by providing access to taxpayers via web platforms to submit documentations for tax returns and publications. Among many benefits associated with e-government services, extant literature has also reported that online services are cheaper, reliable, more readily available and faster than the traditional methods of handling such services. Other authors documented that e-government implementation has also reduced travel, waiting time and facilitated efficient payment methods (Abanumy *et al.,* 2003). Despite some of the successes recorded, e-government activities, especially on the demand side, is still lagging, when compared with what is available on the side of the providers (supply side). In addition to other benefits of implementing e-government services, it is also important to reiterate the place of removing barriers to government services, especially where bureaucracies are major bottlenecks in accessing required services by the citizens. It has also been reported as a great asset to tackling social exclusion (Praeg and Spath, 2011). In the Nigerian context, the Implementation of e-government has begun in Nigeria and its implementations have been low and hence its impacts have not been felt (Yusuf, 2006).

The low implementation of e-government is evident from the United Nations report which stipulates that Nigeria e-government index was 0.44 (141st position of 193) behind other counterparts such as Mauritius (0.72, 63rd position), Seychelles (0.69), South Africa (0.69), Tunisia (0.65) and Ghana (0.59). This is well documented in the United Nations Global E-government Development Index (EGDI) for 2020 (UN, 2020). Scholarly articles have enumerated e-government services, challenges and its implementation. For example, Omeire and Omeire (2014) in their study explored low ICT literacy rate, poor ICT infrastructure and corruption among others as the major constraints surrounding e-government implementation. Fatile (2012) highlighted the myth and opportunities for deploying e-government by the Nigerian public administration. The sustainability of any system should be the main concern of policy makers, especially as it relates to developing an e-government system of this nature. The role played by trained and skilled personnel in this instance should not be under-estimated; this is as reiterated by Abasilim and Edet (2015). The research highlighted some other associated challenges that could militate successful deployment of e-government services. These are; high costs associated with the procurement and training of personnel with relevant ICT skills and, lack of government regulatory policy among others. The adoption of E-government services can foster cost cutting and increased productivity of government agencies worldwide. However, despite these studies, there is a dearth of information and empirical evidence on the adoption of e-government services in the context of Nigeria immigration service (NIS), especially as it relates to feedback from the users. To this end, this research seeks to examine the extent and level of e-government services adoption in the NIS. It also aims to determine the impact of e-government services adoption on users in the study area.

2.   Literature Review
2.1   *The concepts of e-government*
There is no universally accepted definition for e-government. Many authors have defined it differently based on their interests. The World Bank (2010) for example, expressed the concept of e-government as the use of Information Technologies to transform relationships with citizens, businesses, and other arms of the government. The Information Technologies referred

to here are Wide Area Networks, the Internet, and any form of mobile computing used as tools to transform the way of life of the people. Janssen (2007) reported that e-government is the computerization of public sector services by following a pattern to make them suitable for providing services to facilitate good governance to the people by using support technologies as an instrument of delivery. Since technology offers additional tools and options, more is expected from government not only in what it delivers but also in the way in which this is delivered as well as the appropriateness of its delivery (Gil-Garcia *et al.*, 2014). In the same vein, Almarabeh and Abu (2010) added that the integration of Intranets, mobile computing and the Internet has significant roles in organising public services and relative communication with their business counterparts (Goldkuhl and Rostlinger, 2010). Traditionally, manual approaches have been used by most governments to manage their businesses but this has been grossly marred by bottlenecks.

There has been a paradigm shift in the world where governments and other independent policy and law makers come to realize the significance of using e-government as a strong tool for receptive governance (Mehrtens *et al.*, 2001). Hung *et al.,* (2006) and Janssen (2007) opined that e-government services are widely utilized in the public sector to enhance service quality in the form of tax filings and identity management, which includes the issue and renewal of identity cards, passports and driving licenses. It also provides effective services in passport making, the filling and submission of job application forms, producing birth certificates, marriage licensing, admission to higher education and registering voters among other services (Hung *et al.,* 2007). In e-government activities, citizens do participate in decision-making, thereby leading to inclusive government and eradicating enormous bureaucratic procedures that set barriers to citizens from accessing available government information (Coleman, 2006). Not only do adoption of E-Government resulted in huge cost savings but it has also reduced citizens' costs as well (Bharosa *et al.*, 2013). It has also attempted to reduce and enhance transparency and limit corrupt activities in public service delivery. In the just concluded corruption perception Index of Transparency International, Nigeria's index has reportedly dropped to an all-time low[1].

2.2   *The trajectory of E-government services in Nigeria.*
The explosion of the development of the Internet in Nigeria began by the liberalization of the sector in 2001 (Awoleye, 2008). Literature reveals that prior to this time telecommunication subscription in Nigeria was poor. Less than 500,000 telephone lines were connected in 2001 and teledensity was less than 0.1%. This has now reached a mark of over 196 million subscribers, and teledensity of 103% as at June 2020 (NCC, 2020). From 2001, the Nigerian government has taken noticeable steps to put the country on track in the area of ICT development and utilization especially in governance (Asogwa, 2012). The government thus put the National Information Technology policy together in 2000 with the aim of improving Governance in Nigeria. This was part of the efforts put in place to improve public service delivery, ensure transparency, make government accessible, and ensure information dissemination to the public (Omeire and Omeire, 2014).

2.3   *Theoretical Review*
The theoretical framework for this study was based on literature on the adoption of e-government. The adoption constructs for e-government services must be thoroughly known

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[1] https://www.transparency.org/en/cpi/2020/index/nga

before any model for adoption is developed. Many researchers have made it a goal to investigate the initiatives that promote the adoption of e-government services in different environments. Adoption of technologies have been noted to differ from developed countries to emerging economies and developing countries. In the same vein, adoption of technologies in different environments were reported to have exhibited different characteristics and taken different patterns of adoption, especially in the domain of e-government adoption by citizens. Nevertheless, it is worth mentioning that certain environments have unique characteristics that may either threaten or assist the adoption of e-government services. This paper thus employed the technology acceptance model (TAM) to investigate the characteristics of e-government adoption in developing countries like Nigeria.

2.3.1 *Technology acceptance model (TAM)*

TAM is a pre-eminent theory of technology acceptance in Information Systems (IS) research. This theory has been used extensively in information systems literature. Empirical studies have shown that TAM is a robust model of technology acceptance behaviour in a wide variety of areas of IS across many facets and countries (Gefen, 2002; Taylor and Todd 1995). Figure 1 hypothesises that the acceptance of any technology by any person is determined by his/her voluntarily intentions to use that technology. In the same vein, the intention in turn, is also determined by two beliefs which are majorly; (i) the perceived usefulness (PU) of the new IT and (ii) the perceived ease of use (PEU) of the new system. PU is described as the user's "subjective probability that using a specific application system will increase user performance in an organizational context". PEU on the other hand is "the degree to which the user expects the target system to be free of efforts" (Davis, 1989). It thus means that PU has some influence on PEU. It was shown in Straub *et al.* (1997) that paths predicted by TAM apply also to e-government systems. Thus, when the usability of an e-government environment (platform) is excellent and it enables the citizens to accomplish their tasks with ease, then the system has the tendency to be used more. The perceived usefulness and ease of use of e-services have demonstrated the effective evaluation of e-governance online services by citizens (Smith, 2011). The extent to which a potential customer expects e-service solutions to be easy to use is referred to as perceived ease of use. With the utilization of e-services by citizens, the perceived ease of use and usefulness of the TAM is considered significant in measuring e-service quality (Cellary and Estevez, 2010). The adoption of online services has not only been sources of information but also for communicating with the government.
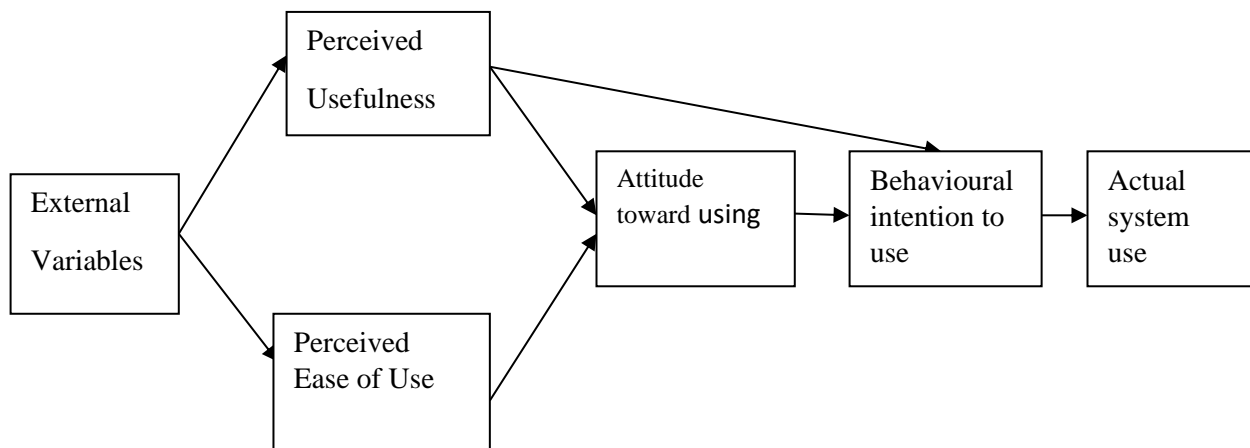
Figure 1   Technology Acceptance Model (Davis, Bagozzi and Warshaw, 1989)

3.2   *Sample size and sampling technique*

The target population consists of users of services of the agency in the study area. A set of questionnaire was designed and administered. The questionnaire was administered to One hundred and twenty (120) users from Lagos, and eighty (80) each from Oyo and Osun States. Multi-stage sampling technique was adopted for this study. The first stage was purposive selection of the Southwestern region among the six geo-political zones in Nigeria. The second stage was the purposive selection of three states, namely Lagos, Oyo and Osun States. The third stage was purposive sampling of State command offices.

3.3   *Research instruments*

The research instruments employed for this study comprised primary data sources. Primary data were collected through questionnaire and personal observations. Information on the socio-demographic characteristics of the users such as level of education, age, and employment status among others was solicited for in the first section of the questionnaire. The second section solicited for Information on the adoption and extent of use of the e-government resources as provided by the immigration office. The third section elicited information on the impact of the web resources provided.

3.4   *Data collection*

The targeted respondents were the users of the immigration services that came to the Agency's offices during the data collection exercise. Two hundred and eighty (280) copies of the questionnaire were administered to the users selected for this study.

3.5   *Study variables and measures*

This section was guided by the socio-demographic characteristics of the respondents as well as the objectives of the study. These are the extent of use and impact of the resources as it relates to its adoption.

3.5.1   Socio-demographic variables and some related variables

A few socio-demographic variables as well as the measures employed in this work among others are: Gender, where 1 - represented the male gender and 2 - represented the female gender. Age of the respondents was measured in categories where 1-represented 16-20 years of age group; 2- represented 21-30 years, 3 – represented 31-40 years, and 4 – represented 41 years and above age bracket. Marital status of the respondents was measured using nominal variable from 1 to 3, where 1 represented single status, 2- represented married and 3-represented widowed. The level of education was captured using ordinal scale from 1 to 6, where 1- represented Primary school level of education, 2- represented secondary school, 3-represented ND/NCE holders, 4- represented B.Sc./HND degree holders, 5 - represented M.Sc. and 6 - represented Ph.D. degree holders. Employment status was measured using nominal variables from 1 to 6, where 1- represented Government employees, 2- represented private employees, 3 - represented self-employed persons, 4 - represented unemployed individuals, 5 - represents retired users and 6 - represented students.

Others are: the location of the respondents which was measured using nominal variables from 1 to 3, where 1 - represented Osun state, 2 - Oyo state and 3 - Lagos state. Types of services rendered by immigration agency were measured using nominal variables from 1 to 4, where 1-represented visa application, 2- passport application, 3- represented passport renewal and 4 – represented information enquiry. Frequency of use the resources was captured by the Internet use and these were measured using nominal scale, where 1- represented quarterly, 2 represented monthly, 3 represented weekly and 4 represented daily. The frequency of the e-government services twas coded by five item-code, where 1 represented-once in a month, 2 represented, a few times a month, 3 represented a few times a week, 4 represented about once a day and 5 represented several times a day.

3.5.2.   Extent and level of adoption of e-government services in immigration agency

E-government services used through the NIS website were measured using nominal variable from 1 to 4, where 1 - represented visa processing, 2 - represented passport application, 3 - represented passport renewal and 4 - represented information enquiries. The ease of use was captured using the variable -NIS website easy to use was measured using dichotomous variable where 1 = Yes and 2 = No. Accessing the uploaded information, files or forms was measured using nominal variable from 1 to 3, where 1 - represented easily accessible, 2 represented not easily accessible and 3- represented fairly accessible. Website user friendly was measured using nominal variable where 1 = Yes and 2 = No. Intention to use e-government services was measured using nominal variable from 1 to 4, where 1 – represented regular basis, 2 – represented continue in future, 3 – represented Quality of previous transaction and 4 – represented others.

3.5.3   Impact of e-government services

This was measured using mean and standard deviation on the following Likert Scale where *5 = Strongly Agree, 4 = Agree, 3 = Disagree, 2 = Strongly Disagree, and 1= Uncertain.* The items measured are: *r*educe processing time, increased efficiency, improved service delivery, accessibility of service, more accomplishment, reduced travelling expenses, reduced queuing time, transaction conduct out of normal working hours, effectiveness in passport processing, and improved information.

3.6   Data Analysis

The method of data analysis that was used in the study includes descriptive statistics such as frequency, percentages, mean rank, and the inferential statistics used were ANOVA, Correlation and Ordinary linear Regression. An alpha level of 0.05 was chosen as the level of significance, which was 95% confidence interval. The data was analyzed using Statistical Package for Social Sciences (SPSS) software. ANOVA and Duncan multiple range test were used to determine the differences in the means of the results from different locations in the study area and also to separate means for the variables that were used to examine the impact of e-government services in Nigeria immigration service.

4.   **Results and Discussion**

This section presents the results and discussion of the research. The administration of the questionnaire instrument is first presented. This is then followed by discussion of socio-economic characteristics of the users of NIS. The adoption of the services by the users as well as the impact it has on the users were also discussed.

4.1   **Adoption of E-government Services**

This section presents the extent and levels of adoption of e-government services as experienced by the users.

4.1.1   Response to questionnaire administration by users of NIS

Table 1 shows the distribution of questionnaire to users of the web portal of the NIS. From a total of 280 copies of questionnaire administered, one hundred and twenty (120) copies were distributed in Lagos State, and eighty (80) each to Oyo and Osun States. Out of the two hundred and eighty (280) copies of questionnaire administered, two hundred and nine (209) were duly completed and retrieved for the analysis used in this research. This represents an average return rate of 74.5%. The return rate in Oyo State seems to be the highest (83.8%), followed by Lagos State (75%) and Osun State (65%). We could not ascertain while the return rate followed this pattern, but it is very likely that this may be somehow connected to the population of the cities where the immigration offices were sited. The NIS office in Oyo state is located in Ibadan, and the City is the third largest in Nigeria after Lagos and Kano. It could also be related to the centrality of the cities and its access to other neighbouring cities where the NIS covers.

Table 1.   Distribution of Respondents by Location for Users of Nigeria Immigration Service Website

Location	Questionnaire distributed	Questionnaire returned	Return rate (%)
Lagos	120	90	75.0
Oyo	80	67	83.8
Osun	80	52	65.0
Total	280	209	74.6

4.1.2   Socio-economic characteristics of users of NISs

Table 2 shows that the highest proportion (59.1%) of respondents were in the 31-40 years of age category. About 21% of the users were in the 21-30 years of age group, while those 41 years and above were just about 12%. Summing this together, it then implies that majority of the people that require the immigration services are those in their active years. Although a paltry 8.2% of the users are between 16 – 21 years of age. This finding is in agreement with the result of Chatzoglou *et al.* (2015) in their research on "factors affecting the intention to use e-government services" which reported that the average users of e-government services are

under 40 years of age. On the gender of the users, the table reveals that 67.9% of the respondents were male and 32.1% of them were female. This is about a ratio of 3:1, where male respondents dominated the sample against their female counterparts. Table 2 further showed that 61.7% of the users of NIS were single, and 32.5% were married.

Further, on the status of the users Table 2 shows their employment status. This reveals that majority (57.2%) of the users were students, and the rest are government employees (13.9%), private institution workers (8.7%), self-employed individuals (6.7%), retirees (5.3%) and unemployed persons (8.2%). Having students as the highest proportion of users who patronise the immigration services, may imply brain drain of this group of users to diaspora. It is also noteworthy to state that Table 2 also reveals the educational background of the respondents. It was noted that 58.0% had HND/B.Sc., while 11.6% and 10.6% had M.Sc. and Ph.D. respectively. In addition, 11.1% had National diploma or NCE, while 7.2% had secondary school certificate and a paltry of 1.4% had primary school certificate. With this level of education of the users of NIS, which shows obviously that vast majority had post-secondary education, may suggest that a good number of them may be using the services with the purpose of furthering their education abroad or possibly for vacation. This is also in tandem with Chatzoglou *et al.* (2015), Nasri and Abbas (2015) whose findings support the result that users of e-government services are well educated.

Lastly, the research also investigated the income level of the users. Table 2 reveals that majority (62.6%) were from low- household income level, while 20.6% and 16.8% of the users were from medium- and high household -income levels respectively. This may mean that more people could have patronised the services of the immigration service if they had the finance to sponsor the passport applications and related processes.

4.1.3   *Type of Nigeria immigration services used*
Table 3 captures the use of Nigeria Immigration system website by users. The table indicated that passport application (88.5%) was the mostly engaged service by the users. This is followed by passport renewal (73.2%), while 51.7% of the respondents indicated that they used the portal mainly to seek for information and enquiries. None of the respondents indicated visa processing as part of services they used on the NIS web portal. The NIS web portal is so seamless to the extent that a prospective passport applicant may wish to initiate and complete the required application form online. This also includes application for renewal. Payment for relevant services on the portal is enabled via Interswitch. This provides a platform where card payments using visa and MasterCard and others are allowed. After the form is duly completed, the applicants have to appear at any NIS office for data capturing to complete the application process. This process is usually completed within one business day.

4.1.4   *Frequency of use of Immigration services*
The experience of the respondents in the use of the Internet is a useful factor which can be used to measure how best they can maximise the use of the e-government resources provided by the NIS. The research noted that about 84.2% of the respondents reported that they use the Internet daily, while others (5.2%) reported that they use it weekly, 7.2% reported they used the service monthly and while 2.5% indicated quarterly use. It may be surprising that the result follows this pattern, much more at this time that efforts are being made to fully eliminate the digital divide across the globe. This depicts that the case of developing countries like Nigeria that are still lagging behind is peculiar.

Table 2. Socio-economic Characteristics of Users of NIS

Parameters		Frequency	Percentage (%)
Age	16-20	17	8.2
	21-30	43	20.7
	31-40	123	59.1
	41 and above	25	12.0
Gender	Male	142	67.9
	Female	67	32.1
Marital status	Single	129	61.7
	Married	68	32.5
	Widowed	12	5.7
Religion	Christianity	135	67.5
	Islam	59	29.5
	Traditional	6	3.0
Educational qualifications	Primary school	3	1.4
	Secondary school	15	7.2
	NDNCE	23	11.1
	HND/B.Sc	120	58.0
	M.Sc	24	11.6
	Ph.D	22	10.6
Employment status	Government	29	13.9
	Private Institutions	18	8.7
	Self-employed	14	6.7
	Unemployed	17	8.2
	Retiree	11	5.3
	Student	119	57.2
Household income level	Low	97	62.6
	Medium	32	20.6
	High	26	16.8

Table 3.   Type of Nigeria immigration services engaged by users

Parameters		Frequency	Percentage (%)
Type of services used	Visa processing	0	0
	Passport application	185	88.5
	Passport renewal	153	73.2
	Information enquiries	108	51.7

A number of factors could be responsible for this, one of which could be the cost of acquiring data for Internet surfing. This may have grossly contributed to their inability to surf the internet on a daily basis, especially for this category of users. Despite the fact that the cost of living in Nigeria is on the increase and unemployment has remained in double digits, the cost of communication is also directly proportional to this. Furthermore, Table 4 further gives additional information relative to e-government services. This shows that the users barely made used of the services as majority (92.3%) reported that they use NIS web portal only about once in a month. In addition, about 4% of the respondents reportedly use it a few times a month and

2.9% used it a few times in a week. This could be attributed to lack of awareness of the existence of NIS website and probably due to difficulty in making use of the platform. Since ease of use of a given technology and its usability is dependent on the flexibility and friendliness of the platform as well as the expertise or experience of the users. The result of the study is in line with the findings of Nasri and Abbas (2015) on "Determinants Influencing Citizens' Intention to Use E-Government in the State of Kuwait: Application of UTAUT" which showed that quite a large proportion used e-government services about once a month and majority used the Internet on a daily basis.

Table 4.   Frequency of use of immigration services

Parameters		Frequency	Percentage %
Internet	Quarterly	7	2.4
	Monthly	15	7.2
	Weekly	11	5.2
	Daily	176	84.2
E-govt srvices	Once in a month	193	92.3
	A few times a month	8	3.9
	A few times a week	6	2.9
	About once a day	2	0.9
	Several times a day	-	-

4.1.5   *Level of adoption of e-Government Services*
Table 5 reveals the level of adoption of e-government services by users. About 45.8% of the users are said to be aware of NIS websites, while 54.2% are not. The table also shows that 55.6% of the users are interested in using the services, while 44.4% are not. About 35.7% were noted to have evaluated the NIS website while 55.7% of the users reiterated that they have tried to use it. Table 5 reveals that 46.3% of the users make use of NIS website for their passport application, passport renewal or for information enquiries.

Table 5.   Level of adoption of e-government services

Level of adoption	Yes	No
Awareness	92 (45.8%)	109 (54.2%)
Interested	113 (55.6%)	91 (44.4%)
Evaluated	72 (35.7%)	130 (64.3%)
Trial	116 (55.7%)	93 (44.3%)
Adopted	94 (46.3%)	105 (53.7%)

4.2   *Impact of E-government Services*
It is expedient that when technologies are adopted, the users are likely to derive some benefits from its use. The extent of this may differ from person to person and could be dependent on some other associated factors, which makes it heterogeneous. It is in this regard that the following are discussed to elicit the impact of the Immigration services on the users as provided by the agency.

4.2.1 *Level of agreement of users on the effect of Immigration services*

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Table 6 revealed the impact of e-government services in NIS. The table shows that the respondents agreed that improved service delivery (Mean=4.34, SD=0.907) had the most impact, which means the users were satisfied and that their expectations were met regarding the e-government resources provided by the immigration office. The respondents also reported reduction in processing time (Mean=4.33, SD=1.026), as one of the main motivations they derived from using the Immigration web platform. Table 6 further shows that the respondents agreed that reduction in travelling expenses (Mean=4.33, SD=0.948) was also part of the benefits they derived from the adoption of the technology. Eliminating traveling expenses from the cost of acquiring a travel passport is a big benefit which cannot be overrated, especially among all classes of citizens. This may appear to low-class citizens as cost saving, while the high-class may value risk of travelling as a major hurdle eliminated. Much more now that insecurity is on the increase in the Nigeria as a result of the tensed political climate at this time.

Others indicated and agreed with the fact that waiting time (Mean=4.31, SD=0.957) is drastically reduced compared to the time before the advent of the online presence. One of the main benefits of e-government resources is its ability to be available at anytime and anywhere to the users (Awoleye *et al*., 2008). This could also obviously permit the users to initiate their passport application processes from the comfort of their homes. The respondent thus rated (Mean=4.07, SD=0.882) this as great impact on their use of the e-government resources of the Immigration agency of the Federal Government of Nigeria.

Table 6. **Impact of e-government services in NIS**

Impact	Mean	SD
Reduce processing time	4.33	1.03
Increased efficiency	4.25	0.93
Improved service delivery	4.34	0.91
Accessible at anytime	4.07	0.88
More accomplishment	4.04	1.03
Reduced travelling expenses	4.33	0.95
Reduced queue time	4.31	0.96
Transaction conduct out of normal work hours	4.12	0.98
Effectiveness in processing of passport	4.19	0.10
Improved information	4.24	0.85

5 = Strongly Agree, 4 = Agree, 3 = Disagree, 2 = Strongly Disagree, 1= Uncertain

4.2.2 Comparative analysis of the **impact of e-government services across selected states**

Table 7 shows the analysis of variance (ANOVA) and Duncan multiple range analysis as a post-hoc test to delineate if there exist differences in the means of the impact of factors that influenced the respondents' adoption of the e-government services across the selected states. In the first instance, respondents in both Oyo and Osun states agreed that 'processing time' (4.11, 4.05) as well as 'increased efficiency' (4.22, 4.04) respectively are the major impacts motivating them to use the e-government services provided by the immigration office. This was found to be significant at $\rho < 0.05$. In the same vein, the situation in Lagos regarding this as well took a stronger dimension as the respondents strongly agreed that reduction in processing time as well as increased efficiency were quite motivating. These differences that singled the responses in Lagos out could be because it is a commercially tensed environment, where everyone is running for time to make more money. This corroborates the saying that

'Time is money' since they relatively may have more bills to pay, they may tend to opt for activities that will save their time (Feldman, 2010).

Table 7 also reveals that respondents across the selected states have slightly different dispositions to the fact that influenced their use of e-government services. In furtherance to this, respondents in all the states sampled which include Oyo (4.00), Osun (4.30) and Lagos (3.97) agreed that the accessibility of the services at any time is their utmost concern. Although, the mean is significantly different in both Oyo and Osun but not in Lagos at $p < 0.05$. Moreover, on the ground of reduction of travelling expenses, the respondents across the states agreed that this has great impact on their experiences of the use of e-government services. This seems to be statistically significant for Osun state at $p < 0.1$ but not for Oyo and Lagos state. The fact that both Oyo and Lagos states are more industrialised than Osun state may have influenced the level of finances of the workforce in the states, which perhaps may have strengthened their finances more than their Osun State counterparts. The respondents across the states also agreed that 'effectiveness in passport processing' and 'improved information' available; are key motivations for their use of the immigration online services. Although this is only significant for improved information but not for the former at $p < 0.05$ with the exception of Oyo and Lagos states. The effectiveness of the passport processing and information gathering on the web portal of the Immigration agency may be traced to its usability (Thuring and Mahike, 2007). This means the adoption of technology is dependent on its usability, which corroborates what Davis *et al.* (1989) summarised in TAM. This is also in tandem with what Bharosa *et al.* (2013) presented in their study, which positioned the place of information exchange between business to government (B2G) as the next frontier for reducing government spending.

Table 7.   Post-hoc Analysis of e-government Impact on Users of Immigration Services

Factors	Oyo	Osun	Lagos	F	*p*
• **Reduce process time**	4.11[a]	4.22[a]	4.51[b]	3.119	0.046
• **Increased efficiency**	4.05[a]	4.04[a]	4.56[b]	8.110	0.000
• **Improved service delivery**	4.48[a]	4.14[a]	4.38[a]	1.939	0.147
• **Accessible at anytime**	4.00[a]	4.30[b]	3.97[a]	2.621	0.075
• **More accomplishment**	4.36[b]	3.48[a]	4.15[b]	12.401	0.000
• **Reduced travelling expenses**	4.18[b]	3.80[a]	4.16[b]	2.915	0.057
• **Reduced queue time**	4.23[a]	4.06[a]	4.09[a]	.521	0.595
• **Transaction conduct out of normal work hours**	4.37[a]	4.28[a]	4.40[a]	.271	0.763
• **Effectiveness in processing of passport**	4.23[a]	4.34[a]	4.54[a]	2.012	0.136
• **Improved information**	4.23[b]	3.88[a]	4.41[b]	6.200	0.002

5 = Strongly Agree, 4 = Agree, 3 = Disagree, 2 = Strongly Disagree, 1= Uncertain

Mean with different alphabets are significantly different at p < 0.05)

5.   Summary, conclusion and recommendations
5.1   *Summary*

This study assessed the adoption of e-government services in the immigration agency in Southwestern Nigeria with a view to investigating the extent of its adoption and the impacts it has on the users. The study was carried out using both primary and secondary data sources. The study covered Oyo, Osun and Lagos states. It was carried out in the State's command offices. A multistage sampling technique was used to select a total of 290 respondents. Primary data were collected through structured questionnaire administered to users in the selected study area. The result showed that most of the respondents in area of study were below 40 years of age and they had post-secondary qualification out of which 58.0% had university educational background. A good proportion (88.5%) of the users adopted the use of the NIS website for passport application, passport renewal (73.2%) and information enquiries (51.7%). On the impact of e-government services adoption in NIS, the result shows that reduced processing time, increased efficiency, improved information had more impact among other variables considered. In addition, comparative analysis of the means differences across the selected states shows that processing time and increased efficiency were noted to have a positive disposition in its favour across the selected states. Although the respondents in Lagos state rated this as more important than their counterparts in other states sampled. This research speculates that this may be due to the frequent occurrence of heavy traffic in the State. Thus, users from the State may resort more to online passport applications. Among other impact factors that have influenced the use of the e-government resources was as a result of effectiveness in passport processing, improved information gathering with exceptions from Oyo and Lagos states. The research thus postulates that the effectiveness of the immigration agency portal may be dependent on its usability, which is a cardinal argument of Davis *et. al* (1989) TAM.

5.2   Conclusions

The objective of the study was to provide information on the adoption of e-government services in the domain of Nigerian immigration agency by users in Southwestern Nigeria. The study concluded that quite a large proportion of respondents were not aware of E-government services, while those who made use of the resources did so for passport application and renewal processes. It was reiterated that the users had been doing this successfully with ease without any form of barrier in achieving their purpose on the e-government platform provided. This summarises the usability and the ease of use of the technology as provided by the government. Among other drivers for the successful adoption of the e-government resources was noted to be more of trust, perceived usefulness, cost, time saving, and quality of service delivery.

5.3   Recommendations

Based on the findings of this study, it is expedient that the government create more awareness for the citizens and most especially the educated class who may wish to take advantage of the digital services provided by the immigration agency. There is a need to enhance the passport processing procedure, which requires the applicant to be present physically at the immigration office for the purpose of biometrics and passport photo capturing. In addition, 'drop box' option could be integrated to enable those who only need to renew their passports, without having to pass through all the processing all over again. This is possible when the agency maintains a reliable data center for this purpose. However, this study is limited by time and funds. Nonetheless, further researches could replicate this study by employing larger datasets among users of web-technologies and their motivations for adopting a web-technology most especially as it relates to e-governance. In addition, the concerns reported as it relates to total time spent to complete their passport application should be examined. The relationship to finance could also be examined, especially in the context of people living in commercially tensed environments like Lagos and Ibadan in Oyo state. In addition, the state of the web-technology should also be determined whether aesthetics has greater impact on its use by the adopters or usability and vice-versa.

REFERENCES

Abanumy, A., Mayhew, P., and Al-Badi, A. (2003). An Exploratory Study of E-Government in two GCC Countries. In proceedings of the *International Business Information Management Conference*, December 16-18th, Cairo, Egypt.

Abasilim, U. D. and Edet, L. I. (2015). E-Governance and its Implementation Challenges in the Nigerian Public Service. *Acta Universitatis Danubius*, 7(1): 30-42.

Al-Rajehi, J. (2007). Critical Success Factors for E-Government in GCC. An Unpublished. PhD Thesis Submitted to the School of the Built Environment, University of Salford, United Kingdom.

Asogwa, B. E. (2012). Electronic Government as a Paradigm Shift for Efficient Public Services: Opportunities and Challenges for Nigerian government. *Electronic government*, 2(2): 141-159.

Awoleye, O. M., Oluwaranti, A. O., Siyanbola, W. O., Oladipupo, F. O. and Adagunodo, R. (2008). Assessment of E-Governance Resource Use in Southwestern Nigeria. Proceedings of the 2nd International Conference on Theory and Practice of Electronic Governance Cairo, Egypt. Association for Computing Machinery (ACM) International Conference Proceeding Series; 351: 154-159. 1-4 December.

Awoleye, O.M., Ojuloge, B., Ilori, M.O. (2014). Web Application Vulnerability Assessment and Policy Direction towards a Secure Smart Government, *Government Information Quarterly* Vol. 31(1), S118-S125.

Awoleye, **O.M.**, Matthew O. Ilori and Timothy O. Oyebisi (2019). Sources of Innovation Capability and Performance of ICT Agglomerated SMEs in Nigeria. *International Journal of Innovation Management, (USA)*. DOI: 10.1142/S1363919620500322

Bharosa, N., Janssen, M., Wijk, R., Winnie, N., Voort, H. Hultstijm, J. and Tan, Y. *(2013)*. Tapping into existing information flows: The transformation to compliance by design in business-to-government information exchange. *Government Information Quarterly*, 30 (S1), pp. 9-18

Chatzoglou, P., Chatzoudes, D., and Symeonidis, S. (2015). Factors Affecting The Intention to Use E-Government Services. *Computer Science and Information Systems*, 5: 1489–1498.

Coleman, S. (2006). *African E-Governance – Opportunities and Challenges. Comparison of Two Theoretical Models*. University of Oxford, Oxford University Press. England.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *Management Information System Quarterly*, 1: 319-340,

Davis, D., Bagozzi, P., and Warshaw, R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35: 8-12.

Dodd, J. (2000). Delivering on the E-government Promise. A Government Technology Industry Profile: NIC. Available from: http://bilisimsurasi.org.tr/cg/egitim/kutuphane/NIC.qxd.pdf. Accessed on 13/ 8/ 2009. [Accessed on 13 July 2017].

Fatile, J. O. (2012). Electronic Governance: Myth or Opportunity for Nigerian Public Administration. *International Journal of Academic Research in Business and Social Sciences*, 2(9): 122-140.

Feldman, N.E. (2010). Time is Money: Choosing between Charitable Activities. *American Economic Journal: Economic Policy*, Vol. 2 (1). Pp.103-130.

Gefen, D. (2002). Customer Loyalty in E-Commerce. *Journal of the Association for Information Systems*. 3:27-51.

Gefen, D., and Straub, D. (2000). The Relative Importance of Perceived Ease of Use in IS Adoption: A Study of E-Commerce Adoption. *Journal of the Association for Information Systems* 1(1): 3

Gil-Garcia, J. Helbbig, N. and Ojo, A (2014). Being smart: Emerging technologies and innovation in the public sector *Government Information Quarterly,* 31(1S), pp 11-18.

Goldkuhl, G., and Rostlinger, A. (2010). Development of Public E-Services - A Method Outline. In: Paper accepted to the 7th Scandinavian Workshop on E-Government (SWEG-2010), *Government.* 1:1

Idike, A.A and Okechukwu, E. I (2015). Census Politics in Nigeria: An Examination of 2006 Population Census. *Journal of Policy and Development Studies,* Vol. 9 (3), pp. 47-72.

Mehrtens, J., Cragg, P. B., and Mills, A. M. (2001). A Model of Internet Adoption by SMEs. *Information and Management*, 39: 165-176.

Nasri, W., and Abbas, H. A. (2015). Determinants Influencing Citizens' Intention to Use E-Government in the State of Kuwait: Application of UTAUT. *International Journal of Economics, Commerce and Management*, 3(5): 517-540.

Omeire, E., and Omeire, C. (2014). An Exploration of Major Constraints to E-Government Implementation in Nigeria. *European Scientific Journal*, 10(14): 481-487.

Oyedeji, J. O. (2018). Classification Modelling for the Impact of Historical Site on Residential Property Rental Value in Osogbo, Nigeria. *International Journal of Property Science,* Vol. 8 (1), pp.13-26.

Praeg, C., and Spath, D. (2011). *Quality management for IT services.* Business Science Reference: Hershey, Pennsylvania, United States of America.

Smith, D. (2011). Models of Successful Adoption and Implementation for IT Projects in the Public Sector. *Government Information Quarterly*, 30(2): 194–203.

Straub, D., Keil, M., and Brenner, W. (1997). Testing the Technology Acceptance Model across Cultures: A Three-Country Study. *Information and Management*. 33: 1-11.

Taylor, S., and Todd, P. (1995). Understanding Information Technology usage: A test of competing models. *Information Systems Research*, 6: 144-176.

Thuring, M. and Mahike, S. (2007). Usability, Aesthetics and Emotions in Human–Technology Interaction. International Journal of Phycology, 42(4), pp. 253-264.

UN (2008). United Nations Department of Economic and Social Affairs, e-Government Survey: E- Government for the People. Available from: https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2008. [Accessed on 20 October 2017].

World Bank (2010). Introduction to E-Government: What is E-Government. Available from: http://www.worldbank.org/en/topic/ict/brief/e-gov-resources. [Accessed on 20 October 2017].

Yusuf, S.A, Balogun, O.L. and Falegbe, O.E (2015). Effect of Urban Household Farming on Food Security Status in Ibadan Metropolis, Oyo State, Nigeria. *Journal of Agricultural Sciences,* Vol. 60 (1), Pp. 61-75. DOI: 10.2298/JAS1501061Y

Yusuf. O. (2006). Solutions for e-Government Development in Nigeria. Accenture EIU Government Research. High performance delivered.