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The Public Value of e-Government from the Perspective of Private-Sector Professionals in Morocco

Idaomar Chaimaa
PhD student, "Management & Information Systems" Research Team
National School of Management- Abedlmalek Essaadi University, Morocco
Chafik Khalid
Professor of Higher Education, "Management & Information Systems" Research Team
National School of Management - Abedlmalek Essaadi University, Morocco

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Abstract

This research aims to assess the public value of e-government in Morocco, using Delone and Mclean's (2016) Information Systems (IS) success model as a reference framework. The methodology is based on a qualitative exploratory study involving 13 companies, including law firms, architecture firms and real estate developers firms. An interview guide was designed to collect data, which were analyzed using Nvivo Qsr 12 software. The analysis identified six variables, namely "Human Capital, Telecommunication Infrastructure, Willingness to Use, State Strategy, Continuous Education, and Culture," which were added to the seven predetermined variables of the Delone and Mclean (2016) IS Success Model. The results of this study conclude the need for public organizations, especially the government, to direct their investments toward human capital and telecommunication infrastructure. This aligns with carefully planned strategies for digitizing public services, aiming to strengthen essential values such as trust, transparency, fairness, time efficiency, and cost reduction.

Keywords: Public value, public administrations, private sector, evaluation, Delone & Mclean (2016) Information Systems Success Model

1. Introduction

Information and Communication Technologies (ICT) have revolutionized the dynamics of interactions between public administrations, citizens, and businesses. Electronic services, or online services, offer a range of digital solutions enabling efficient, transparent, and equitable access to public services for users. The deployment of electronic services by public administrations extends far beyond the simple modernization of administrative processes. It is a reflection of profound and multidimensional public value. These services help to strengthen trust between citizens and government, increase transparency, promote civic participation and improve equitable access to information and services.

A new approach to performance, centered on public values, captures interest (Zumofen, 2016). Unlike the previous New Public Management (NPM) paradigm, it places less emphasis on classical performance, prioritizing the creation of value for citizens. Inspired by Moore's work (Moore, 1995), this transition shifts the priorities of public managers from efficiency and objectives to a broader vision centered on public value. This evolution redefines the roles of managers and their relationships with citizens, extending beyond measurable indicators.

Public value is based on evaluating the benefits offered by public services to citizens (Kelly *and al.* 2002). It is measured through three key indicators: service quality, achieving socially desired results, and user trust.

Morocco has launched several initiatives to accelerate its digital transition, including "Digital Morocco 2013," "Digital Morocco 2020," and "Morocco Digital Strategy 2030." These programs revolve around the development of an information society, a digital economy, and local administration through an ambitious e-government program.

This research explores the public value of online administrations in Morocco, adopting a multiparadigme approach with abductive reasoning. This exploratory method confronts empirical data from interviews with theoretical knowledge from the literature on the deployment of Information Systems (IS) and their impact on public value.

The conclusions of this empirical study provide a better understanding of the challenges of the digital transition of public services in Morocco. They offer essential insights into public value, helping decision-makers adopt effective methods to satisfy users of public services.

The remainder of this manuscript is divided into four distinct sections: the first addresses the theoretical framework and research problem, followed by a second section outlining and justifying the chosen

methodology. The third section presents the results and their concise interpretations, while the fourth and final section discusses conclusions and future perspectives.

2. Theoretical Framework and Research Problem

2.1. Concept of Electronic Public Service

The electronic public service, also known as an online public service (e-service), is partially or entirely accessible to users through electronic channels such as the Internet, mobile applications, interactive voice servers, etc.

According to Lindgren and Jansson (2013), the meaning of the concept of electronic public service encompasses most methods used to designate electronic interfaces between governments and citizens.

2.2. Concept of Public Value Creation

Public value is a key concept in public management, focusing on how governments can generate services that contribute to the well-being of society (Moore, 1995). Public value creation differs from private value creation in that it focuses on the public interest rather than profit maximization (Moore, 1997).

2.3. Principles and theoretical background

2.3.1. Founding framework theories of public value

The theory of public value creation involves managing for concrete results, encouraging governments to focus on measurable objectives to generate value for society. This requires accountability to citizens, transparency in decision-making and efficient use of public resources. In addition, public value creation aims for long-term sustainability, meeting current needs without compromising future generations. These key concepts illustrate how governments improve the well-being of citizens (Hood & Dixon, 2015).

2.3.2. New Public Management theory (NPM)

New Public Management (NPM), recently emerging in public administration, responds to the limitations of classical theory, focused on bureaucracy and efficient state management. By focusing on aspects such as reducing the size of government, encouraging competition, delegating responsibilities to external players and demanding transparency, NPM represents a major development in this discipline.

On the other hand, e-government research is out of step with practice, generating a variety of frameworks and models assessing the discipline from

different angles. Layne & Lee (2001) initiate frameworks based on practical progress.

Using DeLone & McLean's (2016) information systems (IS) success framework, it becomes possible to measure the impact of the various elements involved in the deployment of digital services on user satisfaction, and therefore on the creation of public value.

2.4. Research problem

The objective of this empirical work is to propose a conceptual model adapted to the context of Moroccan administration with a focus on indicators that directly impact the public value of online administration. This aims to address the research problem: **"How do private companies assess the public value of Moroccan e-government?"**

3. Research Methodology

3.1. Sampling and Study Field

The target field of this research is online public administration in Morocco, considering the reforms and innovation projects engaged in this domain over the past two decades. The methodology is guided by a multi-paradigm abductive exploratory approach that aims to explore the perceptions of the interviewees, the empirical data in the literature and the underlying dynamics of their complex relationships. This approach offers the flexibility needed to grasp the current state of Moroccan experience in the field.

Samples are selected by favoring businesses whose operations necessitate regular interaction with inevitably online public administrations. A total of 13 companies were selected, on condition that the samples were diversified. This is a recommended condition insofar as these interviews are used to collect data by semi structured interview (Table 1).

Table 1. Demographic breakdown of interviewees

Maintenance Code (E)	Business Activity	Years of Experience	Degree	Gender M/F	Age	Duration of Interview
1	Real estate promotion	+15 ans	Engineering	M	> 40	50 min
2	Architecture	+15 ans	Engineering	M	> 40	45 min
3	Architecture	-15 ans	Engineering	M	< 30	55 min
4	Architecture	-15 ans	Engineering	F	< 30	55 min
5	Lawyer	-15 ans	Lawyer	M	30-40	60 min
6	Architecture	+15 ans	Engineering	F	> 40	55 min
7	Real estate promotion	+15 ans	Engineering	M	> 40	50 min
8	Lawyer	-15 ans	Lawyer	M	30-40	50 min
9	Architecture	-15 ans	Engineering	F	30-40	50 min
10	Lawyer	-15 ans	Lawyer	M	< 30	55 min
11	Lawyer	+15 ans	Lawyer	F	> 40	60 min
12	Real estate promotion	+15 ans	Engineering	M	> 40	90 min
13	Real estate promotion	-15 ans	Engineering	F	< 30	45 min

Source: Authors

Various methods exist for qualitative data collection, and in this research, we opted for semi-structured interviews. The average duration of our interviews is 55 minutes per interviewee. In consultation with the interviewees, we generally opted to voice recording most of the interviews for accurate documentation. The data were collected based on an interview guide consisting of seven themes corresponding to the dimensions of the Delone and McLean model of 2016. These interviews began in mid-2023 in the respondents' head offices.

3.2. Research Models

3.2.1. Dimensions and Measurement Indicators of Delone and McLean (2016)

The literature is rich in models studying various aspects of Information Systems (IS). In this research, in addition to public value indices, we are primarily concerned with two models relating to the evaluation of the success of Information Technology (IT): the Delone & Mclean (1992, 2003, 2016) model and the Technology Acceptance Model (TAM). Thus, although research on the construction of IS models is abundant, research on the evaluation of the success of these systems is limited (Wang & Liao, 2008).

Furthermore, this study is part of a sequence of previous research by our team that explored the evaluation and use of IS in other public and private contexts (Chafik & Boubker, 2016; Ouajdouni *and al.,* 2020; Houda *and al.,* 2023, Idaomar & Chafik, 2023).

The dimensions of Delone & McLean (2016), namely System Quality, Service Quality, Information Quality, Intention to Use, Use, User Satisfaction, and Net Impact, were initially adopted as the basic measurement variables in this research. This approach has allowed for the qualitative assessment of the "public value" variable as a key composent of the "Net Impacts" and exploration of how each dimension of the model manifests in the context of Moroccan administrations using qualitative data, including themes, patterns, and participants' verbatim.

3.2.2. Dimensions and items appropriate for Public Value measures

In line with the approach of Karunasena *and al*. (2011), which is mainly based on the dimensions of public value of e-government defined by the pioneering authors Kearns (2004), Golubeva (2007) and Heeks (2008), the theoretical indices mainly adopted for public value measures are summarised in Table 2 below.

Table 2. Descriptions of some dimensions of the public value from Karunasena *and al.* (2011).

Dimensions	Indicators	Description and Desired Conditions
Electronic Service Delivery	Information	Accessibility for all citizens
	Importance	Importance of information for citizens
	Choice	Availability of multiple online channels
	Fairness	Fair provision of services
	Cost Reduction	Cost reduction for citizen users
	Citizen Satisfaction	Citizen satisfaction with e-government services
Efficiency	Efficiency	Increasing the efficiency of public organization
	Responsibility	Improving the government's response capacity
	Public perception	Citizens' views on public organizations
Developing trust	Security and privacy	Protection of citizens' privacy
	Transparency	Online decision-making communication
	Trust	Trust in e-government services
	Participation	Citizen participation in public debates

Source: Extracted from (Karunasena *and al.* 2011, p.95-96)

Based on the conceptual framework of (Karunasena *and al.*, 2011) presented above, we have favored the dimension of public value which is the main objective that public organizations seek to achieve when evaluating the impact of e-government.

3.3. Data processing

The methodology is based on the use of Nvivo Qsr12 software for coding, analysing and processing the data from the 13 interviews conducted. These interviews made it possible to collect a body of information that was coded and analysed according to a predefined thematic approach. The

emphasis is on themes that emerge naturally during the interviews, rather than on their frequency of appearance.

4. Results and interpretation

4.1. Descriptive analysis of the sample

This descriptive analysis of the structure of the sample reveals certain characteristics of the interviewers in terms of their profession, accumulated experience, level of education, etc. (Table 3 below).

Table 3. Main characteristics of the survey population

Source: Authors

Characteristics	*Gender*		*Age (Years)*			*Professional activity*			*Years of Experience*	
	M	*F*	*<30*	*30-45*	*>45*	*Architects*	*Lawyers*	*Real estate developers*	*+15*	*-15*
Absolute Frequencies	*8*	*5*	*4*	*3*	*6*	*5*	*4*	*4*	*6*	*7*
Percentage %	*61*	*39*	*31*	*23*	*46*	*38*	*31*	*31*	*46*	*54*

More than 100% of those interviewed had higher education qualifications, 69% of whom were engineers (architects + Real estate developers). This is therefore a population of elites qualified to assess the impact of administrative attitudes on perceived public value.

4.2. Interviewees' overall perception of the different approaches to e-Government

The cloud of words spontaneously reflects the interviewees' overall perception of connected government and its public value. The size of the keywords in this semantic cloud is proportional to their relevance in the content of the semi-structured interviews (Figure 1).

Figure 1. Keyword clouds generated by the encoding of interviews

4.3. Predetermined variables extracted from the Delone and McLean model (2016)

Of all the predetermined quality variables, only that of system quality was expressed at 100% by the interviewees. The other quality variables appear with fluctuating, but not negligible, percentages. This is also reflected in the percentages of overlap of this variable in the interviews of several respondents, who implicitly express the link between these dimensions and the public value of the services in question, for example E2 (41.86%) *"[...] This Rokhas e-service ... also saves us time, avoids travel, there is also transparency ... The great advantage of these e-services is that any decision must be justified....* "And E10 (32.07%) *"[...] I know that in the system, in the e-justice platform, we have taken into account the security factor ...confidence in using - electronic services as alternative tools to traditional administration...*". The quality of the system is identified by the perception of users, who appreciate the technical performance of online systems. In the same vein, other research has noted the influence of system quality on user satisfaction and the perceived usefulness of online services (Chen *and al.* 2015; Zolotov *and al.* 2018).

The use, the intention to use and the satisfaction of users are expressed by percentages between 92% (12/13) and 39%, as they are represented in the verbatim statements of those interviewed. E10 (30.2%) "*[...] Yes, of course, we want to use these systems more and more...*"; E4 (39%) "*[...] Yes, I want to use these e-services more and more... Yes, in terms of investment in the use of these e-services...*". Table 4.

User satisfaction is the main purpose of e-government in general, and is expressed by 39% of respondents, with verbatims that do not require comment: E1 (4.49%) "...Satisfaction with these e-services is Acceptable, with a percentage of 40%" (Table 4).

Table 4. Some verbatim discussions of the themes identified with the most significant % overlaps

Variables	Verbatim
Quality of the system (100%)	*"[...] I know that the system of the e-justice platform, has taken account of the factor of security ...confidence of use - of electronic services as alternative tools to traditional administration... E10*". "*[...] The great advantage of these e-services is that any decision must be justified... E2*".
Intention to use and use 12/13 (92.3%)	*"[...] Yes, of course, we are more and more interested on using these e-services...we need a complete e-service and generalise to other tribunal services... E10*". *"[...] Yes, in terms of investment in the use of these e-services ... develop the existing Rokhas e-service with new options that are not all functional in this V3 version... E4*".
User satisfaction 5/13 (39%)	*"[...] As an architectural firm ...Satisfaction with these online systems is Acceptable with a percentage of 40% E1 ".* *"..., our expectations are to have more e-services and to get complete and general digitization and services 100% online...I would say that in terms of satisfaction with these e-services it is Acceptable at 50%. E5 ".*

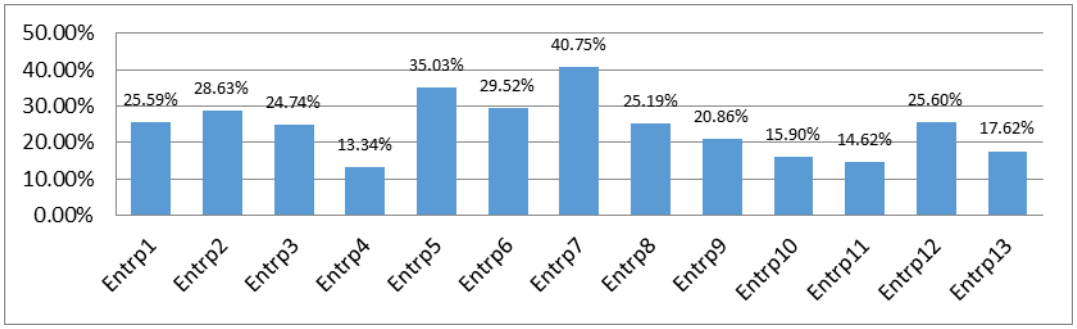
The "Public Value" explanatory variable

This variable was specified from the six other predetermined variables above as being the variable to be explained to which more interest should be attached. 100% (13/13) of the interviewees made a positive link between public value and the success of the e-services systems, with strong expressions in the verbatim of which we have noted an extract in table5: Company 13 (17.6%) "*[...] Of course, the transparency provided by these online services is positively correlated with citizens' confidence in the administration ... as it contributes positively to the comfort of society and improves the public value of the administration*…". In fact, "transparency" and "trust" are among the metrics of public value. The merit of users' trust in an administration implicitly improves the public value of that administration. Company 9 (20.9%) "*[...] Cost-effectiveness, transparency, fairness, time-saving, savings on administrative and travelling costs, and all this converge directly towards improving the public value of the administration, or rather of the administrations responsible for urban planning ...*". As expressed by the interviewee representing Company 9, the items "transparency, fairness and time saving" are indices that are positively linked to the public value of e-government. Rapidity or what can be translated as "time saving", which is also valued financially in terms of profit, as well as transparency, which is opposed to corruption, are managerial values that cannot be separated from the "public value" variable (Table 5).

Table 5. Some verbatim statements with strong extracts from the Public Value variable

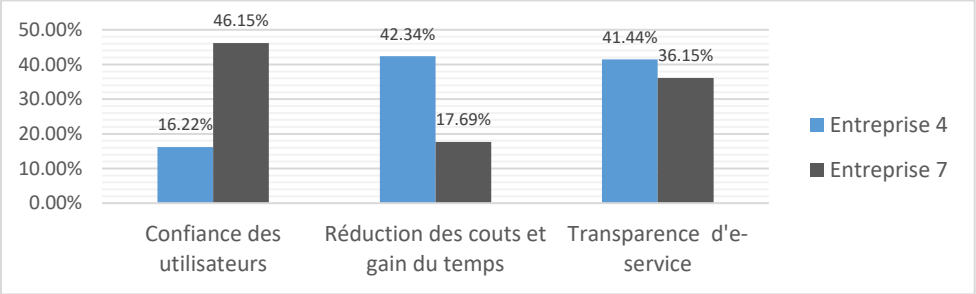
Variables	Verbatim
Public value (PV) 100%	Company 13: "*[...] Of course, the transparency guaranteed by these e-services is positively correlated with citizens' confidence in the administration ... as it contributes positively to the comfort of society and improves the public value of the administration*". Company 12: *"[...] Fairness is therefore assured by the services, which consequently contribute to improving the public value of the administration concerned...*". Company 11: "*[...] Fairness is ensured by the e-service, ... Of course, this e-service provides transparency, ..., this influences the improvement of public value in the administration and trust between citizens and stakeholders lawyers and others* ". Company 9: *"[...] Efficiency, transparency, fairness, time savings, savings on travel costs, administrative costs, and all this converges directly towards improving the public value of the administration, or rather of the administrations responsible for urban planning ...".* Company 6: *"[...] The e-services systems help us save time and money in terms of the provision of administrative services... in short, we have an improvement in the public value of administrative services*". Company 8: *"[...] with these e-services, the lawyer has nothing to hide from the client, its total transparency...this increases confidence in the administrative services and improves their public value*". Company 2: *"[...] strengthening the trust of the various parties and also crucially improving public value through transparency*".

Figure 2. Percentages of public value coverage with encoding of respondents



The analytical decomposition of public value into the highest 40.75% and lowest 13.34% coverage percentages expressed respectively by E7 and E4 (Figure 2), brings out in concrete terms the public value items for the interviewees concerned and as an example: "**Trust, cost reduction, time saving and transparency**" (Figure 3). Returning to the decomposition made by NVIVO, we note that the overlaps between the items are almost the same for E7, who expressed public value as a maximum of 40.75%, and E4, who expressed it as a minimum of 13.3%. Public value is therefore an absolute rather than a relative assessment.

Figure 3. Examples of public value items expressed as Maximum and Minimum by Company n°7 and n°4



4.4. Emerging variables (EV)

Table 6. Extracts from verbatim statements notifying emerging variables

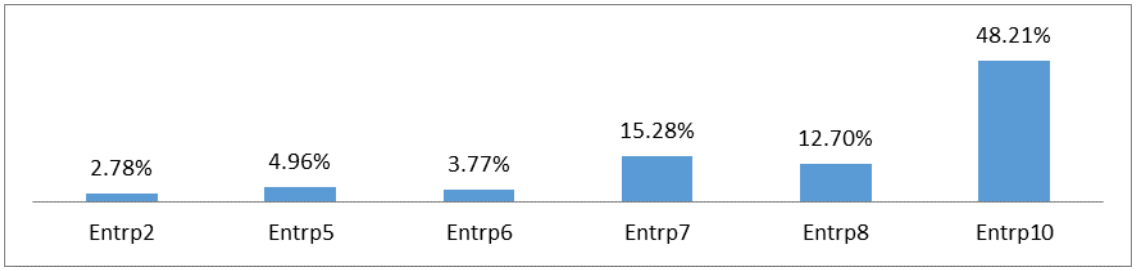
Variables	Verbatim
Human Capital	Company 10: *"[...] There is a human capital problem and apprenticeships can only partially solve the problem, there is also a question of generations, young lawyers are more familiar with digital technology...".* Company 8*: "[...] Yes, there is a human resources problem, ... The human resources are an actual obstacle to the use of e-services ... So we have to take into account, in terms of human capital, qualified skills, i.e. people who have knowledge of the e-service system".*
Culture	Company 10*: "[...] It's a new process with a whole new culture ..., I'm coming back to human capital ... in relation to the tribunals and I can assure you that it's a large community which is divided into two waves, the wave of old lawyers who don't have a culture of digitalization, and then there's the new wave of young lawyers who have a culture of using all kinds of on-line tools ...".* Company 3*: "[...] In the future and with the arrival of young ... architects who have this culture of digitization ... I think that things will improve a lot in the coming years...".* Company 7*: "[...] We have a lot to do in terms of the human skills of our administrations, which must have a culture appropriate to the objectives and culture of digitization and e-service...".*
Continuing Education	Company 2*: "[...] As a real estate developer ... we have not received any specific training in digitization or in information technology...".* Company 7*: "[...] so without any continuous education on the use of e-service CIR (Regional Investment Center), we have done self-training in digitization, IT skills and a personal extra effort...".*
Willingness to use	Company 10*: "[...] What is lacking are human skills at the technical and information technology level ... but also at the level of willingness and serenity, which is what needs to be focused on".* Company 1*: "[...] However, with all these advantages capitalized on, rectifications and adjustments are necessary to improve the public value acquired, and this can only be done in the presence of human skills armed with will.*
Infrastructure	Company 5*: "[...] The e-service "Mahakim" and the e-justice platform. All in all, the power of the internet connection directly influences the public value of e-services, in other words the telecommunications infrastructure directly influences the public value of the connected administration".* Company 10*: "[...] Here we have a telecommunications infrastructure problem that positively and negatively influences the public value of these e-services platforms, e-justice, so we need to review the technological logistics in terms of quality and review the Internet connection in terms of speed and throughput, which should be via optical fiber".*
State strategy	Company 10*: "[...] I mean by visibility that coordinates e-government and other services in Morocco, a strategic platform that determines the criteria for the infrastructure to be acquired, the nature of the human skills ... whatever the ministry or administration seeking to integrate digitization ... the different ministries and administrations".* Company 1*: "[...] In my opinion, evaluation and sanctions in case of use for illegal purposes will help to strengthen the public value of public administrations".* Company 5*: "[...] Initially, the digitization of the justice system was launched by the State. For us, it's a major project that will change the structure and the way we work ... and we're discovering that there are a lot of strategic limitations that need to be resolved quickly".*

Human Capital (HC)

This variable emerged in the answers of 6 respondents out of the 13 interviewed, i.e. 46%, which is enormously important (Figure 3). The respondents' verbatim comments provide arguments that clearly support the emergence of this variable: Company 10: *"[...] there is a human capital problem and self-learning can only partially solve the problem, there is also a generational issue, young lawyers are more familiar with digital technology...*".

Company 8: *"[...] Yes, there is a human resources problem, these human resources are an obstacle to the use of e-services ... We therefore need to take into account the human capital of qualified skills with knowledge of e-services systems*". These respondents consider technical qualifications and generation parameters to be crucial factors in HC.

Figure 4. Emerging variable Human Capital in percentage of coverage



It should also be noted that the Human Capital is linked to other approaches to certain emerging variables such as "culture, continuous education and will Figure 5", according to the interviewees who identified these variables:

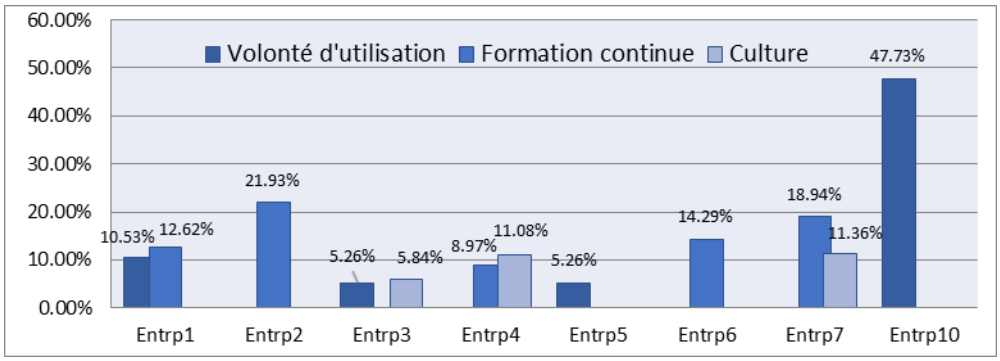
Company 7 (11.37%): *"[...] we have a lot to do in terms of the human skills of our administrations, which must have a culture that is suitable for the objectives and culture of digitalization and e-service...*". This interviewee is just one example of the others (3/13, Figure 5) who identified "culture" as a criterion to be met by the human skills needed to enhance the public value of e-government.

Company 2 (2193%): "*[...] As a company of real estate promoters ... we have not had any training in digitization or IT skills...*". The continuous education that emerged with 38.4% (5/13, Figure 5) is also linked to the technical indicators required by e-government to achieve its objectives, as expressed in part of the verbatim in table 6.

Company 1 (10.53%): "*[...] However, with all these advantages capitalized, rectifications and adjustments are necessary to improve the public value acquired, and this can only be done with the presence of human skills armed with determination*" (Table 6). For this interviewee, improving the public

value of eGovernment is necessarily dependent on strong-willed human resources.

Figure 5. The three emerging variables linked to HC and the interviewees who expressed them



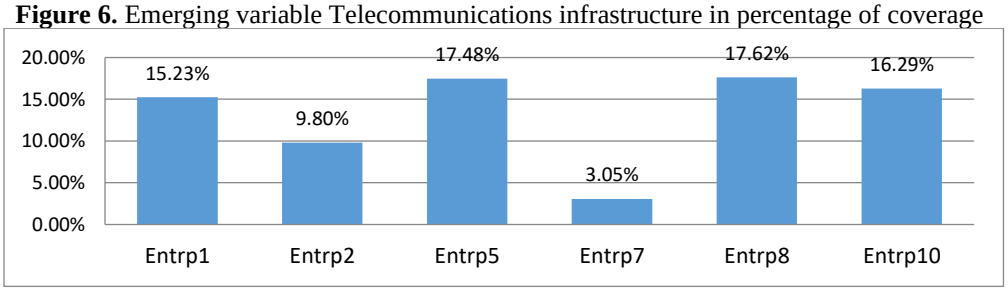
Telecommunications infrastructure

Among the 13 interviews, 6 interviewees mentioned the "Telecommunications infrastructure" variable, which represents 46.2% of respondents (Figure 6). These companies expressed their deep conviction that there is a positive relationship between the qualities and strengths of telecommunications infrastructures and the public value of online services, as expressed in some of the following extracts:

Company 5: *"[...] All in all, the power of the network connection has a direct influence on the public value of e-services, and consequently the telecommunications infrastructure has a direct influence on the public value of the connected administration*".

Company 8: *"[...] The "Mahakim" e-service and the e-justice platform. Ultimately, the power of the Telecommunications connection directly influences the public value of e-services, in other words, the Telecommunications infrastructure directly influences the public value of the administration* ". Company 10: "*[...] This is a telecommunications infrastructure problem that positively and negatively influences the public value of these e-services platforms, e-justice, etc.".*

Figure 6. Emerging variable Telecommunications infrastructure in percentage of coverage



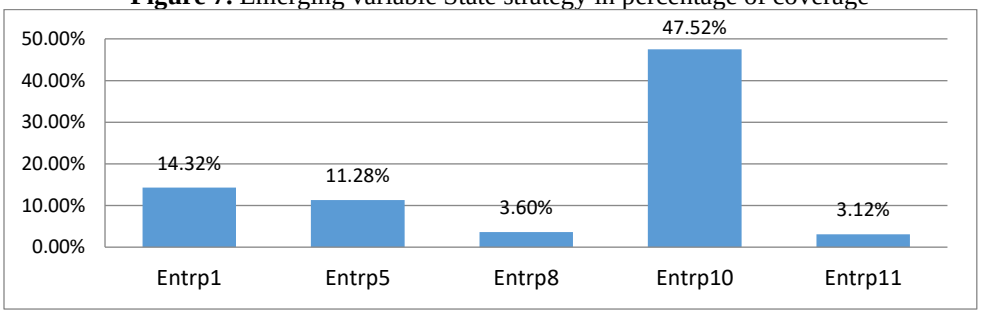
State strategy

This variable was identified by 38.4% of respondents (5/13), Figure 7. This is reasonable in that at present the State is almost the only actor overseeing this digitization sector, with all that it requires in terms of investment, infrastructure, regulation, coordination, etc. Company 1: *"[...] In my opinion, evaluation and sanctions in case of illegal use will help to strengthen the public value of public administrations*".

Company 10: *"[...] I mean by visibility that coordinates e-government and other services in Morocco, a strategic platform that determines the criteria for the infrastructure to be acquired, the nature of the human skills ... whatever the ministry or administration that is seeking to integrate digitization ... the different ministries and administrations*".

Company 5: *"[...] Initially, the digitization of the justice system was launched by the State. For us, it is a major project that will change the structure and the way we work ... by discovering that there are many strategic limitations that need to be resolved quickly...*".

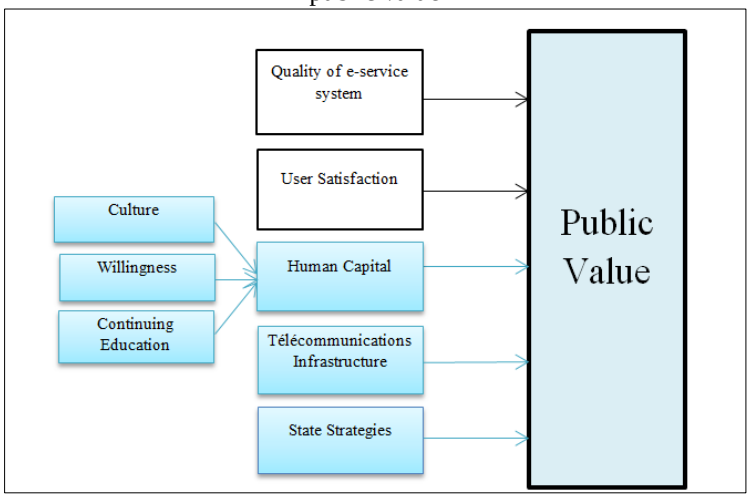
Figure 7. Emerging variable State strategy in percentage of coverage



4.5. Proposal for a simplified conceptual model

For the purposes of this study, the Delone and Mclean (2016) model was used, which provides the researcher with a list of dependent variables from which they can choose, since no single measure is inherently better than others as a baseline (Delone & Mclean, 2016). This model has already been adapted to the context of research aimed at measuring public value (Kayode, 2022). In addition to the 7 dimensions of this model, interviews with private companies revealed six variables known as emergent variables: Human Capital, Telecommunications Infrastructure, State Strategy, Continuing Education, Willingness to Use, and Culture, were articulated around public value to select the variables that directly influence the perceived value of e-government in Morocco (Figure 8).

Figure 8. Conceptual Model of the proposed dimensions with direct positive effect on public value



Source: Authors

The results of this study allow us to conclude that in the context of Moroccan administration, the two predetermined variables of Delone and Mclean, namely user satisfaction and system quality, as well as the emerging variables Human Capital, Telecommunications Infrastructure and State Strategy, have a direct and positive influence on the public value of e-government according to private sector professionals. System quality is therefore a key element in winning user satisfaction and trust in e-government.

5. Discussion and conclusions

This study focused on private companies' evaluation of the public value of e-government in Morocco, using a hybrid exploratory qualitative approach. This approach was applied to 13 companies with professional links to administrations in the process of digitization.

An attempt has been made to conceive a simple conceptual model composed of five variables (Figure 9) incorporating the notion of "public value" from the latest version of the Delone and McLean (2016) model, also validated by other research, as an explanatory variable for evaluating e-government (Omar *and al.,* 2011; Twizeyimana & Andersson, 2019). The five aspects of this proposed model clearly demonstrate their direct positive effects on the public value of e-government in Morocco.

Therefore, system quality is based on technical aspects such as ease of access, system reliability and reply time, as perceived by users (DeLone & McLean, 1992). In parallel, Sedera *and al*. (2004) have identified nine

measures that complement the DeLone & McLean (1992) criteria and overlap with the public value indices (Kayode, 2022).

The "user satisfaction" dimension evaluates the user's overall opinion of the information system (Delone & McLean, 2016). Interviewees clearly expressed their satisfaction in using e-services, using language that overlaps with the criteria identified by Khodakarami and Chan (2011) to describe public value, including user trust, fairness, transparency, administrative efficiency, cost reduction and time savings. As such, it is an evolving set of terms rather than a static vocabulary, evolving in a specific reference context.

The interviews revealed six emerging variables in addition to those identified in the literature: "Human Capital, Telecommunications Infrastructure, State Strategy, Continuing Education, Willingness to Use and Culture".

In other words, the composition of an information system, including Structural Capital (SC) and Human Capital (HC) which reflects knowledge, as well as Intangible Capital (IC) representing performance or public value in public organisations. A close correlation between SC and HC materializes in the use of knowledge and information by the HC (Edvinsson & Malone, 1997).

The " continuing education, willingness to use and culture " variables underline the importance of investing in the education and skills of HCs to ensure that they master the technologies, while at the same time promoting the acquisition of a culture of transparency, trust and other attitudes in line with the characteristics of public value. This culture will help to promote effectiveness, efficiency and, ultimately, commitment to the administration's projects on the part of the personal concerned.

The "State strategy" variable seems to be an element that can directly impact the performance and perception of the public value of e-government in Morocco, and probably in similar emerging countries where the State plays a central role in investment in this area. For example, ensuring the fairness of a system of electronic services, one of the indicators of the public value of e-government, could prove difficult without a telecommunications network covering the entire country.

In conclusion, we share Delone and McLean's (2016) conviction that an information system can impact levels beyond the individual and organizational spheres. In this sense, the success of e-services systems, which generate perceived usefulness and public values based on tangible principles of transparency, inclusion, fairness, empathy and trust, can make a real contribution to the well-being of society.

In the short term, this research envisages a complementary quantitative study aimed at further consolidating our conceptual model and enriching it with other emerging variables.

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References:

1. Chafik, Kh. & Boubker, O. (2016). Evaluation de la contribution des systèmes d'information logistiques à la performance et la maturité des processus. Essai d'une étude qualitative, *Conference Paper*.
2. Chen, J. V., Jubilado, R. J. M., Capistrano, E. P. S., &Yen, D. C. (2015). Factors Affecting Online Tax Filing–an Application of the Is Success Model and Trust Theory. *Computers in Human Behavior (43)*, pp. 251-262.
3. Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly, 13*(3), pp.319-40.
4. DeLone, W. H., & McLean, E. R. (2002). Information systems success revisited. *In Proceedings of the 35th annual Hawaii international conference on system sciences* (pp. 2966-2976). IEEE.
5. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of management information systems, 19*(4), 9-30.
6. DeLone, W. H., & McLean, E. R. (2016). Information systems success measurement. *Foundations and Trends in Information Systems, 2*(1), 1-116.
7. Edvinsson, L. & Malone, M., 1997. Intellectual Capital: Realizing your company's true value by finding its hidden roots. New York. HarperBu
8. Hood, C., & Dixon, R. (2015). A Government That Worked Better and Cost Less? Evaluating Three Decades of Reform and Change in UK Central Government. *Oxford University Press*.
9. Houda, E. H., Chafik, K., & Mghizou, H. (2023b). Tendances technologiques de la Transformation Digitale des Administrations Fiscales à l'Echelle Internationale : *Revue de Littérature et Etat des Lieux cas du Maroc. European Scientific Journal, ESJ, 19*(19), 68.

10. Idaomar, C., & Khalid, C. (2023). Etude exploratoire de l'apport des systèmes e-services à l'amélioration de la valeur publique de l'Administration Marocaine. *International Journal of Accounting, Finance, Auditing, Management and Economics, 4*(5-2), 814-834. https://doi.org/10.5281/zenodo.10032281.
11. Kayode, A., A., (2022), e-government and the public value of environmental sustainability (pves): a developing country perspective. *Governance and Management Review (GMR) Volume 7*, No. 1, Jan-Jun 2022
12. Kelly, Gavin, Mulgan, Geoff, & Muers, Stephen. (2002). Creating public value. London, *Cabinet Office*.
13. Khodakarami, F., & Chan, Y. (2011, April). Evaluating the success of customer relationship management (CRM) systems. *In Proceedings of the European Conference on Information Management & Evaluation* (pp. 253-262).
14. Layne, K., Lee, J. (2001). Developing fully functional E-government: A four stage model. *Government information Quarterly 18*, 122-136.
15. Lindgren, I., & Jansson, G. (2013). Electronic services in the public sector: A conceptual framework. *Government Information Quarterly, 30*(2), 163-172.
16. Moore, M. H. (1995). "Creating Public Value: Strategic Management in Government." *Harvard University Press*.
17. Moore, M. H. (1997). Creating Public Value: Administrative Responsibility in a Political World. *Public Administration Review, 57*(2), 89-96.
18. Omar, K., Scheepers, H., & Stockdale, R. (2011). E-Government service quality assessed through the public value lens. *In Lecture Notes in Computer Science* (pp. 431–440).
19. Ouajdouni, A., Chafik, K., & Boubker, O. (2020). Transformation Digitale de L'Administration Publique au Maroc : *Revue de la littérature et état des lieux. European Scientific Journal, ESJ, 16*(19), 406.
20. Sedera, D., Gable, G., & Chan, T. (2004). Measuring enterprise systems success: the importance of a multiple stakeholder perspective. In Proceedings of the 12th European Conference on Information Systems: *The European IS profession in the global networking environment* (pp. 1-14).
21. Twizeyimana, J. D., Andersson, A. (2019). The Politics of Open Government Data: Understanding Organizational Responses to Pressure for More Transparency. *Government Information Quarterly, 36(*2), pp. 167-178.

22. Wang, Y.-S., Liao, Y.-W. (2008). Assessing eGovernment systems success: A validation of the DeLone and McLean model of information systems success. *Government Information Quarterly 25*(4), 717–733.
23. Zolotov, M. N., Oliveira, T., Cruz-Jesus, F., &Martins, J. (2018). Satisfaction with E-Participation: A Model from the Citizen's Perspective, Expectations, and Affective Ties to the Place. Cham: *Springer International Publishing*, pp. 1049-1059.
24. Zumofen, Raphael. (2016*). L'impact de l'accountability publique sur la performance organisationnelle-Le cas des mesures du marché du travail dans les cantons de Fribourg et Vaud*. Thèse de doctorat. Université de Lausanne, Faculté de droit, des sciences criminelles et d'administration publique. http://serval.unil.ch.