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**Article**

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Article

# Causes and Effects of Processes' Complexity in Public Institutions: Some Experiences from Italian Universities

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**Abstract:** This paper addresses the issue of complexity in the administrative processes in public institutions; in particular, accounting routines and processes are examined. Back-office activities, although having a merely supporting role in the delivery of public services, are often quite complex and use a significant amount of public institutions' resources. However, the literature reveals a scarce use of accounting data by politicians and citizens. While the relation between complexity and costs has been the subject of major research in the business world, this issue is still unexplored with regard to the administrative processes of public institutions. This paper is based on an in-depth analysis of two cases in the higher education sector.

**Keywords:** efficiency; support activities; processes; public administration



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## 1. Introduction

This paper analyzes some processes and routines enacted by two Italian universities to perform back-office activities. Processes and routines are the dimensions where resources are used to generate value.

Public value is created when an organization is clear about what they are trying to achieve, they have support for it (legitimacy/authorizing environment) and they can make it happen (the organization has the capability and resources to do it) (Moore 1995; Stoker 2006; Alford and O'Flynn 2009). The last dimension of the so-called "Public Value Triangle" highlights that public administrations should have the operational capacity to employ resources and authority along the value chain to create the desired results (Benington and Moore 2010). In our view, the analysis of processes and routines may contribute to the understanding of how organizations use resources to generate public value. However, more and more often, public institutions tend not to carry out the processes of service delivery; the vision of the "enabling state" has emerged, where the State at the central and local levels plans and (at least partly) finances public services, but where provision is located within the independent sector—comprising both the voluntary and community sectors and the for-profit sector (Osborne and McLaughlin 2005). In this context, back-office activities that support the provision of public services have gained relevance. Even in the institutions that still have a direct relationship with users, such as hospitals and universities, support processes within the organization play an important role and use up a large volume of resources.

This paper explores the issue of administrative processes' complexity, considering this as a possible source of inefficiency and an obstacle to value creation. According to Moore "to keep the organization in good condition, managers must use and adapt their administrative systems: their structures, decision-making processes, personnel systems and control mechanisms. Operational

*managers may need to make changes to these systems to increase productivity, improve the quality of reporting to supervisors ... Therefore, managers often have to make administrative innovations ...*". We consider that under certain circumstances the simplification of administrative processes responds to Moore's claim for innovation.

Simplification measures are among the most common policies adopted for the creation of public value. Two main aspects are considered: the structure of the State on the one hand, and the relationships of citizens and businesses with public institutions on the other. Examples of simplification measures that involve the relation between public administration and citizens or businesses are: the rules on transparency, tacit consent rules and the one-stop shop policies for taxpayers and businesses. In Italy, the decree 77/2021 contemplates several measures in these directions to speed up the plan to overcome the crisis induced by the pandemic. Additionally, the dematerialization of documents and digitization (i.e., technological solutions to manage complexity) are often referred to as simplification policies.

Higher education institutions (HEIs) are part of this process of simplification: students can access many services online (e.g., registration) and the memory of the paper booklets for the registration of the exams' grades is now very distant. Instead, the simplification of processes within the institutions (i.e., not referring to the relationship with users of services) had little consideration; rather, external pressures for improved accountability and transparency are plausibly boosting the complexity in this area.

This paper aims at analyzing the factors that enhance complexity at the institutional level. To this end, we examine some processes that feed the accounting system of two Italian universities. In Italy, simplification policies mainly regard the organization and functioning of the State (e.g., transfer of competencies from the central to local governments, and rationalization of administration levels with the elimination of intermediate forms of local governments) (Pollitt and Bouckaert 2011). Moreover, simplification implies the creation of executive agencies that are supposed to operate through performance contracts and the widespread introduction of "one-stop shops" for businesses (Ongaro 2004). We consider simplification at the institutional level. We address the following research questions: What factors boost the complexity of back-office activities in public organizations? Does the complexity of back-office activities affect the institution's efficiency?

This paper is organized as follows: Section 2 analyzes the literature on the complexity and simplification of administrative processes; the methodology adopted is described in Section 3. The subsequent sections include the description and the discussion of the case studies (Section 4), and findings and conclusions (Section 5).

## 2. Literature Background

The simplification of administrative processes is a multifaceted topic: it overlaps the broader theme of the "modernization" of public administration and intersects the issues of efficiency and effectiveness as well. Administrative simplification is by no means a new theme: for over a decade, it has been the keyword with regard both to the evolution of the legislative system and the relation between citizens and public administration. According to Ferrari (2018), simplification is "a kind of slogan that summarizes a series of trends all related to the democratic principle exalted by a new context of participation and translated into cooperative-contractual formulas, local autonomy which varies in degree from country to country depending on the level of vertical separation of power, horizontal subsidiarity (...), competition and the market, efficiency which is not just enterprise-oriented but is tempered by the need for forms of solidarity ...".

Given the multifaceted nature of the topic, it has been considered from different perspectives in several research fields. First, simplification has been analyzed in the extensive literature of political science and law (i.e., administrative law and fiscal law). This depends on the fact that what is presented as "bureaucratic degeneration" is, in reality, a multiplication of rules. In this perspective, simplification is meant as "reduction of the rules", aiming at producing both a greater freedom of economic initiative and savings in public

spending (Merloni and Pioggia 2018). According to Travi et al. (2018), the search for new tools which can reduce the impact of plentiful and not proportionate regulations on citizens has been dragging on for almost 20 years now. During this period, simplification measures both of general (i.e., referring to an indistinct number of administrative proceedings) and of punctual character (referring to individual proceedings) were tried out. Following the author, the most common examples of simplification policies are: procedural simplification (Travi et al. 2018), in order to reduce fulfilments for citizens and businesses; managing the stock of legislation in order to make it more and easily accessible; the simplification of fiscal rules and tax obligations; and the reduction in paper documents.

There has also been other research on the simplification processes in different countries, such as Hungary (Rixer 2014), Pakistan (Khan 1989) and Italy (Regonini 2016). The results allow a deep analysis of the issue and the opportunity to classify the different measures used to ensure simplification.

A specific literature stream considers administrative simplification mostly with regard to the relation of public administration with other subjects, i.e., citizens and businesses (Gobba 2020). However, the daily experience of public servants shows that simplification also represents a main issue within public institutions as well as in the relations among public organizations. Examples of reforms aiming at reducing complexity within the public sector are the reduction in the number of public bodies (e.g., the diminution of municipalities in Greece, Denmark, Ireland, and Albania) or governmental levels (e.g., the case of “provinces” in Italy). In this perspective, simplification stems from reforms of structural aspects of the public realm implying a different distribution of power and functions. Some analyses on simplification in public institutions have been conducted also in the higher education sector (Davidson 2014), in some cases specifically on the complexity of processes (Alexander and Hjortsø 2019).

At the institutional level, simplification has been studied with regard to front-office activities (Rinaldi et al. 2015). At the organizational level, simplification is still almost unexplored. The public management literature rarely considers simplification in of itself; rather, the focus is on methods to enhance and measure efficiency and effectiveness such as business process re-engineering (BPR), performance measurement, performance management and the accounting system. In particular, BPR is viewed as a comprehensive and effective way for organizations to enhance efficiency (Rinaldi et al. 2015). It implies the reinventing of government by reforming bureaucracy through restructuring and the revitalization of government processes. Receipts that characterize the New Public Management rhetoric are also mentioned as constitutive elements of BPR initiatives in the public sector: the enhancement of government entrepreneurship, the introduction of competitive spirit and the improvement of performance measurement (Halachmi 1995). Thus, re-engineering is a call for a change in perspective as opposed to process modification or improvement. It is not our purpose to take stock of the findings of BPR studies in public administration; however, they have at least the merit of having focused the attention on the pitfalls of acting according to well-rooted habits.

Thus, this paper contributes to the debate by considering a different area of simplification: support activities (instead of frontline) at the institutional level (instead of the field or public sector level). The attention of researchers in public accounting has been catalyzed by the shift from cash-based to accrual-based accounting propitiated by NPM-inspired policies. Using a mostly technical approach, researchers have concentrated on the adequacy of accrual accounting for public institutions and on the move toward IPSAS (Guthrie 1998; Carlin 2005; Paulsson 2006; Christensen 2007; Christiaens and Rommel 2008; Lapsley et al. 2009; Ella et al. 2011; Agasisti et al. 2015; Cohen et al. 2021). However, we consider that the shift to accrual accounting per se does not improve efficiency; rather, the complexity of accrual-based systems may give rise to complexity and inefficiencies.

A recent research stream claims that complexity should not be seen as something that leads to inefficiency *tout court*; indeed, a growing body of literature explores how managing complexity could give new opportunities to businesses (Kohr et al. 2017) and

public organizations (Edelenbos et al. 2009). Strategies to manage complexity in the public sector pass through a well-balanced path between trust and control (Edelenbos and Eshuis 2009); case studies show that the lack of strategy in combining trust and control can influence the creation of public value.

With reference to routines and processes, on the other hand, accounting research has focused on managerial accounting practices. An important body of literature considers the process of emergence and change in management accounting routines; in particular, the institutional theory (van der Steen 2011) and the contingency theory have been adopted to explain the change in management accounting practices as reactions to external stimuli.

We consider routines and processes that support the budgeting, accounting and reporting system of some public institutions as an example of a broader group of “support activities”. Routines are interpreted as a set of recurrent, situated practices. Burns and Scapens (2000) define routines as “the way things are actually done” and as “procedures habitually in use”. Thus, while a procedure may reflect the way a *una tantum* activity is performed, routines are characterized by repetition. For the purposes of this paper, however, the concept of “procedure” is used as a synonym of routine. The idea of procedure also somewhat overlaps with the concept of process. However, two aspects allow us to distinguish between these concepts. According to ISO 9001 (2015), a process is “a set of related or interacting activities, which transform inputs into outputs”, while a procedure is “a specific way to carry out an activity or a process”. Thus, two main differences between procedures and processes can be identified. First, procedures are based on rules that are either developed internally (i.e., by the organization itself) or are imposed by third parties; these rules define how the process must be carried out. However, one process may be accomplished according to different procedures. Second, a procedure can be narrower than a process; in fact, a procedure can refer to a single activity, while a process is a set of related activities.

The functioning of the accounting system, regardless of whether it is cash or accrual based, implies the carrying out of activities (how things are actually carried out). Activities give rise to costs. There is a lack of knowledge on what the sources of inefficiencies are in the support activities performed in public institutions and on the possible strategies to improve efficiency in this area. We assume that there is a direct relation between the complexity of procedures and their cost. This assumption underlies a great part of the management accounting research (Cooper and Kaplan 1988). Thus, the simplification of processes and routines would reasonably enhance efficiency (Weitzenboeck 2021).

Notwithstanding the relevance attributed to simplification, the processes and the routines adopted in support activities have often become more and more complex: budgeting, accounting, reporting and auditing activities reflect this trend. A recent study of the Policy Department for Structural and Cohesion Policies of the European Parliament on the simplification of procedures within the European Structural and Investment Funds confirms that “the problem is essentially one of the costs incurred in the process of financial control and audit versus the benefits this produces” and that “at the present moment, significant simplification has yet to be realized” (Ferry and Polverari 2018).

We argue that researchers in public management may play an important role for the definition of simplification strategies for processes and routines at the institutional and infra-institutional levels.

### 3. Context and Methodology

This paper is based on an in-depth analysis of administrative processes in two Italian universities. To enhance the reader’s contextual understanding and to indicate why the analysis of processes at the organizational level is meaningful in the Italian public administration, we introduce our analysis with a brief overview of major reforms introduced in the country.

Italian public administration still experiences a gap between the spirit of some broad reforms at the system level and the bureaucratic culture at the organizational level. On

the one hand, important reforms have been introduced aiming at improving efficiency, accountability and transparency. NPM-inspired reforms led to a markedly increased adoption of contracting-out, the introduction of performance management systems (with legislative decrees 269/1999 and 150/2009), and the adoption of accrual accounting in some sectors of public administration, including higher education. The central government also introduced performance-linked rewards for human resources (legislative decrees 150/2009 and 74/2017) and, with reference to higher education, performance-based funding to reward institutions. The new funding mechanism has remarkably increased the sector's competitive dynamics.

Italy also adopted simplification policies with regard to the organization and functioning of the State (e.g., the transfer of competencies from central to local government and the rationalization of administration levels with the elimination of intermediate forms of local governments) (Pollitt and Bouckaert 2011). Moreover, simplification implies the creation of executive agencies that were supposed to operate through performance contracts, the widespread introduction of "one-stop shops" for businesses (Ongaro 2004) and tacit consent rules.

However, Italy has a strong tradition of a formalistic and bureaucratic approach to public administration. The above-mentioned reforms aimed at instilling a logic of economic rationality that reflects values such as efficiency, effectiveness and accountability in the results (both individual and organizational). The working environment of today's government officials, however, remains bureaucratic rather than "post-bureaucratic" (Parker and Bradley 2004). In such a context, the analysis of processes at the institutional level gains relevance. Simplification policies have interested the central government and specific sectors of public administration, while the implementation of such measures within each public organization is left to the initiative of the single institution; thus, the rationalization of the political and administrative system of the country did not exhaust the simplification process.

The simplification of operating processes at the organizational level has been little investigated. We aim to study the determinants of processes' complexity at this level; we consider routines related to support activities (i.e., back-office), since little consideration has been given to the effects of complexity in this area, although it often represents the core part of public institution jobs. In particular, our analysis regards the planning, accounting and reporting system. This is one of the fields that was most involved in regulatory interventions for efficiency improvement and result orientation. In this area, reforms aimed at improving cost control, the transparency of financial reports, and the accountability of public managers through performance measurement systems. The norms have mostly focused on technical aspects: contents and layout of the budget, base of the accounting system, layout of the financial reports, methodologies for the definition of goals and the measurement of results. The design of the procedures that feed the accounting system is left to the initiative of the individual organization.

The accounting system represents a clear example of how the application of norms inspired by the rhetoric of efficiency and effectiveness is imposed in contexts characterized by attention to compliance with the rules. We consider two Italian universities: in the first case, we examine the procedures that feed the accounting system, while in the second institution the focus is on the phase of reporting the results. Both institutions started their own paths of simplification: complexity was already identified as an issue in both organizations.

In November 2019, university "A" launched an initiative for the simplification of the accounting procedures for research projects. A working group was set up with the participation of 11 members of the administrative staff and one of the authors. The working group met 8 times between November 2019 and April 2020 and formulated a proposal for the simplification of two procedures. The meetings lasted an average of two hours; minutes were drawn up for each meeting. The process was interrupted because of the pandemic crisis and because the introduction of new accounting routines would have been possible only with a broader modification of administrative accounting regulation of the

organization. Our analysis is based on participation in the meetings and on the minutes produced by the administrative staff after each meeting.

The analysis conducted in university “B” considers the process of reporting. Among its strategic goals for the period 2019–2023, this institution considers the “growth of a socially responsible university”. In line with this strategic goal, the general manager and the Rector strongly promoted the redaction of a social report. The process started in November 2019. Data collection involved all the organizational units of the institution. Although some face-to-face meetings were organized at the beginning to set up the job, with the advent of the pandemic, remote working became the norm. The Microsoft Teams application was used to collect the data (mainly on Excel and Word files) of the social report, as well as for the meetings. One member of the research team had the opportunity to observe the whole process with the role of periodically informing the Rector and the general manager on the progress of the project. A middle manager was appointed for the coordination of the process. This paper considers the development of the process of social reporting. In particular, the analysis focuses on the following aspects of the process: phases of the project and its timing, the number of units involved, the level of involvement of different subjects in the process, the relations among organizational units, the obstacles to its fulfillment and the afterthoughts with consequent decisions.

This paper draws upon the work of Stake (1995), interpreting the two cases to conceptualize an understanding of the causes and consequences of complexity of public administrations’ processes at the organizational level. The findings of case-study research suffer limitations with regard to the possibility of making generalizations; however, as stated by Siggelkow (2007), a single-case study, well grounded in previous literature, can help the research team shed light on possible gaps in a theory or find specific aspects of it that deserve more detailed analysis.

#### 4. Case Studies

Despite the fact that technology today enables the collection and processing of an increasing volume of data, the complexity of support activities in public administration has increased in recent decades; complexity depends on the number of subjects involved in processes and procedures, as well as on the volume of relations among them (Collinson and Jay 2012). Thus, a procedure that requires two signatures of different subjects working in different departments in order to authorize a transaction is more complex than a procedure where one subject can authorize the same transaction through a specific business application. The effects of complexity on the costs of support processes are plausibly negative: each adjunctive activity requires resources, i.e., expenses. Moreover, when activities do not add value to the addressees, complexity gives rise to inefficiency, i.e., the consumption of resources with no added value. In this section, we describe two examples of processes and procedures that we had the opportunity to observe in the administrative departments of two Italian universities.

##### 4.1. Case A Description

As specified in Section 3, Italian universities adopted accrual accounting after a general reform of the higher education system. The shift to accrual accounting should have allowed universities to implement cost control techniques. However, only very few universities have adopted managerial accounting and the cost of teaching or research programs is barely correlated to the outcomes of institutional activities (Busetti and Dente 2014). In the university that we consider here (“university A”), a specific accounting routine requires the administrative staff of the research departments to prepare an accrual-based budget for each research grant application; this routine was introduced as an ex-ante internal control to avoid the incurrence of losses from research projects, something that sometimes occurred in the past. Thus, the administrative staff of the research departments must prepare two different budgets for each research project proposal: one is requested by the external funder, the other by the university’s central administration. De facto, the internal

budget of the research project replicates the information requested by the funders using a different layout; moreover, some additional data are requested. Unsurprisingly, the project budget prepared for the university's central administration never complies with the budgeting rules set by the funders: it considers a different classification of the expenses and even different rules on general expenses. Thus, even if only 10% of the research projects submitted receive the grant, the departments' staff must prepare two different budgets for each research proposal. This routine has entailed a considerable burden on the workload of the departments' administrative staff. The budgets of research projects prepared for internal use are double checked by two organizational units of the university's central administration: the research office verifies the suitability of all budgets (i.e., that the total income from the project allows the coverage of general expenses of the university for at least 20% of the total value of the project) and the financial accounting office checks the compliance with the accounting internal regulation. Projects that do not meet all conditions simply cannot be submitted.

The administrative staff of the research departments also claim a simplification of the accounting rules after the approval of the research project. Once the grant is obtained, to avoid the incurrence of losses due to ineligible expenses at the end of the project, the central administration does not allow departments to use the available financial resources for a value corresponding to the general expenses (amounting up to 20% of the research grant), thus limiting the activity of the departments. This restriction was considered disproportionate to the value of ineligible expenses, which is usually very small. The administrative staff of the departments proposed the recoding of a smaller provision for risk (5% of the research grant) to overcome this limitation.

A third important simplification measure requested by the departments' staff regards the reporting phase. The research office of the university's central administration asks the academic staff to prepare a timesheet for each research project, even when the external funder did not request it. The timesheet reports day by day the number of hours spent on the research project and the activities performed by the researcher. According to the internal procedure of the university, until the timesheet is completed by all the researchers, the reporting of research expenses cannot be completed. Thus, the timesheet becomes necessary to also pay the researchers and the administrative staff for the activities performed in the research projects. When the timesheet is not requested by the external funder, the research team agrees upon the remuneration of each member of the group in the budgeting phase, depending on the value of the project and on each member's role in the project. The number of hours one is expected to spend in the project is also considered, although this is not the most important factor. Both the administrative staff of the departments and the academic staff consider the fulfillment of the timesheet—when not requested by the external funder—as a useless and time-consuming burden. Moreover, the timesheet for internal use is not subject to any form of control. Therefore, it is prepared inaccurately (when not arbitrarily) by the researchers and does not necessarily report what they really did; rather, it complies with the initial decisions about the remunerations within the research team. Since researchers consider this as a bureaucratic burden, they are reluctant in the fulfillment of the task; therefore, collecting all the timesheets from the researchers often takes quite a long time, with the consequence that the payment of the fees to the personnel involved in the project slows down. The departments' administrative staff proposed to simplify this phase by substituting the timesheet with a self-declaration made by the researchers about the total number of hours spent on the research project.

#### *4.2. Discussion of Case A*

In university A, accounting procedures are still influenced by well-rooted habits that were established before the reform of the higher education sector and of HEIs' accounting systems. Before 2010, university departments enjoyed financial and accounting autonomy, and approved their own budgets and financial statements. After the reform, the budget is for the university as a whole, as are the financial statements. Nevertheless, the departments



tend to retain their autonomy; they consider controls from the central administration as interferences in their activities. A deep contrast between the departments (where teaching and research activities are developed) and the central administration persists. The departments accuse the research office of assuming the role of an inspector of their activities, rather than the role of a promoter of research activities and of support to the faculty for the preparation of projects. On the other hand, the central administration distrusts the competencies of the departments' administrative staff.

The frequent controls that the central administration puts in place on the departments' acts (e.g., on the verification of the economic sustainability of the projects) and of the researchers' activities (timesheets) enhance the complexity of the accounting procedure. According to the managers working in the central administration, controls are necessary because the losses suffered in past research projects were due to mistakes of the departments' staff. Of course, losses generated by one department are covered by the university as a whole; in other terms, resources are subtracted from virtuous departments to deal with the errors of the department that made some mistakes.

Controls made by central administration regard the economic sustainability of the projects: the focus is on cost coverage. Cost control is particularly stressed by the NPM logic. Nevertheless, the approach adopted by the university's central administration is bureaucratic. The departments are not accountable for the economic sustainability of the projects: they have just to comply with centrally defined rules. Norms aiming at avoiding risks constitute the "boundary lever of control" (Simons 1995); from this perspective, control has an inspective role rather than supporting managerial decisions. The case of university A shows the effects of the adoption of a rational business-like logic (attention to the margins of research projects) in a bureaucratic organization: the objective of avoiding losses is pursued by setting rules and implementing controls on compliance with them, rather than making the staff responsible for the result. The introduction of managerial tools (accrual accounting) in a context characterized by bureaucratic culture has brought greater attention to costs, but has not affected the approach for the design of procedures.

Moreover, control over the departments' activities have intensified with the shift from commitment accounting to accruals. Because of the complexity of the new accounting system, the possibility for the departments' administrative staff to make mistakes has increased. The persistent inspective activity reduces the departments' autonomy and responsibility and takes up resources in the central administration; these effects collide with the expectations of the advocates of New Public Management, who saw in the adoption of accrual accounting an opportunity to enhance efficiency and to make managers more accountable for results.

Another relevant aspect of the university case regards the volume of data requested for internal purposes. The requests of data often go beyond real needs; the timesheets are just an example of this.

#### 4.3. Case B Description

In 2019, university "B" defined its new five-year strategic plan: one of the strategic goals was conceptualized as the "development of a socially responsible university". To pursue this goal, the general director of the university decided in accordance with the Rector to consider the issuance of a social report as an operating objective for the year 2020. This decision entailed the extension of the reporting system of the institution: non-financial reporting had to become complementary to the traditional financial statements. Italian public institutions carry out social reporting on a voluntary basis: in 2015, only 20 of the 66 Italian public HEIs had a social report (Mio 2016). A total of 10 universities published other kinds of non-financial statements: sustainability reports, mandate reports or other forms of non-financial reporting. According to the governing bodies of university B, the main purpose of implementing the process of social reporting was to "give an account to stakeholders of the results beyond their financial dimension".

The university had already published two editions of the social disclosure in 2008 and 2009; its adoption was interrupted in the following years because of the considerable volume of resources used by the process and because of the lack of a strong support from the top management of the organization. Moreover, in 2010 the university started a project for the introduction of accrual accounting and priority was given to this challenging activity. After the election of the new Rector and with the accrual accounting system in function, in 2019 the issuance of the social report was once again considered a priority for the institution.

Since the social report aimed at measuring the performance of the institution in all areas, the reporting process involved almost all the organizational units: all the 10 departments for teaching and research activities and seven areas of the central administration (e.g., accounting and control, human resources, property management, research office, teaching support office, technical infrastructures, libraries and the university's editor). Data collection proved to be particularly complex.

The process was coordinated by a middle manager who already had a prominent role in preparing the previous editions of the disclosure. The initial idea was to replicate the past experience; in an initial meeting, the coordinator repropounded all the indicators used in the previous editions of the social report to the heads of the offices that had to be involved in the collection of data. This initial meeting also aimed to launch the project within the institution and to draw its roadmap. The process accumulated delays from its early stages due to difficulties in collecting the data: the coordinator did not have enough authority to impose an acceleration. In this case, the departments (peripheral structures) demonstrated more diligence than central administration offices.

To gain stronger support from the university's governing bodies, the project leader involved the Rector's delegate for the budget in the project. In this second phase, it was agreed that the traditional formula of publishing a printed version of the social report was not up to date anymore: a dynamic website had to be developed instead. A PDF summary of the report would then be posted on the website. The need to prepare the technological infrastructure of the social report further expanded the working group of the project.

In summer 2020, the Rector asked to verify the possibility for the organization to be included in the GreenMetric project, where universities are ranked according to specific sustainability parameters. The project underwent another turning point and started a third phase of the project: it was decided to attach to the social report a specific section dedicated to the performance achieved with regard to the United Nations' Sustainable Development Goals (SDGs). In this phase, the Rector's delegate for sustainability also joined the project. Despite the support of the Rectors' delegates, the project continued to experience delays. Data gathering and processing went on very slowly; apart from the difficulty in finding some data, the processing of information proceeded slowly since only two employees knew how to use the software (Tableau). This produced a bottleneck which slowed down the site's feeding process considerably.

Since the institution did not have a specific disclosure on inclusivity and gender issues, in the last phase of the project it was decided to further enlarge the scope of the website by disclosing data on this topic.

The initial goal of issuing the 2019 social report by the end of 2020 was delayed and partially changed. The general director imposed a new deadline in April 2021 for the adoption of the report and suggested renaming it the "Integrated social report" to highlight that sustainability, gender and inclusivity issues were also considered.

#### *4.4. Discussion of Case B*

The reporting process of university B has become more and more complex in recent years; the introduction of the "Integrated Social Report" is just the last step of this change. The wider the scope of the process, the greater the volume of resources needed to implement it and, therefore, its complexity and its cost. Improvements in the accountability and transparency of the results should offset the increased costs; in the long term, an accountable institution is also expected to enhance its capability to generate public value. New Public

Management studies have emphasized the (presumed) positive relationship between accountability and results, while the cost of improving institutions' accountability and transparency has been disregarded.

The case discussed here shows the other side of the coin. Actually, we do not have any measure of the effect that the improvement of universities' accountability has on the public value generated; on the other hand, we can estimate that more than 30 persons in the university spend a considerable part of their worktime to contribute to the preparation of some kind of disclosure, either financial or not financial. The case of the social disclosure of university B well represents the relation between the complexity of the process and the resources used. After the first phase, the project's complexity grew because of the choice to use a technological support (dynamic website) and because of the new perspectives of the disclosure (i.e., not just social, but also sustainability, inclusion and gender issues). Due to these extensions of the project, more on more persons had to be involved for data collection and processing. The changes were opposed by the participants: they claimed that moving away from the original design implied carrying out activities that have already concluded, thus slowing down the whole process. The progressive widening of the disclosure toward new perspectives raised the reluctance of organizational units to spend time to provide data for "yet another disclosure".

Thus, even assuming that increased accountability leads to better performances, one should not disregard the fact that it also brings complexity to internal processes and consumes resources. According to the complexity theory, organizations may use control or trust (or combinations of the two) to manage complexity (Edelenbos and Eshuis 2009). In this case, control (through the establishment of precise deadlines for data collection and processing) prevailed on trust (i.e., a positive expectation that other actors refrain from opportunistic behavior); however, control practices did not prevent delays from occurring, since nobody could be sanctioned for that. This case indicates that simplification has to be considered when complexity results in new activities with no or poor added value for the stakeholders. The preparation of the social report required the collection and processing of more than 350 indicators of different nature (input, process, output, outcome and context indicators) for each of the two years considered; moreover, many indicators were detailed by the department and/or course of study. Very detailed performance measures do not always lead to improved transparency and accountability: bad performances may be concealed among hundreds of indicators and the existence of different performance indicators referring to the same aspect may augment the ambiguity about the institution's results.

Similarly, increasing the number of disclosures does not necessarily enhance the stakeholders' capability to assess a public institution's performance. Table 1 summarizes the reports that the university has to prepare: the asterisks indicate the reports that HEIs had to prepare even before the NPM-inspired reforms in 2009 (on performance management and transparency), and in 2010 (on higher education).

The increased variety and volume of information to provide and the number of different disclosures to prepare has increased the complexity of the reporting process in the last 10 years. This effect becomes even more clear if one also considers that for almost all the disclosures there is a corresponding document in the planning phase (e.g., performance plan, economic budget, cash budget . . . ). Sometimes, different disclosures share similar contents. This is the case, for instance, for the Rector's statement, the social report and the Non-financial Performance Disclosure (NFPD). The Rector is a compulsory annex of the university financial statement that introduces the results of the year (both financial and non-financial) in light of the general context. The NFPD is prepared in accordance with decree 150/2009 and published on each institution's website according to decree 33/2013. This document also aims at providing information on the achievements with reference to organizational (and personal) goals. Thus, three different documents provide the same information using different layouts and classifications of the indicators. Complexity might be reduced by defining a standard set of indicators and a standard layout to meet the information needs of different stakeholders.

**Table 1.** Universities' reports.

		<b>Outputs of the Reporting Process</b>	
		<b>Financial</b>	<b>Non-Financial</b>
Requested by the norms	1.	Financial report: <ul style="list-style-type: none"> <li>• Balance Sheet</li> <li>• Statement of Financial Performance</li> <li>• Cash Flow Statement</li> <li>• Notes</li> </ul>	1. Rectors' statement 2. Non-financial Performance Disclosure (NFPD: comparison between goals and results)
	2.	Financial report according to commitment accounting: receivable, payables and cash movements occurred in the period	
	3.	Classification of the expenditures by destination: missions and programs	
	4.	Consolidated financial statements	
	5.	Reporting for transparency norms: cost of public services	
On a voluntary basis			1. Social Report 2. Gender Report 3. Sustainability Report

Another example of complexity induced by the production of new reports is the case of the consolidated financial statements. For university B, the consolidation process modifies the figures (revenues, expenses, net assets . . . ) of the university's financial statement by 1%. Thus, the value added by the information provided with the consolidated statement is not comparable to the cost of preparing it.

## 5. Conclusions

The debate on the simplification of public administration dates back to the 1950s, when [Kidneigh \(1954\)](#) already linked it to efficiency and effectiveness. At that time, the solution proposed was *"the use of scientific method and logical thought-ways in the process of translating objectives (policy) into services"* and *"standardizing operations through agreed upon uniformities in policy and procedure that can be articulated and communicated through a manual"*. From a bureaucratic perspective, *"the standardization of operations provided opportunities for simplifying the administrative process through job and duty analysis that can serve to reduce the number of steps to be taken in carrying out the work. This inevitably implies the division of labor in such a way as to provide for specialization of workers with reduction of the scope of responsibility for given workers assigned to given phases of the process"*.

However, the fragmentation of tasks and responsibility did not produce the expected effects in terms of efficiency, effectiveness and accountability. Rather, it augmented the disaffection of civil servants; moreover, compliance with rules and procedures resulted in scarce attention being paid to results.

Through performance measurement, putting an emphasis on output control, orientation toward market mechanisms, private sector management practices and parsimony in resource use ([Hood 1991](#)), NPM promised a marked change in public institutions' approaches and more attention to public services users' needs.

The cases considered here show that the introduction of managerial recipes such as accrual accounting or performance measurement and reporting did not lead to improved efficiency and effectiveness. University A has emphasized cost coverage and the economic sustainability of research projects; the budget of research projects and the recording of research transactions are made according to the new accounting system (accrual). However, the focus on the margin of research projects (i.e., the avoidance of losses) did not result in improved efficiency in the use of resources. Instead, the emphasis on the economic

performance and the scarce familiarity of the staff with the new accounting system led the central administration to intensify control over the departments. The whole process was slowed down, due to the introduction of non-adding-value activities. The staff of the department claim more autonomy and responsibility in results, but the approach used by the central administration remains bureaucratic: the formal use of the timesheets clearly shows that compliance to (internally defined) the norm and procedures prevails.

The complexity of procedures stems from the need for inspective controls (which is typical of law) and from the volume of information requested to manage organizations and to report their performances (which is typical of management studies). Several analysts see an inherent tension between basic private management techniques involving competition, speed, efficiency, individual accountability and responsiveness to users of services, and the slow, detailed, egalitarian and equitable approach inherent in administrative law (Guyomarch 1999).

From the perspective of public value, accountability and the reporting of performance is also necessary to gain legitimacy. However, the case of university B shows that being accountable to different stakeholders enhances complexity by requiring the accounting system to generate a growing volume of information. Different kinds of disclosures are made due to legal requirements or are done so voluntarily; indeed, the same performance measures are used in different reports with different aims and targets.

A consequence of this continuous activity of data gathering and processing is that in the eyes of the departments' staff, all requests of new data are delegitimized, even if relevant. Further research is needed to explore the effects of this form of complexity on employees' stress and motivation.

This also happened in other sectors of the Italian public administration (Caccia and Steccolini 2006) and it does not produce appreciable effects on political and managerial decisions. This reinforces the question about the usefulness for politicians, managers and citizens of imposing the production of a huge volume of data through highly complex accounting systems.

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