

PRELIMINARY VERSION – NOT FOR CITATION

# IT Value in Public Sector: Discussion on an Established Model for Private Sector

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**Abstract.** IT value is defined as the stream of research devoted to the identification of economic impacts and organizational benefits of IT applications. This is a research topic with a long-standing tradition, stimulated by the identification of the so-called “productivity paradox”. IT value engaged scholars from many disciplines, adopting different methods and theoretical perspectives, in the study of the benefits produced by IT investments. In spite of a substantial body of literature produced by scholars on this topic during the recent years, the argument still stimulates discussion. A common trait that groups several, when almost not all, studies on the IT value phenomenon is the focus on the private sector, with the frequent use of income or financial indicators to measure improvements. The phenomenon thence needs a study in this peculiar and potentially different context of public administrations. Taking into account this scenario, this paper introduces analyses of the IT value phenomenon in the public administration domain and discusses on the basis of a multiple case study a rich and established IT value theoretical model available in literature.

**Keywords.** IT Value, Public Administration, Public value, Theoretical model, E-Procurement

## Introduction

The term IT value is used to identify studies that deal with the identification of economic impacts and organizational benefits of IT and of its manifestations [1]. The debate rose in the past with the diffusion of computers in economic activities [2]. The interest on the investigation of potential benefits derived by IT applications was motivated by the discovery of the so called “productivity paradox” [3], and later reinforced by the debate on the relevance of IT for competitive advantage generation [4]. As a consequence the IT value phenomenon was investigated by many scholars, from the point of view of different disciplines, and with the use of a wide range of different approaches [5] and theoretical perspectives [6].

The diversity of research methods and theoretical perspectives produced results hard to be generalized, and difficult to be reproduced in other contexts than the one being investigated. While there is enough agreement amongst researcher that IT creates benefits [1], aspects like the factors affecting this value creation, the conditions under which such value creation happens, and the real nature of the link between IT value and IT investments is still worth of discussion [7].

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A lot of the studies in the IT value literature, when almost not all, focus prevailing on the private sector. Such tendency is testified by the frequent use of measures like added productivity, consumer surplus, financial payback, return on capital employed and similar [8, 9]. While these approaches are of ease understanding in private business contexts, they cannot be sheer applied [8] in Public Administrations (PAs), who work for public utility purposes.

In continuity with what suggested by some sources [8, 9], this paper argues that contributions produced by IT value literature cannot be easily applied to PAs. The IT value phenomenon deserves to be studied in the context of PAs, since under this circumstances IT investments could be subject to different constraints hampering or hardening their value creation potential. Moreover this paper also argues that the study of the IT value phenomenon under the perspective of PAs has been quite neglected by the literature. For example a query in sources indexed in Scopus with the keywords “it value” and “public administration(s)” (in title, abstract, and keywords) produces today only two results.

Since the perspective of the stakeholder from which the IT value phenomenon is investigated is relevant ([10] citing [11] and [12]), the investigation of the IT value phenomenon in PAs deserves specific attention. PAs are subject to working conditions that are different from those of private organizations. Organizations pertaining to the public sector are subject to rules, like for example in the purchasing activity, and in the human resource management, or additional constraints affecting their activities, which may constitute hurdles unknown to private organizations. PAs are in general highly constrained in their actions by the fundamental requirements of safeguarding impartiality, ensuring stability, and continuity in their action [13].

Having such scenario in mind, this paper is part of a larger research effort devoted to the investigation of the IT value phenomenon in the public sector. We use the term “public sector” to identify all the PAs, and other public bodies who provide public services, like for example schools, hospitals, public transport companies, when owned and managed by central or local governments. To achieve such objective this paper investigates the applicability of the IT value theoretical framework of Melville et al. [5] to the context of PAs, and more specifically on the public Local Healthcare Agency (LHA) of Viterbo (Italy). In this regard, empirical evidences gained from a set of projects run by the LHA to implement e-procurement IT services are investigated.

The paper unfolds as follows: after the description of the necessary methodological considerations, the theoretical framework in discussion is presented in detail, followed by some useful definitions on e-procurement. Afterwards, the cases are described and the consequent findings are reported and discussed. Eventually some considerations on limitations and future research conclude the paper.

## **1. Methodology**

As briefly mentioned in the previous section, this paper is part of a larger research effort [14] devoted to investigating the IT Value phenomenon in the context of public administrations. More specifically this research paper is targeted to investigate whether the theoretical model of Melville et al [5] is suitable to describe the IT Value generation phenomenon in the context of the public administration. To reply to this research question, an exploratory research based on a multiple case study was adopted [15, 16]. To ensure rigor in the research process, considering the suggestions provided by Yin

[16], we defined and eventually followed a detailed research protocol described below.

At first, a suitable context to investigate the research question was identified and chosen. The context is that of the Local Healthcare Agency (LHA) of Viterbo (Italy), which is a pertinent context for the aim of the paper since: (i) it is an organization belonging to the public sector, (ii) it run IT investments and documented their outputs and outcomes, and (iii) the IT investments analysed concern e-procurement technologies, which are reported of producing real benefits at the level of the organization implementing them.

Within the boundaries of this organizational structure, we identified and selected seven individual cases constituted by as many innovation projects, both affecting organization and technology, promoted by the LHA of Viterbo to experiment and implement e-procurement wide adoption. These cases were chosen since they granted researchers access to evidences on the application of IT technologies in a PA context.

Considering that each one of these projects was finally assessed producing reports and documents detailing and describing the activities performed, the outcomes of the implementation process, and the actual benefits achieved, these documents were used as source of data. In total 35 different reports and documents focusing on specific aspects of the project run, often assessing through different measures benefits and outcomes produced, were evaluated.

We read and analysed these documents to identify information on each of the seven projects with regard to: (i) IT artefact, (ii) performance indicators used to assess the outputs, (iii) organizational performance indicators used to assess the outcomes, (iv) internal actors of the LHA, and (v) external actors around the LHA. We discarded all the documents that did not contain any of this information, while the others were retained to obtain data regarding the IT value generation phenomenon. These data were used to confront evidences from the LHA case with the constructs of the Melville et al. [5] theoretical framework, and eventually to formulate considerations on the applicability of the theoretical model to the case.

This study adopts an holistic interpretive approach, in order to try to understand the theoretical applicability of known dynamics of value generated by IT investments in the context of organizations of the public sector. The holistic approach was specifically chosen following Fink's [17] remark that most researchers followed reductionist approaches to study the IT value phenomenon.

## **2. Theoretical framework**

In reply to the wide abundance of different approaches in IT value research, Oh and Pinsonneault [6] affirm the need of a holistic vision to orient further development in this field of study. Melville et al. [5], on the basis of previous research papers, built a comprehensive IT value model able to identify where and how IT value is generated. Overlapping the results of several studies investigating the IT value generation process available in the literature drew this framework. The authors ground the model on the theoretical foundations of the Resource Based View (RBV). This theory posits that a resource generates sustainable competitive advantage to a firm when it is valuable, rare, inimitable, and not easily sustainable.

The rationale motivating the adoption of this theoretical model lies then on a two-fold consideration. On the one side it takes into consideration the abundant literature available on the phenomenon. On the other side it addresses all the facets (micro and

macro) of the IT value phenomenon adopting a holistic perspective.

The integrative model depicted in Fig. 1 and proposed by Melville et al. is based

on three different domains, treated as overlapping layers: (1) the focal firm, (2) the competitive environment, and (3) the macro environment. Such framework describes how phenomena resident within each domain shape the relationship between IT and value generation ([5], p. 293).

**Figure 1** IT Business Value Model [5].

The model posits that the core of the IT value generation phenomenon is a process that takes place inside the Focal Firm. The Focal Firm is the domain affected by the IT investment. The Focal Firm represents the organization acquiring and deploying the IT resource, and for this reason it shall be identified in every analysis. Inside the focal firm the IT resources (both human and technological, tangible and intangible) interact with complementary organizational resources affecting business processes activities. The effect of this interaction produces improvements on business processes performance measured by some indicators capable of taking track of improved operational efficiency like flexibility, information sharing, inventory management, and others. The improved business process performance produces then an improved organizational performance which is the overall firm performance measured with indicators like productivity, efficiency, profitability, market value, competitive advantage and others.

The focal firm is embedded in a competitive environment, which is the specific context where it operates. The competitive environment is characterized by specific industry characteristics like competitiveness, regulation, technological change, and other factors that might shape the way in which IT is applied within the focal firm to generate value. At the level of the competitive environment also competitors and trading partners of the focal firm operate. Since IT applications tend to overpass firms boundaries, the resources and business processes of trading partners might also affect the way

in which the focal firm generates value from IT investments.

Finally the focal firm and the competitive environment are embedded in the macro environment, which denotes the country and meta-country specific factors that shape IT application inside focal firms. The macro environment is characterized by the country characteristics. These characteristics are macro factors that might shape IT application and the IT business value generation process. The level of development, regulation on technology development, education, culture, and research and development investments are all examples of factors potentially affecting the IT application inside focal firms.

### *2.1. Potential adaptations for the PAs context*

With the intent to apply this framework to PAs, the paper argues that adaptations should be introduced, particularly as regards the items and concepts more linked to a firm point of view. At a first glance the component Organizational Performance, and the components of Competitive Environment layers, as well as the same concept underlying it, appear problematic to be applied in the public sector.

Another significant issue in applying such model to a PA stems from the different strategies and objectives of entities pertaining to respectively public and private sector [18]. Subjects from private sector are targeted to produce private value, which can be measured in financial terms, as profit earned. A public body instead should create public value to the community it has to serve, by providing quality services, corresponding government policies, at the lower possible costs and safeguarding transparency and equity. In such terms, public value can be difficult to define, and less easily measured than private one. This is true also when considering the value possibly produced through IT investment, which Cresswell et al. [19] suggest to assess by taking the point of view of services' recipients. Moreover, another important difference between private and public value is that the first increases for a firm when it takes the advantage in a competition with its similar, while the latter increases when several public entities collaborate, sharing resources and knowledge [20].

### *2.2. E-Procurement*

As regards procurement, following other studies [21, 22], in this paper it is intended as a broad process that starts with a need for a good or service and ends with its use and the payment for its supply. According to this statement, the term "e-procurement" indicates the organizational solutions supported by Information and Communication Technologies (ICT)-based tools that allow electronic forms of procurement, potentially more effective and efficient than traditional ones, where a more or less broad and profound process redesigning is required [23]. e-Procurement solutions include tools in two areas, which must be jointly used to streamline the whole procurement process:

- E-purchasing, that includes very different tools which allows the purchasing phase to be entirely managed, from finding a product to invoicing and payment, through on-line tenders (e-tendering) or marketplaces and electronic catalogues (e-requisitioning), electronic invoice exchange and processing (e-invoice) and liquidation activity (e-payment);
- E-logistics, which aims at optimizing the management of inventories, and internal goods flows, based on Intranet/Extranet technologies, integrating Supply Chain Management (SCM) solutions, linking both internal and external

players.

The e-procurement in public healthcare can be considered [23] as a highly representative domain, which comprehends that one of other PAs, since in healthcare:

- Structures deliver critical and specialized services vs. the rest of PA, where safeguarding high quality standards for many purchased goods it is paramount;
- Spending has a more composite structure, which includes standard supplies for the whole PA together with highly specific purchases (e.g. operating room specific devices);
- Market involves many, up to about 500 thousand, highly differentiated suppliers (multinationals, mid-size national Companies and local SMEs).

### 3. Case Description

The LHA object of study in this paper is a public structure and provides healthcare services to the province of Viterbo. This LHA manages the organizational and financial aspects of healthcare services provision to the citizens of an Italian province with more than 300.000 residents. With the aim of gaining efficiency and reducing the spending for goods and services procurement, since 2000 (see Table 1) the LHA run four experimental projects on e-procurement. The outcomes of each project were evaluated in detail, by the same LHA in collaboration with other subjects, like University of Tuscia and CONSIP (the Italian national agency for the public procurement), in order to assess benefits (both on purchase and on administrative costs) and make the best decision on their definitive adoption. Results were remarkable, even though different in nature and dimension, also taking into account the obstacles met (technological, organizational and also normative), like for any innovation [24].

Beyond the pilot experiences, the LHA adopted two tools provided by CONSIP and launched an extensive programme to innovate the tender process, through the implementation of the best tested solution. Also the outcomes of such projects were assessed in detail [23, 25]. Tables 1 and 2 show, recalling the adopted model, the main elements of the projects promoted along years, both as pilot test or as full adoption, by the LHA of Viterbo: IT tools introduced, processes and internal resources involved in each project, role played by external subjects, what and how results were assessed.

Beside what represented in the tables, in order to better interpret the cases, some more information must be given about the context, and the role of some actors who appear somewhere. The LHA of Viterbo, with the already mentioned aims of gaining efficiency and reducing costs, promoted as a first mover the innovation linked to e-procurement introduction. The self-conceived projects were the 1, 4, 5, 6, and 7. Projects 2 and 3 took instead their origin in the Italian financial bill of the year 2001, which forced all the PAs to make their purchases recurring to the Frameworks Contracts and the tools made available by CONSIP. Such constraint was several times during the following years alternatively enlarged or reduced. The rule mainly supports an economic target – that of dropping down the spending for purchasing by the PAs – but the policy behind it aims also to increase transparency and comparability among different PAs, and to promote innovation, both technological and organizational, in all the public bodies.

**Table 1.** Characteristics of the projects carried on by the LHA of Viterbo

#	Project	Year	IT contents	Involved processes	Internal resources	Environment role
1	Private marketplace (pilot test)	2000	Healthcare specialized marketplace test	Less expensive purchases	Purchases unit (part of)	Marketplace owner (also as sponsor) Other healthcare structures co-participating to the test
2	Public Electronic Catalogue	From 2002	Internet based e-Catalogue	Over-threshold tenders	Purchases unit (part of)	CONSIP: <input type="checkbox"/> created the system on the basis of new laws <input type="checkbox"/> still manages it <input type="checkbox"/> supported this project Suppliers admitted by CONSIP
3	MEPA	From 2002	Wide-scope marketplace with special functions for tender asking and submitting	Under-threshold tenders and Direct purchases (change of internal rules and processes)	Purchases unit (part of)	CONSIP: <input type="checkbox"/> created MEPA on the basis of new laws <input type="checkbox"/> still manages it <input type="checkbox"/> supported this project Suppliers of goods / services included in MEPA by CONSIP
4	e-Tenders (pilot test)	2003	Platform for e-tender	Under-threshold tenders	Purchases unit (part of)	Provider of the platform Other LHA
5	e-Logistics (pilot test)	2003	Intranet/ Extranet platform for SCM	SCM process for common goods and not specific medical devices	Purchases unit (part of) Warehouses and internal Departments recipient	Logistics outsourcer CONSIP (as advisor) Suppliers of goods
6	Operating room e-procurement (pilot test)	2003	Intranet/ Extranet platform for SCM	Entire procurement cycle of specific medical devices	Purchases unit (part of) Warehouses Wards	Supplier / Logistics outsourcer
7	e-Tenders (extensive adoption)	2004	Platform for e-tender	Under/over-threshold tender (change of internal rules and processes)	Purchases unit (part of)	Platform provider Suppliers ready for e-tenders

As regards the role of other actors, CONSIP was alternatively a compulsory service provider (projects 2 and 3), or a partner supporting analysis and designing of a new process for the LHA (project 5). Another public healthcare structure was also a partner for the LHA of Viterbo (project 4), accompanying this latter in the reuse of the e-tender platform already used by the former.

**Table 2.** Characteristics and results of the assessment performed by the LHA of Viterbo after each project

#	Project	Measured results	Assessment method	Main results
1	Private marketplace (pilot test)	Costs level	Direct comparison of purchase costs	Relevant savings
2	Public Electronic Catalogue	Regarding the former: <input type="checkbox"/> Effort in purchasing (standard and range) <input type="checkbox"/> Elapsed time in purchasing (standard and range) <input type="checkbox"/> No. of roles and offices involved <input type="checkbox"/> No. of tasks performed	Combination of direct measures and interviews Comparisons between old and new process data	Reductions of effort (>90%) and elapsed time (>80%), both standard and range Reductions of tasks, roles and offices involved
3	MEPA	Regarding the former: <input type="checkbox"/> Effort in purchasing (standard and range) <input type="checkbox"/> Elapsed time in purchasing (standard and range) <input type="checkbox"/> No. of roles and offices involved <input type="checkbox"/> No. of tasks performed	Combination of direct measures and interviews Comparisons between old and new process data	Reductions of effort (around 35%) and elapsed time (around 60%), both standard and range Some reductions of tasks, roles and offices involved
4	e-Tenders (pilot test)	Elapsed time	Direct measures Comparison between process and test data	Reduction of elapsed time
5	e-Logistics (pilot test)	Regarding the former: <input type="checkbox"/> Fixed and financial inventory costs <input type="checkbox"/> Elapsed time in supplying <input type="checkbox"/> No. of positions removed in the warehouses	Direct measures Comparisons between old and new process data	Savings on fixed and financial inventory costs Reduction of elapsed time Some positions removed
6	Operating room e-procurement (pilot test)	Regarding the former: <input type="checkbox"/> Fixed and financial inventory costs <input type="checkbox"/> Effort in inventory management <input type="checkbox"/> Administrative costs	Direct measures Comparisons between old and new process data	Administrative costs savings (80%): fixed and financial inventory costs (42%), effort (26%), purchase management and control (32%)
7	e-Tenders (full adoption)	Regarding the former: <input type="checkbox"/> Effort in purchasing (standard and range) <input type="checkbox"/> Elapsed time in purchasing (standard and range) <input type="checkbox"/> No. of tasks performed	Combination of direct measures and interviews Comparisons between old and new process data	Reductions of effort (>15%) and elapsed time (>20%), both standard and range Little reduction of tasks, none of roles

#### 4. Discussion on the findings

The PA investigated here has a rich history of IT investments related to the e-procurement introduction. All the projects were finally assessed in details. These investments represent potentially extensive innovations since they can involve all the areas of an organization. Moreover it must be highlighted that this specific PA played a



significant role in the nationwide e-procurement landscape implementation since. It was a first mover and also awarded national prizes by CONSIP in 2009 and by the Italian Ministry of Public Administration in 2010 for this implementation. All these notes qualify the LHA of Viterbo as a relevant context for the aim of this paper.

Each of the seven cases consist in some kind of innovation, both technological and organizational, since each initiative implied the redesign of one or more processes, and the use of new technologies. These changes were very different for wideness and type (see table 1) as, on the organizational side, they spread from the redesigning of the purchasing processes, up to the complete redefinition of the surgery protocols, mixed with the choice to fully outsource the warehouse management and logistics. The process redesigning had a huge part, even when laws and rules constrained it, and was particularly significant in the projects involving other units beyond the Purchase unit, like e-Logistics (5) and Operating room e-procurement (6). Process innovation was however also present in the other projects, even though limited to a part of the Purchase unit. Besides, all the projects involved a specific team composed by resources with updated competences, recruited just for this aim. Several members of such team later on took a managerial role in some functional units in charge of procurement in the same LHA.

On the technological side the innovation goes from the implementation and use of new IT tools inside the organizational context (marketplace, e-catalogue, e-tender, Intranet / Extranet platform for SCM), up to the direct connection of the outsourcer's system to the internal network, passing through the computerization and the connection to the same network of each Department (or ward). Moreover, many of the adopted technologies were Internet-based (like for example the e-catalogue and the platform for SCM), provided and managed by an external partner. Consequently, the role played by external actors increases its importance.

Finally, as regards the performance measurements, the studied organization denoted a high interest in: (i) evaluating savings (fixed and financial inventory costs and administrative costs), (ii) increase in processes execution speed (elapsed time and efforts in purchasing), and (iii) simplification of processes workflows (number of roles and offices involved, and number of tasks performed). All these results had to be reached respecting the constraints imposed to all the PAs (transparency of activities and conformance to competition principles among companies). At the same time, a healthcare structure (which delivers critical and specialized services) must ever safeguard some paramount factors, like: high quality standards of many goods and services purchased, for their impact on the final service quality, and timeliness of purchases.

In order to verify the suitability also for public organizations of the model drawn by Melville et al. [5], a thorough analysis should be performed by confronting the elements of the theoretical framework (statements, references, constructs, propositions) with the instances emerging from the presented cases.

The components related to more internal processes, those gathered in [5] in the so-called "IT Business Value Generation Process" (see figure 1), do not seem affected by changes when applied in the presented context. They refer to elements that do not change their role and relevance when moving from considering private organizations to public ones. Actually, as it can be noticed in table 1 and table 2, all the presented cases involve elements like:

- The use/introduction of technology, particularly oriented towards resources and information sharing across the organization to provide business applications (purchasing), and the employ of resources with higher technical skills: these circumstances adhere to the content of the "Technological IT Resources"

and “Human IT Resources” components;

- The effort in evolving organizational change: process redesign, rules redefinition (i.e.: the surgery protocols), and creation and evolution of structures (i.e.: the project team, later transformed in a unit); all of them are coherent with the "Complementary Organizational Resources" component;
- The commitment to activities underlying value generating process, as inbound logistics, manufacturing (in the presented cases, surgery interventions), which pertain to "Business Process" component;
- The attention paid to the research of efficiency, declined in terms of flexibility, inventory management, time savings, in some specific processes (i.e.: purchasing, logistics), recalls the content of the "Business Process Performance" component.

As instead regards the focal entity level (considered in the model by Melville et al. [5] as the total sum of processes and organizational resources that form a firm), it is normally assumed that measures on Business Process Performance should reflect Organizational Performance. It can be argued that, in the public sector context, this passage cannot be taken for granted. Efficiency improvements at organizational level, like for example the cited reduction of roles and tasks involved in the process (as in the cases 2, 3, 5 and 7) or the positions removal (e-Logistics case), generate the so called “slack resources” in the meaning intended by Bourgeois [26], but do not easily turn into value, as a real value is capitalized only when these resources are allocated to new activities or moved in other positions (then improving services offered) or even removed (yielding actual savings in the balance sheet). In the case of a PA, for example, a reduction of time execution of a business process, as well as a more certain elapsed time for the same process, can become “public value”, in terms of a higher service level perceived by citizens using the PA’s service. However, such reductions in effort cannot turn into true financial savings for the PA because the same human resources whose effort was reduced can hardly ever (due to law constraints) be reassigned to new tasks or activities, neither they can be dismissed.

Given the mentioned perplexities on the role of the competitive environment for a PA, it is out of discussion that the focal PA is immersed in a total different environment, compared to the one of a private company, which is animated by different subjects with different roles, like: policy makers, Public Agencies and corresponding partners. Moreover, the public environment has different characteristics with regard to the private one: competition with similar entities is usually not required, instead of collaboration; laws and rules are more restrictive than for private entities; and each public body is inserted in an institutional hierarchical structure. All these differences may influence, even hardly, the behaviour of a public body in addressing IT-based innovation.

The former considerations do not support the emphasis posited in the model of Melville et al. [5] on the Resources Base View, with its focus on the gaining of a competitive advantage and on profit as a measure of success. The choice of some specific measures that rely only on the passive side of the financial cycle, made by an organization like the LHA of Viterbo, which denotes a so significant attention to a careful assessment of the outcomes produced, reinforces this statement: IT innovation is carried on with the only target of reaching improved efficiency and service quality. As regards the latter issue, the more and more rigid constraints, the decisive presence of other actors (Public Agencies, or other PAs in a different hierarchical position respect to the focal PA), the different relationships with those (providers) already present in the original model, and the collaborative relationship with peers, ask for a different formulation

of the environment external to the focal PA, and of its components.

Finally, when considering public entities the more external layer of Macro Environment and its component, as defined in the original model, should be partially adapted. While most of the factors – like culture, infrastructures, population dynamics and so on – may influence both private or public organizations, the role of government and public decision makers, both as innovation promoters or funding actors, have a more direct and influential role on PAs, like the projects 2 and 3 testify.

## **Conclusions**

This research paper discusses the applicability of the IT value generation framework of Melville et al. [5] to the public sector domain, through the confrontation with the empirical evidences of seven innovation projects run by an Italian LHA.

The paper discusses in details the characteristics and role of: institutional agents, partners, and environment, that can shape the conditions under which the PAs can benefit from the value delivered by their IT investments. The paper particularly stresses the different degrees of power that these subjects can wield on the focal PA. Both the subjects and the power they wield are different, and in some cases without an alter ego, with respect to the private sector. Under a broader perspective, regarding the IT value phenomenon in the public sector context, the paper pointed the attention to the very concept of value, that assumes different facets when translated in public contexts, and on its assessment, that is no longer feasible in the PAs domain with measures based on profit or competitive advantage. Considering that PAs are usually subject to constraints like service universality that are of no use for private organizations, the paper also argues to rethink the value in scarcity perspective with the one of public value. It also calls for a rethinking of the theoretical foundations of the IT value phenomenon which, at least for the case of RBV, are probably of no application for the PAs domain.

Moreover, the paper identifies the need of defining a new adapted model for investigating IT value generation specifically in the public sector. To this regard, a future research project will be targeted to investigate this issue.

This paper is subject to two possible limitations: (i) it involves a sole type of public body, (ii) it is deeply rooted in the context of Italian PAs. Regarding the first aspect the findings can be generalized for all the LHAs, but they are also applicable to central or local governments, central and local administrations, and other bodies devoted to public services (such as schools, hospitals, public transport), since the framework of regulations, power, and institutions surrounding them is common.

As regards the second limitation, the revealed issues of the theoretical framework by Melville et al. [5] when applied to the public sector, seem to be plausibly shared by not Italian PAs, since the environment in which they operate, in terms of actors and their roles, is compatible with the one investigated in this paper. It can be anyhow argued that different regulations might alter the influence of the identified actors on the focal PA, as well as the way IT produces value for this latter. It is therefore desirable that further research addresses such issue in contexts different from that of Italian public administrations.

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