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Master in Business Administration (MBA)

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***Rethinking Bureaucracy in Public-Private Collaboration: The Case of the
Greek National COVID-19 Vaccination Program and the ESIDIS System***

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Patras, Greece, June 2026

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Dedication

This thesis is dedicated to my family, my husband, and my daughter for their continuous support and patience. I would also like to dedicate this thesis to my mother, who was the driving force behind this endeavor and continuously encouraged me to achieve more than I believed I could.

Abstract

This dissertation examines the role of bureaucracy in public administration through digital transformation, focusing on the Greek National Electronic Public Procurement System (ESIDIS) and its contribution, from a tender procedure perspective, to the implementation of the Greek National COVID-19 Vaccination Program. The study explores how traditional bureaucratic principles –such as formal rules, hierarchy, documentation, and accountability– are not eliminated but transformed into digital form.

Adopting a qualitative single-case study approach, the research combines semi-structured interviews with key stakeholders and documentary analysis of procurement data and processes. The findings suggest that ESIDIS operates as a digital mediator of public procurement, embedding bureaucratic procedures into standardized electronic workflows. This transformation appears to contribute to the enhancement of transparency, traceability, accountability, and coordination among public and private actors, thereby supporting public-private collaboration, particularly in crisis conditions.

However, the study also identifies persistent constraints, including legal rigidity, procedural complexity, usability challenges, and technical limitations. These factors suggest that while digital platforms may improve efficiency in specific stages of procurement –especially tendering and contract award– they do not fundamentally alter the existing legislative and bureaucratic structures. Instead, they digitize and standardize existing processes.

The contribution of ESIDIS to the COVID-19 vaccination program is therefore primarily procedural and institutional, facilitating procurement-related activities rather than directly determining overall program success. The research concludes that bureaucracy can function as an enabler of efficiency when supported by well-designed digital systems, but its effectiveness depends on system usability, legal adaptability, and integration across the entire procurement lifecycle.

Overall, the study highlights the dual nature of digital bureaucracy, underlining both its potential to enhance governance processes and its structural limitations.

Keywords: Bureaucracy, Digital Governance, E-Procurement, ESIDIS, Public-Private Collaboration, COVID-19 National Vaccination Program

Επαναξιολόγηση της γραφειοκρατίας στη συνεργασία Δημοσίου – Ιδιωτικού τομέα: Η περίπτωση του Εθνικού Προγράμματος Εμβολιασμού κατά του COVID-19 και η Πλατφόρμα ΕΣΗΔΗΣ

Βαλασία Ντρίβα

Περίληψη

Η παρούσα διπλωματική εργασία εξετάζει τον ρόλο της γραφειοκρατίας στη δημόσια διοίκηση μέσω του ψηφιακού μετασχηματισμού, εστιάζοντας στο Εθνικό Σύστημα Ηλεκτρονικών Δημοσίων Συμβάσεων (ΕΣΗΔΗΣ) και τη συμβολή του, από την άποψη της διαγωνιστικής διαδικασίας, στην εφαρμογή του Εθνικού Προγράμματος Εμβολιασμού κατά της νόσου COVID-19. Η μελέτη διερευνά πώς οι παραδοσιακές γραφειοκρατικές αρχές - όπως οι τυπικοί κανόνες, η ιεραρχία, η τεκμηρίωση και η λογοδοσία - δεν εξαλείφονται αλλά μετασχηματίζονται σε ψηφιακή μορφή.

Υιοθετώντας μια ποιοτική προσέγγιση μελέτης περίπτωσης, η έρευνα συνδυάζει ημιδομημένες συνεντεύξεις με βασικά ενδιαφερόμενα μέρη και ανάλυση εγγράφων/τεκμηρίων, δεδομένων και διαδικασιών προμηθειών. Τα ευρήματα υποδηλώνουν ότι το ΕΣΗΔΗΣ λειτουργεί ως ψηφιακός μεσολαβητής των δημόσιων συμβάσεων, ενσωματώνοντας γραφειοκρατικές διαδικασίες σε τυποποιημένες ηλεκτρονικές ροές εργασίας. Αυτός ο μετασχηματισμός θεωρείται ότι συμβάλλει στην ενίσχυση της διαφάνειας, της ιχνηλασιμότητας, της λογοδοσίας και του συντονισμού μεταξύ δημόσιων και ιδιωτικών φορέων, υποστηρίζοντας έτσι τη συνεργασία δημόσιου και ιδιωτικού τομέα, ιδίως σε συνθήκες κρίσης.

Ωστόσο, η μελέτη εντοπίζει επίσης επίμονους περιορισμούς, όπως νομική ακαμψία, διαδικαστική πολυπλοκότητα, προκλήσεις χρηστικότητας και τεχνικούς περιορισμούς. Αυτοί οι παράγοντες υποδηλώνουν ότι ενώ οι ψηφιακές πλατφόρμες μπορούν να βελτιώσουν την αποτελεσματικότητα σε συγκεκριμένα στάδια των προμηθειών - ιδίως των διαγωνισμών και της ανάθεσης συμβάσεων - δεν αλλάζουν ουσιαστικά τις υπάρχουσες

νομοθετικές και γραφειοκρατικές δομές. Αντ' αυτού, ψηφιοποιούν και τυποποιούν τις υπάρχουσες διαδικασίες.

Η συμβολή του ΕΣΗΔΗΣ στο πρόγραμμα εμβολιασμού κατά της COVID-19 είναι επομένως πρωτίστως διαδικαστική και θεσμική, διευκολύνοντας τις δραστηριότητες που σχετίζονται με τις προμήθειες και όχι καθορίζοντας άμεσα τη συνολική επιτυχία του προγράμματος. Η έρευνα καταλήγει στο συμπέρασμα ότι η γραφειοκρατία μπορεί να λειτουργήσει ως παράγοντας που επιτρέπει την αποτελεσματικότητα όταν υποστηρίζεται από καλά σχεδιασμένα ψηφιακά συστήματα, αλλά η αποτελεσματικότητά της εξαρτάται από τη χρηστικότητα του συστήματος, την νομική προσαρμοστικότητα και την ενσωμάτωση σε ολόκληρο τον κύκλο ζωής των προμηθειών.

Συνολικά, η μελέτη υπογραμμίζει τη διττή φύση της ψηφιακής γραφειοκρατίας, υπογραμμίζοντας τόσο τις δυνατότητές της να ενισχύσει τις διαδικασίες διακυβέρνησης όσο και τους δομικούς της περιορισμούς.

Λέξεις-κλειδιά: Γραφειοκρατία, Ψηφιακή Διακυβέρνηση, Ηλεκτρονικές Προμήθειες, ΕΣΗΔΗΣ, Συνεργασία Δημόσιου-Ιδιωτικού Τομέα, Εθνικό Πρόγραμμα Εμβολιασμού κατά της νόσου COVID-19

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List of Acronyms

AADE:	Independent Authority for Public Revenue
AI:	Artificial Intelligence
AMKA:	Greek Social Security Number
BOT:	Built-Operate-Transfer
DIAVGEIA:	Greek transparency platform
EODY:	Hellenic National Public Health Organization
ERDF:	European Regional Development Fund
ESIDIS:	National Electronic Public Procurement System
ESPA:	Greek partnership agreement funding framework (2014-2020)
EU:	European Union
G2B:	Government to Business
G2C:	Government to Citizen
G2G:	Government to Government
Gov.gr:	Greek Government Digital Portal
HSPPA:	Hellenic Single Public Procurement Authority
ICT:	Information and Communication Technologies
IPA:	Interpretative Phenomenological Analysis
KEP:	Citizens Service Center
KIMDIS:	Central Electronic Registry of Public Contracts
KPIs:	Key Performance Indicators
NGO:	Non-governmental organizations
PPPs:	Public-Private Partnerships
RFP:	Request for Proposal
RQ:	Research question
RRF:	Recovery and Resilience Fund

1. Introduction

The increasing use of digital technologies has reshaped public administration, transforming traditional bureaucratic systems into digitally mediated processes. While bureaucracy is often associated with rigidity and inefficiency, contemporary developments suggest that it is being adapted rather than eliminated, with its principles embedded into digital form. In many cases, traditional bureaucratic principles, such as formal rules, hierarchy, documentation, accountability, and standardized procedures, are transferred to digital platforms and electronic workflows. In this way, a new form of digital bureaucracy is created, in which administrative processes become more traceable and transparent, but may remain complex and legally rigid.

This issue is particularly important in the field of public procurement. Public procurement is inherently a highly regulated and bureaucratic process, as it involves compliance with the legal framework, formal documentation, tendering procedures, evaluation mechanisms, accountability requirements, and interaction between contracting authorities and private economic operators. The introduction of electronic procurement systems, such as ESIDIS, therefore provides an appropriate context for examining whether digital tools simplify bureaucracy or primarily reorganize it into a digital form.

The case of the National COVID-19 Vaccination Program is particularly suitable for the present study, as it required rapid coordination between public authorities and private actors under crisis conditions. In this context, ESIDIS is not examined as the platform that managed the vaccination program as a whole, but rather as a digital public procurement environment that supported the formal procedures of tendering, documentation, and contract award associated with the implementation of the program. Consequently, this study focuses on the dimensions of public procurement and governance rather than on the medical, epidemiological, or operational effectiveness of the vaccination program.

Using a qualitative single-case-study approach, the research combines semi-structured interviews with relevant stakeholders and documentary analysis of procurement data and institutional sources. The contribution of this master's thesis lies in its attempt to connect the theory of bureaucracy with digital governance and public-private collaboration. By examining ESIDIS as a form of digital bureaucracy, the study contributes to a better understanding of how traditional administrative principles are embedded within digital systems, what facilitating mechanisms are created, and which limitations continue to persist.

This approach is of theoretical significance because it reassesses bureaucracy in the digital era, while also having practical value by identifying areas in which electronic public procurement systems can be further improved.

The thesis is organized as follows. Chapter 1 introduces the topic, the research context, and the purpose of the study. Chapter 2 presents the literature review on bureaucracy, organizational efficiency, digital transformation, e-government, public–private collaboration, and electronic public procurement, with particular emphasis on the Greek digital governance framework and ESIDIS. Chapter 3 outlines the research methodology, including the qualitative case study design, data collection methods, interview procedures, thematic analysis, and methodological limitations. Chapter 4 presents the case study and empirical findings, drawing on data related to ESIDIS, documentary evidence, and interviews. Chapter 5 discusses the findings in relation to the literature and the research questions, focusing on digital bureaucracy, enabling and constraining mechanisms, and the implications for public–private collaboration. Finally, Chapter 6 summarizes the main conclusions, acknowledges the study’s limitations, and proposes directions for future research and practical improvements.

2. Literature Review

This chapter examines the theory of bureaucracy, the relationship between bureaucracy and efficiency, digital transformation, e-government, e-procurement, public-private partnership and the Greek digital governance framework, with an emphasis on ESIDIS platform.

The literature review aims to locate the concept of bureaucracy over the years and explore the theories that are built around this idea. The conceptualization of bureaucracy dates back to 1764, when Melchior von Grimm, a German-born French-language journalist, art critic, diplomat. Since 1764, many have used this word either to mock or to criticize. Max Weber and his followers were the first to approach Bureaucracy in the form we know today (Felten & von Oertzen, 2020).

According to Daft (2010), Max Weber, known as the father of Bureaucracy, was a German theorist of management, who presented the main characteristics of bureaucracy in organizations, in early 1900s and how bureaucratic institutions should be designed. The Max Weber theory remains ideal to this very day, however criticized for its rigidity due to strict rules and hierarchy that must be followed to achieve the typical sense of the concept.

However, since Max Weber's work was not published in English until 1946, the prevailing theory until the 1950s was Goodnow's, Gulick's and Taylor's. Goodnow inserted a theory where the administration and politics should be two different sectors, even though politics and administration are two co-related fields. His theory described administration and politics as two parallel sectors that would evolve independently in order to adopt the sense and rules of bureaucracy (known also as the study of the separation of powers). Taylor concentrated on the design of procedures administration should follow ("how") and the performance the employees should present after the incentives they received. Last, Gulick, who was overly criticized by Simon's (1947), believed in observation rather than data collection (Meier & Krause, 2003).

Modern organizations have to deal with technological development, market changes and relentless competition. The competitive advantage lies in the balance between different organizational characteristics and philosophies such as bureaucracy, delegation and communication between stakeholders by analyzing the relationship between knowledge management and leadership (Pellegrini et al., 2020).

A theory that Bureaucracy is not always in favour of the public good but covets private sector's interest and leads citizens to work as subordinates was also presented (Tullock, 1967; Peltzman, 1976; Djankov et al., 2002; Stigler, 2021). Also, Bureaucracy is valued when it gives the opportunity to Governments to be flexible in the implementation of their measures and the results that come from these measures. So the success of such an effort is the main topic to evaluate (Acemoglu & Robinson, 2013).

In recent years, we also encounter many literature references for the concept of bureaucracy such as James Q. Wilson's "Bureaucracy: What Government Agencies Do and Why They Do It" (2019), Michael Lipsky in "StreetLevel Bureaucracy: Dilemmas of the Individual in Public Services" (2010) and Janet V. Denhardt και Robert B. Denhardt book titled "The New Public Service: Serving, Not Steering" (2015) which examine the concept of bureaucracy, challenge rigid bureaucratic idea and explore the collaboration within bureaucratic environments.

2.1 Theoretical foundation of bureaucracy

Before Max Weber's theory, the organizations were more like a small family-owned company, following the orders and vision of one single person rather than the strategical goals of an organization as a whole. Max Weber challenges this tactic and proposes an impersonal and logical system of administration. He wishes to exclude the unforeseen factor "human" from this equation and implement rules and regulations that would minimize any unpredictability (Kettl, 2022). He supports that an impersonal organization would be more reliable, efficient and flexible.

Max Weber distinguished bureaucracy authority in three categories: Traditional, Charismatic and Legal-Rational. Traditional Authority is associated with cultures affiliated with religious, spiritual or family type structures. It is characterized by intense symbols of dominance and even patriarchy where capitalism has not met significant growth and the members of a family, tribe or society accept the power of their leader. This type of authority is decreasing nowadays due to modern perceptions. Charismatic Authority, on the other hand, is based on the personal characteristics of a leader and breaks the traditional bonds of nepotism. A charismatic leader attracts his followers due to his weapons of persuasion and often is a successful communicator with ardent supporters. Since the base of Charismatic

Authority relies to the unstable factor “human”, it usually transforms to a traditional or legal form of Authority. Legal-Rational Authority is based on "a belief in the legality of enacted rules and the right of those elevated to authority under such rules to issue commands" (Weber, 1978) and is based on the legal system (ex. laws) by the meaning of acceptance of the system by subordinates and leaders and on the other hand on the acceptance that this legal system is rational and task oriented as well as successful. Usually, Rational-Legal Authority creates a system of written procedures and regulations and originates from formal authority and functional authority depending on the source of the power, position based on a recognized status in an organization or professional capability, experience and skills (Peabody, 1962).

Max Weber’s theory presents the main characteristics of an ideal bureaucratic organization:

- Division of labor
- Clear Hierarchy of authority
- Formal Rules and Regulations
- Procedures
- Formal or Impersonal Relationships
- Employment and promotion based on technical competence

To analyze the points above, Weber supports that the division of labor is one of the core principles of a modern bureaucratic organization. Tasks are divided into sections within teams that are specialized in their field, thus they are more efficient and faster by mastering expertise. Workers are focused on their point of knowledge, with no distractions or new information that needs time and effort to be absorbed.

Clear lines of authority from top to bottom ensure that orders are direct. Each level of command has a specific set of tasks and responsibilities. The level of effort is constant as well as productivity.

Tasks should be executed under specific and formal instructions. Same rules apply for everyone in the chain of commands. Also, standardization of procedure eliminates the possibility of misunderstanding or miscommunication within the group. Rules and procedures secure consistency, stable productivity and fairness.

Bureaucracy, according to Weber, must be impersonal. No personal relationships should affect decision making, nor personality should be encountered when a person is evaluated. An employee's career path must be examined through its accomplishments and not by favoritism or personal connections. At the same time, a hire follows specific technical specifications without been affected by soft skills.

Decision making according to Weber is designed to achieve efficiency and minimize any waste using logic and rationality. Bureaucratic organizations implement written rules and documentation to help themselves to be fair, transparent and predictable. Each member of this organization is equal to the other members and has clear view of what has to be done and what to aspire. However, this theory has met many arguments in its way, especially characterized by inflexibility, strictness, excluding space for initiatives (Daft, 2010).

On the other hand, Michael Crozier, a French sociologist, chooses to argue with the limitations of Weber's theory by supporting that strict bureaucratic organizations are vague and do not always operate under formal relationships and procedures, leading its members to constant battle for power, since personal interest takes place to prevail within homogeneity. Political influence, strategic maneuvers and small groups of power exist along with formal procedures. These groups operate underground and create allies in order to accomplish personal aspirations. Especially, when bureaucratic organizations run under ambiguity, some may exploit this uncertainty and shift decision making or resources to their benefit. So, Crozier analyzes the complexity of large-scale organizations and supports that bureaucracy not only relies in rationality but has also to examine the culture they operate in (Crozier & Friedberg, 2017).

On the same page, Herbert Simon (2013), American political scientist, criticises the "perfect" rationality in bureaucracy and supports that the decision-making individual does not have all the information he needs to proceed, but he is restricted to the knowledge he possesses. So, the decision he makes is not the "perfect" one but the "ideal" one, according to the tool he has. He introduced the idea of "administrative man" who makes his choices keeping in mind rationality, personal values and intuition. Simon does not reject rationality, but presents a more realistic operator, who is victim of his mortality. Simon's theory provides a more accurate perspective of how decisions are made in the real world and identified intelligence, design and choice as main steps in the decision-making process (Schwarz et al., 2022).

“Post-Bureaucratic Theory” is also known as “Post-Bureaucracy Model” which also argues with the limitations of the traditional bureaucratic theories, as a conceptual framework. Presents the introduction of new information, knowledge, consultation of ideas and proposals and promotes different perspectives of role models and offers flexibility. Since technology has changed the organizations status as known until few years ago, bureaucracy had to adapt to this change. Post-bureaucratic theory decompresses the higher-level management from absolute decision making and gives the opportunity to lower lines of command to present ideas and take initiatives. It also strengthens the sense of ownership in these levels and encourages communication among hierarchy. The pursuit of new ideas, research and development is crucial. Employees are motivated to enrich their CVs with new skills, a way of thinking quite different from the original bureaucratic theory, where the staff was the tool and not the goal. This idea shifts away from the original characteristics of bureaucracy, as described by Weber, and empowers low levels of organizations to autonomize and contribute to the decision-making process (Simon, 2018).

Finally, “New Public Management Theory”, exploits private sector’s management techniques and integrates them to the public sector. Since public sector had to be updated regarding its efficiency in the markets, new tools of performance measurement were introduced. Before this theory, bureaucratic organizations were operating by the “book” without the incentive of evolving. Performance metrics force public services to correlate with private sector and modernize. Introduces the idea of best practices and limits the decision-making power from the central government agencies. It is quite common these days to encounter new, smaller semi-public organizations that are autonomous from the central government and are responsible for their strategic moves. Key Performance Indicators is a concept also introduced in the public sector, maximizing performance and promoting initiatives by implementing innovative techniques and even collaborating with the private sector (Lane, 2002).

But how does the ESIDIS platform incorporate the Weberian theory? At the next table (Table 1) the main characteristics of the traditional bureaucratic principles and how they are incorporated into ESIDIS system are presented.

Table 1: Reflection of Bureaucratic Principles in ESIDIS

Traditional bureaucratic principle	How it can be reflected in ESIDIS
Formal rules and regulations	Standardised procurement procedures based on public procurement legislation
Hierarchy and authority	Contracting authorities, evaluation committees and approval mechanisms
Documentation	Electronic submission and storage of tenders, documents, decisions and supporting evidence
Impersonality	Common rules and criteria for all participating economic operators
Accountability	Digital traceability of actions, procurement stages and decisions
Technical competence	Requirement for digital signatures, procedural knowledge and platform use

2.2 Bureaucracy and organisational efficiency

The period we are living in has met a mix of changes and transformations to adapt to the new era. After World War II and Industrial Revolution, society was very different from the one our grandparents lived on. Before this period, the world was experiencing slow but steady development over decades. Afterwards, knowledge was the key point everyone was pursuing in order to evolve. More and more people were seeking to graduate from a university, fact that contributed to economic development as well. So, to be competitive, specialized knowledge was then the need to be covered. The motive and concern of any organization is the incorporation of specialized knowledge (Drucker, 1992).

After reviewing the available theories regarding bureaucracy, it is important to analyze how bureaucracy affects efficiency in organizations. But what is an organization? An organization could be public or private, or even both (as a collaboration). “Organization” according to Cambridge Dictionary (Merriam-Webster, 2026) is “a group of people who work together in an organized way for a shared purpose”. What is its purpose? It depends on the type of organization and the vision of the people who constitute this organization. Finally, what is efficiency? It is the concept that indicates how effectively structures such as hierarchy, procedures, rules, and role specialization enable organizations to achieve their

goals with minimum effort. The level to which an organization is accomplishing its goals and targets, such as efficiency, quality, and customer satisfaction, is called organizational performance (Richard et al., 2009). The effect of bureaucracy on organizational performance is a wide topic and many support that provides accountability, stability, and rationality but there are also arguments with this theory. However, the way to assess the effectiveness of bureaucracy in organizational efficiency is to examine strengths and limitations of bureaucracy and how these influence efficiency.

Bureaucracy's positive characteristics may be standardization of workflow, professionalism, organization and order, planning, and specialization. It can clear the landscape in unclear professional areas and systemize tasks and procedures. This provides a sense of security, stability and continuity via structured systems. In fact, this mentality makes organizations operate reliably despite the instability of the human factor. At the same time, people who work in bureaucratic environments feel safe and sure of the tasks they must complete. The presence of doubt is minimum since their work is predictable and well defined.

Clear hierarchy of authority and organizational structure, by clarifying roles and duties is also one of the key points. This system enables employees to understand their responsibilities and minimize confusion and misunderstanding, which could cost time and money. Employees can focus on their duties and increase productivity.

Bureaucratic institutions operate under standardized rules, which contribute to consistency in decision making. Regulations are applied equally and fairly, and employees are aware of the future. This consistency provides stability and sense of security helping employees to cope with recurring difficult tasks effectively. Moreover, the liability of the well structure hierarchy enables employees to trust the organization and feel part of a well-organized mechanism operating with solvency and meritocracy. At this point, it is essential to refer to the equality that prevails among stakeholders. Employees are fairly treated regardless of their personality or personal background, avoiding favoritism.

Bureaucracy promotes also specialization. Employees are recognized for their skills and are allocated based on them. The division of labor enables stakeholders to thrive in their field, improving the quality of the work they produce. Specialization in bureaucratic systems

ensures high productivity. A group of experts, for example, can achieve their goals faster and work in a more cooperative way than employees that are not specialized in the task.

Large scale organizations, such as large companies or even governments, benefit from the structure of bureaucracy. Standardized procedures specialized personnel, documented rules and procedures, clear authority enable the coordination of complex assignments and raise productivity. Especially when standardized procedures are established, the environment is fruitful for fast paced and correct decision making. Keeping in mind that these procedures are recorded, re-evaluation and improvement is also legit, through compliance audits. Bureaucracy supports stability and accountability by applying consistent rules and procedures (Scot, 2022).

Even though bureaucracy seems to provide organizations with tools to operate in a planned and structured manner, many support that also presents limitations and argue about its efficiency.

First, a classic limitation of bureaucracy is excessive regulation or else “red tape”. Complicated rules and procedures, many levels of hierarchy and approval, and overload of documents delay decision-making, confuse stakeholders and this concept is not appropriate for fast-paced environments where rapid actions need to be taken.

Improvement and innovation are concepts that don’t go along with bureaucracy. Organizations tend to operate under the same rules and procedures without questioning them or enhancing them. This leads companies and stakeholders to make the same mistakes repeatedly losing opportunities of evolvement.

Furthermore, communication bottlenecks are also common since procedures are usually complicated, many forms need to be reviewed and filled out and take time to pass orders and messages among groups, which leads to coordination failure. At this point it is important to refer to the inflexibility of bureaucracy, due to its rigidity. New ideas and initiatives are not welcome since they disrupt strict procedures and specifically designed communication. It is not uncommon for organizations to have displeased customers due to lack of flexibility. Inductively, innovation is also pulled back, and organizations tend to operate under obsolete procedures.

Finally, bureaucracy, due to the rigid rules and regulations, is vulnerable and creates space for abuse of power by actors that wish to overpass them or even stakeholders who take advantage of power for their own benefit (StrategicLeadersConsulting, 2025).

Bureaucracy acts as a system of order and stability and provides security to organizations. It lessens mistakes and procrastination, speeds up decision making, has clear rules and procedures to be followed as well as authority levels and supports organizational structures. It is though accused of stiffness and detention. Most of the characteristics enable bureaucracy to increase productivity and performance by systemizing workflow and procedures. The National Vaccination Program, through ESIDIS platform (Public Procurement Program) in regards to the procurement aspect, that we will analyze later in this thesis, facilitated an impartial, efficient, and accurate outcome, contributing both to citizens and Government benefit and reinforcing the collaboration between public and private sector (Weber, 1978).

2.3 Digital Transformation and e-governance

Due to the rapid growth of technology and the need of every organization to keep up with this progress, new challenges have arisen. The business transformation procedure where digital technologies are used to create a new business and organizational model, modifying the existing conditions, is called Digital Transformation (Tang, 2021). This is a phenomenon we observe in private and public sector as well. It started about fifty years ago, in 1970s with the invention of microprocessor in 1971 and the first email sent in 1971. These inventions laid the foundations for the technological development we are encountering today.

E-governance is the use of Information and Communication Technologies (ICTs) to strengthen governance by increasing service delivery, enabling transparency, supporting citizen engagement, and allowing more effective collaboration among stakeholders. By integrating digital solutions into government operations, it promotes a more accessible, accurate, accountable and responsive public administration (Srinivas, 2026). Another helpful definition by Keohane and Nye (2003) where they state: “*Governance implies the processes and institutions, both formal and informal, that guide and restrain the collective activities of a group. Government is the subset that acts with authority and creates formal*

obligations. Governance need not necessarily be conducted exclusively by governments. Private firms, associations of firms, nongovernmental organizations (NGOs), and associations of NGOs all engage in it, often in association with governmental bodies, to create governance; sometimes without governmental authority”. This definition does not limit the power of e-governance to the public sector and embraces the concept of managing and administrating in the private sector. Finally, Gartner proposed a four-phase e-governance model. According to this model, governments focus initially on providing online information, however, the rising expectations of the citizens and the public administration and eventually the need for larger internal efficiency, make the implementation of more sophisticated digital services necessary.

In phase One – Presence, we observe the offer of information across several platforms of government such as websites, available for stakeholders. This is a minimum cost phase that just makes accessible but does not offer interaction.

In phase Two – Interaction, the exchange of information is enabled among stakeholders and the government. It is an open communication channel through e-mails, platforms, and online forms, among others. It minimizes physical interaction, which may save resources and enhance governments’ accountability and transparency.

The Third phase – Transaction, is the stage where the government enables electronic services which replaced the previous bureaucratic system and makes citizens and businesses life easier. These could be online tax payments, tender electronic systems and others. The level of interactivity here is higher than phase Two.

Last, phase Four – Transformation. This phase includes the use of any technology available to digitize public services and procedures. It reduces all bureaucratic limitations and transforms the government’s services, by gathering information, organizing, analyzing and offering solutions (Baum & Di Maio, 2000).

Across all four phases, the expansion of online service delivery and the adoption of ICTs support one or more features of e-governance, which are democracy, government and business. In parallel, Irani, Al-Sebie & Elliman (2006) presented a three-phase e-governance solutions model as shown below in Table 1 (Palvia & Sharma, 2007).

Table 2: Three-phase e-governance solutions model

E-Governance solutions overview			
	External G2C	External G2B	Internal G2G
Phase One – Information	Local / Departmental / National Information	Business information	Knowledge base / Knowledge management
Phase Two – Interaction	Downloading forms on websites / Submitting forms / online help with filling forms	Downloading forms on websites / Submitting forms / online help with filling forms	E-mail interactive knowledge databases / Compliant handling tools
Phase Three - Transformation	Personalized website with integrated personal account for all services	Personalized website with integrated personal account for all services	Database integration

Source: Palvia & Sharma, 2007

G2C – Government to Citizen

In G2C activities the government gives access to one-way information and services to citizens. Users are able to download information, fill in forms, submit documentation to the government etc.

G2B – Government to Business

In G2B activities the government offers a two-way interaction with vendors. A very common G2B service is a public tender's – procurement platform, such as ESIDIS, using bureaucratic procedures to verify the accuracy and transparency of the process and operates as a digital point of interaction between Government and economic entities.

G2G – Government to Government

In G2G the Government enables public sector entities to operate effectively and efficiently among its departments and exchange information and services. (Palvia & Sharma, 2007). Greek governmental G2G services are considered Diavgeia Platform and MyKepLive as well as G2C.

Greece, as one of the most bureaucratic procedural countries, follows the last years the dictates of the times and implements digital transformation in the government services. Time and resources consuming processes are replaced by digital transformation and e-

government services that embrace all available technology, such as AI machine learning tools, data governance and integration, data analytics and others.

Digital transformation provides the foundations (technological, procedural, and cultural) that encourage e-governance to operate in a comprehensive manner, using state-of-the-art technology, supporting unimpeded workflow, supporting integrated platforms and participatory governance. Digital transformation does not necessarily eliminate bureaucracy. It often transfers rules, stages, hierarchy, documentation and control mechanisms to digital platforms and electronic workflows, as we meet on ESIDIS platform. In this sense, ESIDIS could be presented as a form of digital bureaucracy, since it does not eliminate public procurement procedures, but organizes, records and mediates them digitally.

For the Government, the use of digital tools and the transformation of older outdated systems seem to increase efficiency, standardize procedures and can improve data management. It could also operate as an enabler of the governmental agencies to evolve and develop and participate in innovative actions. For stakeholders, such as the citizens, digital transformation could make government services more accessible and faster, provide stability to the services quality, accuracy and accountability (Honnurali, 2024).

2.4 Public-private collaboration in the digital era

According to the World Bank Group (2026), Public-private partnership (PPPs) is the operation where governments exploit private sector's knowledge, resources and expertise to execute public projects and provide services.

This collaboration is crucial in the digital era, characterized by fast technological change. This relationship is important because it enhances digital transformation. It is common for governments to meet bureaucratic obstacles and slower procedures. Collaboration with the private sector can offer technological acceleration due to specialized expertise. High competition between private firms leads to faster growth of technological development, and thus to state-of-the-art technological solutions for their clients. Private sector can be also more flexible than the public sector and offer multiple technology products custom made for every need.

Furthermore, this type of partnership can enhance the quality of public services. Clients, in this case citizens, are expecting public services to be user-centric and user-friendly,

efficient. And private sector can provide this expertise. In fact the presence of private sector in this relationship introduces qualitative metric systems, as Key Performance Indicators (KPIs), in order to measure the productivity of the service or the product and analyze the data for performance evaluation.

Most popular PPPs structures are service contracts, operation and management contracts, The structure of the PPP model relies on the risk taken and the volume or risk each stakeholder is about to undertake. To verify a positive outcome of a project, it is important to define the risks that this project includes and the best allocation of them to the participants, to receive the best possible outcome. The optimum scenario is for each participant to undertake the type of risk they know how to manage best, so for the project to present the minimum possible damage.

Service contracts are binding agreements between government authorities and private collaborators to perform assignments within a specified framework. Another term for service contracts is outsourcing, where an external provider, or third party, is hired to complete a task or provide a service, usually onsite. These kinds of contracts are short-term contracts, which last up to a year, and occur after a bidding procedure. In most cases, there are also recurring contracts. The project's supervision and responsibility remain at the government's discretion. This kind of PPP is preferable, since the costs are low, using the expertise of the private sector.

Operation and management contracts allocate most of the responsibility to the private partner. The private sector performs a project undertaking operation and management, by applying its expertise to evolve management systems and practices. At the same time, the government partner holds the ownership of the project and the service procurement. They last longer than service contracts, up to five years, and the payment is arranged either on a pre-agreed basis or on a performance basis. These kinds of contracts are preferred in cases where the goal is to improve public authority efficiency and productivity but quite risky for the government, since the private partner does not bear any financial responsibility (Turina & Car-Pušić, 2006).

Many support that Public-Private Partnerships are contributing to the enhancement of the economy. They discharge the public sector of large investment and managerial costs, they help on the attraction of foreign investments, they enhance the efficiency of services and financing for infrastructure, digital or not, and offer great impact to the private sector's

employment. It also important to refer to the technical knowledge that passes on from the private sector to the public as well as the innovation created (Nasios & Foradoula, 2021).

However, this concept has opponents who support that PPPs constrain the public sector from development of expertise as well as the over costs that the public sector must bear due to the private sector's tariffs and the high risk that is mostly allocated to the government. We should not forget the obstacles that a private firm could face in a collaboration with the government, like bureaucracy. PPPs face also challenges that occur from the involvement of technology, like weak legislation regarding the PPPs framework. Since technology has entered PPPs the last decade, the legal structure is still at the starting point. There are many concerns regarding data protection, due to the citizens personal information transferred and the ownership of the available sensitive information. Also important to refer to the cyber-attacks, that the public sector is not ready to face efficiently, without the strong presence of a private expert partner. Furthermore, governments are not always trustful towards citizens, especially in the technology sector. Another threat for PPPs is the trust that must be built between the two partners, especially when the private sector's main goal is profit, and government's weak knowledge in technology development (Batjargal, 2021).

However, PPPs can offer great opportunities for digital development and collaborations that could make public services efficient and life changing. AI-driven services, cybersecurity solutions, digital platforms for citizens and the construction of eco friendly systems are opportunities that are worth the effort.

Especially in crisis conditions, such as the COVID-19 pandemic period, public administration needs speed, reliability and institutional control, while collaboration with private entities could accelerate the implementation of digital solutions, as long as it is accompanied by transparency and accountability (Casady & Baxter, 2020).

2.5 Bureaucratic digital tools and procurement systems

Bureaucratic digital tools include platforms, systems, and technology that can enhance the public sector's efficiency and simplify procedures.

Open data programs across Europe and beyond have proven that the publicity of government's acts can accelerate accountability, trust and fight corruption.

High-volume projects, such as Data Europa portal, are highlighting the effects of systemization of procedures. The portal is the official central access point for public sector

information and open data throughout Europe. It centralizes data from European countries providing disclosure of important information across the continent. The respective platform for Greece is called DIAVGEIA, incorporating all government's legal acts. ESIDIS (NEPPS / National Electronic Public Procurement System) platform is implemented since 2013 operating all public tenders for Greece. In 2024 Greece became a member of the European project, known as Europeum, a secure data exchange platform that will enable European countries to proceed to the digital transformation (European Commission, 2024). National For Germany NIF4OGGD (NLP Interchange Format for Open German Governmental Data) gathers all open data posts in one search machine (Antoniou et al., 2025). France has implemented the Service-Public.fr, as public activities search engine and the Government Procurement Platform (PLACE – Plateforme des achats de l'Etat), mandatory for public tenders published by the government's agencies (Direction de l'information légale et administrative (DILA), 2026). At the same time, UGAP (Union de Groupements d' Achats Publics) is the central marketplace for public entities. Furthermore, Italy is using Italia Domani to modernize public administration, as well as Governo.it (Governo Italiano – Presidenza del Consiglio dei Ministri, 2026; Italia Domani, 2026).

Studies on Greece's administration transformation are presenting how technological solutions and digital tools, especially when they interoperate, contribute to the enhancement of the government's efficiency and can decongest public services and agencies from high volume workload, rigidity and slow, time-consuming procedures. They may improve the connection between citizens, businesses and the government, making procedures easier and more accessible. It accelerates trust and accountability, urging users to learn more and use them more often, as long as the paperwork is reduced and the delays are minimized. Public tenders are published and proceeded under full transparency, operating under clear rules and regulations, enhancing accountability (Kalogirou et al., 2022).

The public procurement procedure is by nature a bureaucratic process, as it includes a legislative framework, tender stages, submission of supporting documents, tender evaluation, approvals, objections, award stage, contract and documentation. E-procurement and especially ESIDIS operates as a digital mediation of bureaucratic procurement procedures and does not consist just a technical system, but a digital environment where rules, procedures, assessments and accountability mechanisms are applied.

The enabling mechanisms that ESIDIS could offer are directly connected to efficiency, transparency, traceability, accountability and coordination. A digital procurement system

can contribute to reducing physical presence, faster submission and management of documentation, publicity of tenders, recording of actions, easier monitoring of tender stages and better coordination between contracting parties (Paraskeva & Tsoulfas, 2025).

On the other hand, constraining mechanisms are also present. The digitization does not necessarily eliminate all the problems of bureaucracy. There may remain limitations such as legal rigidity, procedural complexity, difficulties of use, need for training, technical malfunctions or incomplete coverage of all stages of a project after the assignment.

2.6 The Greek context: Bureaucracy and digital governance

The Greek Government follows a hybrid mode of Weberian-Napoleonic bureaucratic model where public administration is characterized by strong legalism with presence of formal legislation and rigid procedures. Also, the state authority is centralized implementing high hierarchy in ministries. The recruitment of public servants is conducted under time-consuming procedures and offers permanent tenure. We observe that the Greek government operates under strict rules and regulations instead of adjusting after performance review (Nasios, 2024).

In digital era, the Greek government is obliged to reshape their bureaucratic systems, adopt technological solutions and transform. Digital transformation becomes a necessity, and organizations tend to transform public administration and reevaluate procedures, to operate under new rules and systems.

It is less than a decade, that the Greek Government proceeded to universal digital transformation and implemented technological means on its procedures to streamline government workflows.

In Greece, the Ministry of Digital Governance is responsible for the digital transformation of all the Greek public services and supervises many government entities. The main purpose, since 2019, when it was founded, is to create a modern, efficient and inclusive digital governance which can improve citizens lives, promote transparency and lead to economic development. It aims to exploit any available digital technology to transform public services and improve governance by ensuring the security and protection of digital systems and data, while creating a more participative society, through a citizen-centric approach (Patergiannaki, 2023).

Following, we are exploring some digital platforms created by the Ministry of Digital Governance which are available to citizens and may enable the transparency of the public sector. They operate as elements of a broader digital governance ecosystem, with a common goal, to enable the government – citizens relationship, minimize the documentation workload and increase accountability and transparency.

2.6.1 KEP (Citizens Service Center)

The institution of KEPs started in 2002, to create, for the first time, a liaison between the public services and the citizens. In 2020, KEPs was a network of 1.059 active physical branches where about 2,510 employees serve citizens and eventually, due to the need of digital transformation, they have transformed in digital services as well. New procedures have been incorporated like myKEPlive program where citizens have remote access to selected KEPs. New integrated information system is implemented for back-office services. New digital mailboxes in each KEP are created, to transform them into one-stop services, which promote an alternative digital road for services, integrating new technologies (Ministry of Digital Governance, 2021).

2.6.2 Gov.gr (Single Digital Portal)

The Single Digital Services Provider Portal, Gov.gr, is one of the technological tools for public services digital transformation. Its purpose is to transform life events into specific services provided by the government's information systems. The portal incorporates information from other information systems, such as the Identify Center and the Notifications Hub, while the basic functions provided concern the multimodal provision of electronic services (personal computer, mobile phone). The Identify Center ensures the citizens' secure entry into government services via electronic identification.

The Basic Registries of the government are more than 250, and they are authentic catalogues of a particular kind of information. Electronic registries (e-Registries) are registries for which the authenticity, integrity, availability and authorized access to the information held are ensured by digital technologies. The Basic Registers, according to the European definition of the New European Interoperability Framework, are "the cornerstone of digital services, as they are reliable sources of basic information on elements such as persons, companies, vehicles, licenses, buildings, locations and streets, which can be reused

digitally". The Basic Registers include the Tax Register, the General Commercial Register (GEMI), the Citizen Register, the police IDs or the Residence Permit Register and Special Expatriate Identity Cards for third-country nationals, the Social Security Register, the National Land Registry, the Register of Streets and Numbers, the Register of Agencies and Services of the General Government, the Register of Driving Licenses and the Register Car Licenses. In fact, all the public services are necessary for citizens. The Gov.gr portal enables everyday transactions for citizens with the government and gives access to Public Services Administration.

More than seven million Greek citizens have used Gov.gr to issue documents or submit declarations, rating over 95% satisfaction. A pilot AI-powered digital assistant (chatbot) was also implemented, mechanically trained on open data from Gov.gr and public agency websites.

Another sub-platform is Gov.gr Wallet, a digital high-end platform where citizens and businesses are allowed to create, store, and manage digital documents (e.g. Digital ID, driving license) with legal validity equivalent to originals. Many services before, as hard to find, are now open, known and available, by facilitating society in interaction with the government (Ministry of Digital Governance, 2021).

2.6.3 DIAVGEIA and KIMDIS platforms

One of the oldest bureaucratic tools in Greece is DIAVGEIA. It was implemented under law 3861/2010 and the goal was to publicly transaction of government policy and documents, to achieve transparency in the public sector. Every decision, document, contract, procurement request, hiring approval is uploaded in DIAVGEIA portal, with is accessible to anyone. Almost every entity of the public sector is integrated in the portal and more than 11.500.000 actions have been posted (Beris et al., 2019). While in the past, the acts were validated with a stamp by a public service, now the acts are valid only after their post on the portal and their digital signature by the system. At the same time, KIMDIS platform (Central Electronic Registry of Public Contracts) where all public procurements are posted, tends to make the procurement procedure even more transparent. The platform is also valuable for the government and the citizens, since it can provide accuracy and open data information, fully accessible to everyone, at real time (Antoniou et al., 2025).

2.6.4 ESIDIS/NEPPS System (National Electronic Public Procurement System)

Finally, ESIDIS platform (NEPPS – National Electronic Public Procurement System, accessible via www.promitheus.gov.gr, is the Greek National Electronic Public Procurement System, an integrated information system created to ensure the operation of national electronic public tenders and contracts and cooperation of contracting bodies and economic entities. It is implemented by the Ministry of Digital Governance in the context of digital transformation of the relevant electronic processes (eProcurement) and provides safe, transparent and efficient electronic services to public agencies and private entities (Interreg Europe, 2021).

The Greek Public Procurement system is large and complex and a digital platform was a necessity to avoid manual methods and heavy paperwork. Before the installation of ESIDIS, the procedure was primitive, manual, time consuming and lacked transparency. It also needed a lot of time for the tender committees to come up to a conclusion. Since 2016, when the ESIDIS platform was actually implemented, the procedure has radically changed. There is no need anymore for paperwork, constant visits to the relevant authorities to issue legal documents, nor endless deadline extensions. Especially, due to the enforcement of the L.4412/2016 (as amended) the time frameworks are clear and strict and cannot be diverged, unless there is a legit reason, within the aspects of the law. Services tenders and procurement tenders seem to proceed to the award stage within the time frame, having also the support of HSPPA (Hellenic Single Public Procurement Authority), especially authorized courts for public procurement, who accelerated the appeals procedure within specific timeframe, so that public procurements won't take forever to be awarded (Bitzidis et al., 2020).

2.7 Conceptual framework

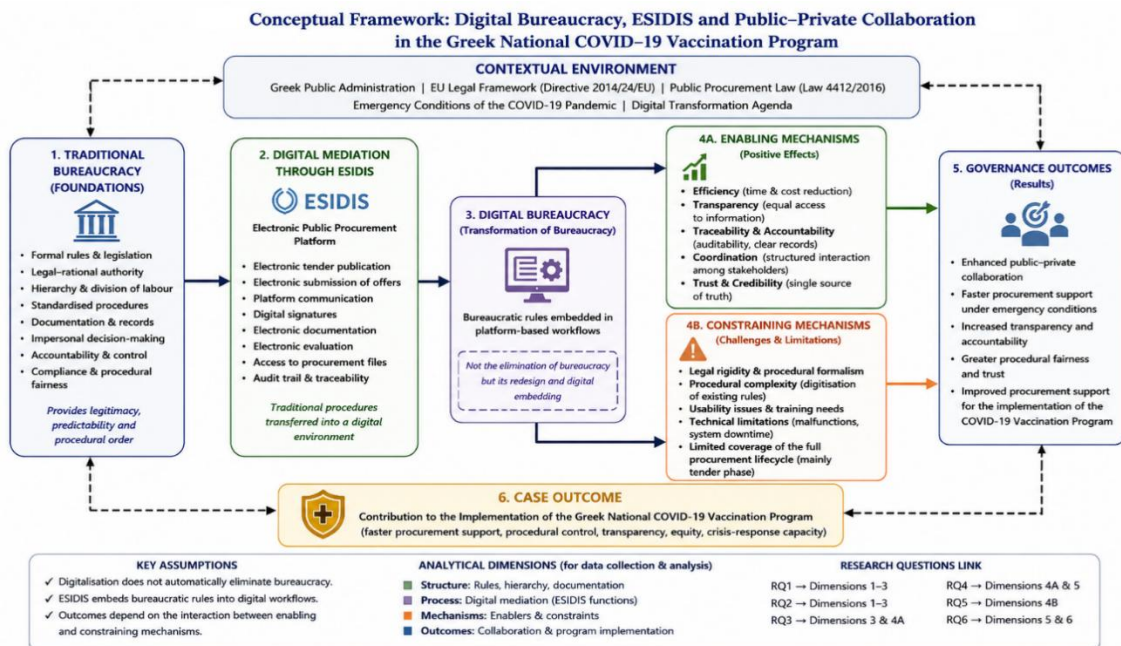


Figure 1: Conceptual framework

The conceptual framework demonstrates how traditional bureaucratic organizations are transformed through digital governance within a specific contextual environment and contributed to the success of the case of the Greek National COVID-19 Vaccination Program. The basic bureaucratic elements of bureaucracy which are formal rules and regulations, legal authority, hierarchy, documentation and standardized procedures and accountability, set the foundations of stability, legitimacy and trustworthiness for digital transformation to be implemented and evolve in public administration.

The second component presents the digital transformation of public governance through the public procurement system, ESIDIS. The platform transforms, but does not eliminate, the traditional bureaucratic tender procedures, like procurement announcement, offer submission, documentation, evaluation and awarding into a digital process. The foundations of bureaucracy are implanted, however, the system improves the old traditional procedure into a new digitized workflow, assisted by new tools, such as digital signature, online traceable documentation repository and communication channels.

This does not lead to the elimination, but to the implementation of digital bureaucracy, where rules and procedures are transformed and incorporated in electronic workflows. In this section, it is emphasized that bureaucracy is not abolished, but redesigned in order to adopt to the new era.

Furthermore, the conceptual framework presents two types of mechanisms, the enabling and the constraining mechanisms which occur from the digital transformation. The positive effects of the enabling mechanisms are the increase of efficiency, transparency, traceability, coordination and credibility, cause of the digital standardized procedures. On the other side, the challenges emerged by the constraining mechanisms are the rigidity of the legislation and formality of procedures, complexity, technical limitations of the platform and the limited application of the system, since it does not include all aspects of the procurement process.

To conclude, the framework centralizes all these pillars to the governance outcomes, especially for an emergency case such as the COVID-19 National vaccination program. It presents the results from these two contradicting mechanisms, which are the enhancement of public-private collaboration, faster procurement procedures, enhanced transparency, accountability and trustworthiness, which all contributed to the fast and successful implementation of the Greek National COVID-19 vaccination program, proving that reshaped digital bureaucracy can support emergency cases.

2.7.1 Research Questions

Main research question

RQ01. In what ways does ESIDIS transform traditional bureaucracy into digital bureaucracy in the context of public-private collaboration during the Greek National COVID-19 Vaccination Program?

Sub-research questions

RQ02. How are traditional bureaucratic principles embedded in the design and operation of ESIDIS?

RQ03. How does ESIDIS digitally mediate public procurement procedures?

RQ04. What enabling mechanisms does ESIDIS create in terms of efficiency, transparency, traceability, accountability and coordination?

RQ05. What constraining mechanisms remain in the use of ESIDIS, particularly regarding legal rigidity, procedural complexity, usability barriers and technical limitations?

RQ06. How did ESIDIS contribute to the implementation of the Greek National COVID-19 Vaccination Program?

In the following table, the theory analysed above is connected with the research questions posed for the purposes of this research.

Table 3: Research questions and literature

Literature review area	Main contribution to the study	Related RQ
Bureaucratic theory	Explains traditional bureaucratic principles such as rules, hierarchy, documentation and accountability	RQ02
Digital bureaucracy	Explains how bureaucracy can be transformed into digital workflows and platform-based procedures	RQ01, RQ03
E-governance and digital transformation	Explains how digital tools reshape public administration and service delivery	RQ01, RQ03
E-procurement	Explains how procurement procedures are digitally mediated through platforms such as ESIDIS	RQ03
Enabling mechanisms of digital systems	Explains potential improvements in efficiency, transparency, traceability, accountability and coordination	RQ04
Constraints of digital bureaucracy	Explains legal, procedural, usability and technical limitations	RQ05
Public-private collaboration in crisis conditions	Explains the role of digital procurement and coordination during the COVID-19 vaccination program	RQ06

The literature suggests that bureaucracy should not be approached only as an obstacle to efficiency, but also as a governance mechanism that supports standardisation, accountability and transparency. In the digital era, these bureaucratic principles are increasingly embedded into electronic platforms and digital workflows. ESIDIS can therefore be examined as a form of digital bureaucracy in public procurement, where rules, documentation, traceability and accountability are digitally mediated. This theoretical perspective provides the basis for examining how ESIDIS transforms traditional bureaucratic procedures, what enabling and constraining mechanisms it creates, and how it contributed to public-private collaboration during the Greek National COVID-19 Vaccination Program.

3. Research methodology

This chapter presents the methodological approach adopted in this dissertation. The study follows a qualitative single-case-study design in order to examine how ESIDIS, as a digital public procurement platform, mediated bureaucratic procedures and public-private collaboration in the context of the Greek National COVID-19 Vaccination Program. The chapter explains the research philosophy, the case-study design, the data collection methods, the interview process, the ethical considerations and the thematic analysis procedure used to interpret the empirical material.

3.1 Research philosophy and approach

In order to answer the present research questions, qualitative case-study methodology was adopted. Qualitative research methodology is research that uses non-numerical methods to explore, interpret and analyze phenomena, experiences and behaviors. Qualitative researchers believe that the researcher is actively involved in the research process, since he/she guides the research influenced by his/her surroundings (Creswell & Poth, 2016). It is a method that provides an in-depth understanding of concepts and offers the opportunity for new perspectives and views, analysis viewpoints and theories development. On the other hand, quantitative research is used in defined variables, using quantitative data collection methods in a more structured approach like surveys and interviews with measurable data.

A qualitative researcher starts with an assumption and interpretive methods to address a social or human problem, beginning with a clear purpose. The researcher chooses strategically qualitative sampling, appropriate qualitative methodology, according to the problem to be discussed, uses data collection methods and qualitative data analysis, as well as other methods, such as interviews and enhances the trustworthiness of the process. Further, the researcher proceeds with the interpretation of the findings and finally makes the presentation (Creswell & Poth, 2016).

Qualitative research includes many types of research such as Narrative research, Phenomenological research, Grounded theory, Ethnography and case-study methodology, which is used in this research, where questions are posed such as “how” and “why” using sometimes quantitative data as well. It is an in-depth examination method of a specific subject or topic in its natural setting (Creswell & Creswell, 2017).

The case examined in this dissertation is the role of ESIDIS in digitally mediating public procurement procedures related to public-private collaboration during the Greek National COVID-19 Vaccination Program. ESIDIS was selected because it constitutes the central electronic public procurement platform in Greece and represents a relevant example of digitally mediated bureaucracy. The study focuses on procurement-related coordination, transparency, accountability and collaboration mechanisms, rather than on the medical, epidemiological or clinical aspects of the vaccination program.

3.2 Research design (Case-Study Method)

As described in the previous section, case study is used for an in-depth analysis of a specific phenomenon. It has been used in psychology, sociology, anthropology, business, economy, education, health studies and political science. Case-study methodology explores the significant characteristics of life phenomena, such as behaviors, processes, international relations and industries' life cycle and uses quantitative data to explain the "how" and "why" on a topic. It is not only a preliminary research method but also an exploratory, descriptive, and explanatory method. Case-study method is preferred in exploring contemporary events, when the respective behaviors cannot be controlled. It includes presentations on the events and literature reviews, as well as stakeholder interviews. In fact, in many cases, previous research cases are used as a base for a more thorough investigation (Yin, 2009).

This strategy has also opponents who support that researchers who choose case-study methodology are not rigorous or that they are impartial and they guide the research results, allegations that we do not encounter in other quantitative research methods due to the objective data findings. Arguments also occur from the uniqueness of the experiment and sample, since it provides one-dimensional perspective. One more usual complaint is the extent of a case study that is usually too long and maybe chaotic, but this usually occurs depending on the data collection method selected (Baxter & Jack, 2008).

The research design begins with the topic of the case study, by presenting the concept the researcher is investigating considering the conditions the concept relies on. It might be a single-case or a multiple-case (comparative) examination. It also utilizes triangulation methods as source of evidence for results presentation and does not only rely in one source for evidence. It also benefits from pre-existing theoretical background to guide data collection and investigation (Yin, 2009). Stake (2008) has presented three forms that case-

study research can form: a) Intrinsic, where the case is studied as a unit, b) Instrumental, where the case is examined to deepen in co-related cases or phenomena, and c) Collective, where the case is investigated including other cases as well (Rosenberg & Yates, 2007).

In terms of process and results, the case-study method will help us in this research to deepen in a specific topic and be able to collect data from different sources. It also provides an extensive understanding of a concept in its own uncontrolled environment and gives the opportunity for the researcher to evolve a theory that may be applied to further cases.

The case-study research questions can be both qualitative and quantitative and focus in ideas such as explore, explain, analyze and understand. They usually start with “Why...” and “How...” for the researcher to gather more empirical outcome (Schoch, 2020).

3.3 Data collection methods

Qualitative research is based on personal experiences of stakeholders. The concept “qualitative interview” refers to in-depth interviews, and the design of the interview is expected to be based on specific ontological and scientific principles and be linked to the main research questions of the research. The extent to which the research is going to be established depends on the level of knowledge of the interviewer on the research and the relevant questions that are posed and at the same time on the perspective of the interviewee and the information they are willing to provide (Mason, 2009).

In this thesis, a semi-structured interview method was used, and eighteen (18) pre-defined questions (Annex I) were designed and posed for us to be able to create a guide with specific and important topics regarding the research. The semi-structured interview method allows us to be flexible regarding the questions and rearranging them during the interview. Participants were given the opportunity to review or clarify their responses to secure trustworthiness, validity and the reliability of the interviews and results.. The interviewees were not chosen randomly, but according to their relation with the ESIDIS platform and the COVID-19 Vaccination Program.

The demographic data of the interviewees provides a clear point of view of their roles regarding ESIDIS and their involvement in the procurement process. In later section, the findings from the interviews will be presented.

The five (5) interviewees were mainly employees of the economic body responsible for the development of emvolio.gov.gr portal, contract they signed with the Contracting Authority

and held different roles and seniority within the company. They chose to keep their anonymity. Also, one of them was, at the time the contract was executed, the President of the Hellenic National Public Health Organisation – EODY.

The interviewees hold roles and seniority levels such as Partner of Public Sector (1), Director of Public Tenders (1), Contract’s Manager (1) and the Project Manager (1) of the respective project of Vaccination Program against COVID-19 disease. Also, one of them was by the time the contract was executed, the President of the Hellenic National Public Health Organization – EODY (1).

They all have experience of 10 to 25 years in procurement projects for the public sector. All of them have long time experience regarding the legislation 4412/2016 which governs the procurement processes and the ESIDIS platform.

Almost all of them have previous experience with older procurement processes, before the implementation of the electronic procurement system ESIDIS, so they can provide information and comparison information regarding the pre-ESIDIS era and the post-ESIDIS era.

The interviews took place online and lasted approximately twenty minutes each. They were recorded and manuscripts are stored in a safe file.

An important part of the interview methodology are the ethical issues that may arise from such a procedure. This concept includes several rules that regulate the relationship between the researcher and the research stakeholders and focus mainly on how the interviewer should handle the interviewee. (Howitt, 2010).

Ethical considerations were addressed by ensuring voluntary participation, informed consent, anonymity and confidentiality. Participants were informed about the purpose of the study and the academic use of the collected data. No personal identifiers are reported in the dissertation, and participants are referred to through codes. The collected material was used only for the purposes of this research.

Table 4: Interviewees Roles

Participant	Sector	Role / expertise	Relevance to the study
P1	Public relevant organization	President during the COVID-19 Vaccination Program period	Experience with ESIDIS, procurement or vaccination-related project

Participant	Sector	Role / expertise	Relevance to the study
P2	Private relevant organization	Partner of Public Sector Projects	Experience with public-private collaboration
P3	Private relevant organization	Public Tenders Director	Experience with digital procurement procedures
P4	Private relevant organization	COVID-19 vaccination program Project Manager	Experience with project implementation or coordination
P5	Private relevant organization	Contracts Manager	Experience with procurement, governance or digital systems

3.4 Data analysis techniques

A wide variety of analysis techniques are used in qualitative research. They include interpretation of the original theory and results from the research. The available techniques are a) Coding Analysis, where the data are allocated in categories and systematically organized, b) Content Analysis, where the environment of an organization is examined thoroughly, c) Narrative Analysis, where personal perspectives of a theme are examined, d) Discourse Analysis, which analyzes the impact of social life in language, e) Interpretative Phenomenological Analysis (IPA), where individuals lived experiences are investigated, f) Grounded Theory Analysis, where the analysis occur directly from actual data than prior theory, g) Cross-Case Analysis, where multiple cases are examined in order to locate differences and similarities, and finally h) Thematic Analysis, the most widely known and used technique, where patterns of meaning within datasets are identified, analyzed and interpreted in structured and flexible framework (Ahmed et al., 2025).

Thematic Analysis is suitable for interviews, documents, examinations and case studies and can be inductive, which is data driven, or deductive, driven by theory (Braun & Clarke, 2006). It is a flexible technique and according to Braun and Clarke's (2021) theory a six-phase thematic analysis framework is developed in order to for the research to achieve reflexivity and transparency. The theory includes a) familiarization with data, b) generating initial codes, c) searching for themes, d) reviewing themes, e) defining and naming themes, and f) writing the report. Moreover, a hypothesis is posed in order to be examined and tested whether it is confirmed or not (Braun & Clarke, 2021).

Thematic analysis was used to identify recurring patterns across the interview material and documentary evidence. The analysis began with repeated reading of the collected material in order to become familiar with the data. Initial codes were then generated, focusing on references to bureaucracy, digital procedures, transparency, accountability, coordination, efficiency and limitations of ESIDIS. These codes were grouped into broader themes, which were then compared with the research questions and the conceptual framework developed in Chapter 2.

In order for the research to be as accurate, credible, dependable and integral as possible, Triangulation was used to enhance confirmability and credibility to evaluate the interviews results in comparison with the respective literature and statistics (Lather, 1997). The credibility defines whether or not the research results correspond to the information provided by the interviews and constitutes a logical analysis and interpretation of the initial experiential data. Interview findings were compared with documentary evidence, relevant literature and publicly available ESIDIS/procurement data. This triangulation allowed the researcher to examine whether the perceptions expressed by participants were consistent with secondary sources and the broader institutional context.

Also, support was provided by a peer, and specifically by an academic staff member to validate the inquiry findings, by reviewing the literature presented, the data collection method and process, the data management and the analysis procedure (Guba, 1981).

Transferability is reached by providing sufficient contextual and analytical details, thick descriptions, so that future researchers can judge the applicability of the context (Stalmeijer et al., 2024).

The basic themes used in this analysis connected to the related research questions, presented in Chapter 2, and shown in the following table.

Table 5: Relation of basic themes and research questions

Theme	Description	Related RQ
Digital bureaucracy	How ESIDIS embeds rules, procedures, documentation and hierarchy into a digital platform	RQ01, RQ02
Digital mediation of procurement	How ESIDIS supports electronic tendering, submission, communication and traceability	RQ03

Theme	Description	Related RQ
Transparency and accountability	How ESIDIS supports traceability, equal treatment and auditability	RQ04
Coordination and efficiency	How ESIDIS affects communication, speed and coordination between actors	RQ04, RQ06
Public-private collaboration	How public and private actors interact through digitally mediated procurement procedures	RQ01, RQ06
Constraints and limitations	Technical issues, legal rigidity, procedural complexity and user challenges	RQ05
Crisis implementation	How ESIDIS contributed to procurement-related aspects of the COVID-19 vaccination program	RQ06

3.5 Methodological limitations

The study is subject to certain methodological limitations. First, the number of interviewees is limited, which means that the findings cannot be statistically generalised. Second, participants' views may reflect their professional position and involvement in the examined processes. Third, the study relies on publicly available data and selected documentary evidence, which may not capture all internal decision-making processes. Nevertheless, the combination of interviews, literature and documentary evidence provides a sufficiently rich basis for an exploratory qualitative case study.

4. Case Study Presentation and Data Analysis

This chapter presents the empirical case study and the main findings of the dissertation. It first provides an overview of ESIDIS and its role in Greek public procurement, followed by a presentation of the Greek National COVID-19 Vaccination Program and the emvolio.gov.gr platform. It then analyses available ESIDIS and public procurement data and presents findings from interviews and documentary evidence. The analysis is organised around the research questions, focusing on the transformation of bureaucracy into digital bureaucracy, the digital mediation of procurement procedures, enabling and constraining mechanisms, and the contribution of ESIDIS to public-private collaboration during the vaccination program.

4.1 Overview of the ESIDIS platform

ESIDIS/NEPPS (National Electronic Public Procurement System) System was presented in 2013 and in 2017 became obligatory for all Greek public entities. It refers to the Greek government e-purchasing process. It is implemented for tender procedures that exceed value of 30.000 euros, except for direct award procedures. The platform was designed to streamline the government's purchasing process by making it efficient, faster and transparent. It contributes to the enablement of the publication of public tenders' notices, supporting the submitting process and seems to contribute to a meritocrat evaluation process. Moreover, it monitors the execution of contracts, like ordering, invoicing and electronic payment.

The law that ESIDIS platform is operating under is law 4412/2016 as amended recently by law 5218/2025 and describes all provisions and restrictions regarding public procurement procedures. ESIDIS verifies that all strict procurement procedures are compliant with legislation and regulations (Zeppos & Yannopoulos, 2025).

According to Directive 2014/24/EU, public sector procurement is how public agencies and entities interact with private sector and proceed to purchase goods, services and projects, under the rules and regulations the government has established (European Parliament and Council of the European Union, 2014).

The tendering process has specific steps, visualization and planning of the procurement, tender announcement, contract award and contract monitoring.

The first step is for private firms or “economic bodies” to register to ESIDIS portal, to verify that they are existent and legal entities operating in Greece. Since, ESIDIS operates under the umbrella of Promitheus (<https://portal.eprocurement.gov.gr/webcenter/portal/TestPortal>) along with KIMDIS System, public operators announce their intent for procurement or tenders for goods, services or large public projects. After the offer’s deadline submission the tender’s committee proceeds to the offers unsealing and evaluation of documents and technical offers. Later, they proceed with the evaluation of the economic offers and call the preferred bidder, depending on the type of tender, to submit the legal documentation in order to prove the declaration they had submitted at the participation level. Finally, they conclude to their decision and announce the result to the participants and provide a specific amount of time for participants to submit an appeal, if they do not agree with the evaluation in legal grounds. If the tender proceeds without any obstacles, it soon becomes a contract with one vendor, or more in case of contract-framework, with specific terms, conditions and duration. But the procurement procedure is completed once the contract has come to an end and the goods or services are delivered (Ministry of Digital Governance, 2026).

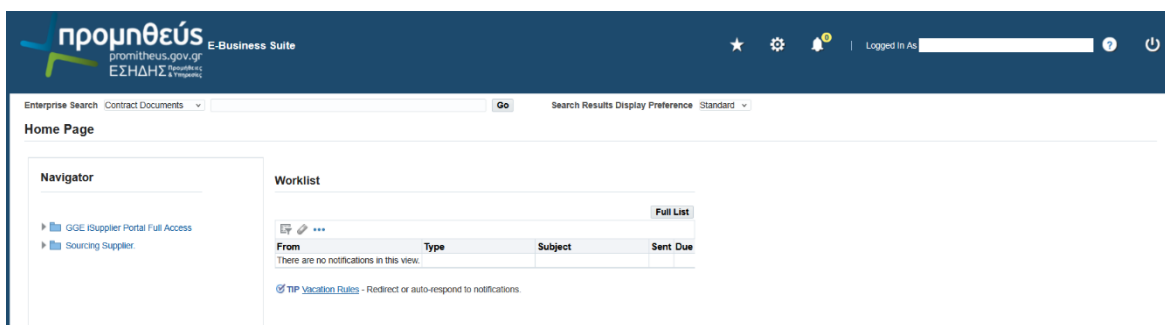


Figure 2: ESIDIS platform (Promitheus.gov.gr, 2026)

It is critical and to the government’s benefit for public tenders to promote competition and eliminate corruption, giving all participants the opportunity to participate in a meritorious tender procedure. The Directive 2014/24/EU rules the public procurements in countries of EU and simplifies processes. It is one of the cornerstones of modern public administration and the implementation of digital governance. ESIDIS digitizes all procurement phases, appears to make the tender process accessible, public, transparent to all stakeholders and seems to contribute to the reduction of bureaucracy limitations, costs, time consuming processes and its purpose is to enhance competition by giving opportunities for foreign firms

to participate. ESIDIS is not just a simple technical platform, but a very good example of digital bureaucracy, where the the public administration procedures are not eliminated, on the contrary they are transformed and organized in a digital environment. It helps legislation and regulations to be implemented effectively and efficiently and minimizes participants' workload (Ministry of Digital Governance, 2026).

4.2 The National COVID-19 vaccination program and emvolio.gov.gr

The National COVID-19 vaccination program was created by a private company in Greece, after the expression of Information Society S.A. (KtP M.A.E.), the executive support organization for the implementation of information and Communication Technologies projects in the public sector. Since the necessity for a public vaccination system was urgent, due to the fact the COVID-19 disease appeared in the country the same year, Information Society S.A. proceeded with the typical procedure of L.4412/2016 for public tenders through ESIDIS platform, and announced an urgent negotiation process titled "Provision of specialized Technical and Operational Support services within the framework of the National Vaccination Program against COVID 19", protocol number 12784/24-12-2020 that followed all the rules and regulations that occur from the legislation 4412/2016. The original budget of the tender was 645.000,00€ (Promitheus.gov.gr, 2026; Hellenic Republic, Ministry of Health, 2026).

The proposals submission date was on 28/12/2020 and after the submission the contracting authority decided within one day, on December 29, 2020, that the participant "PricewaterhouseCoopers Business Solutions Provision of Business and Accounting Services Societe Anonyme" was the preferable bidder. On December 31st, 2020, the number 1642 Contract was signed by the two stakeholders for 604.000,00€, excluding VAT, and for a duration of three (3) months (Promitheus.gov.gr, 2026).

Since the tender document predicted the option of a time extension, the two parties, on April 6th, 2021, signed the extension of the contract for 374.479,95€, which is the legal 50% fee of the original contract and for a duration of forty-five days (Promitheus.gov.gr, 2026).

The purpose of the project was the end-to-end configuration of the process of the COVID-19 Vaccination Program, to help the effective management and distribution of the COVID vaccines, the scheduling of citizens' appointments and the monitoring of the progress by the contracting body. Simultaneously, the contractor was also assigned Project Management

(PMO) of the program, coordinating the configuration of the system and the development of applications.

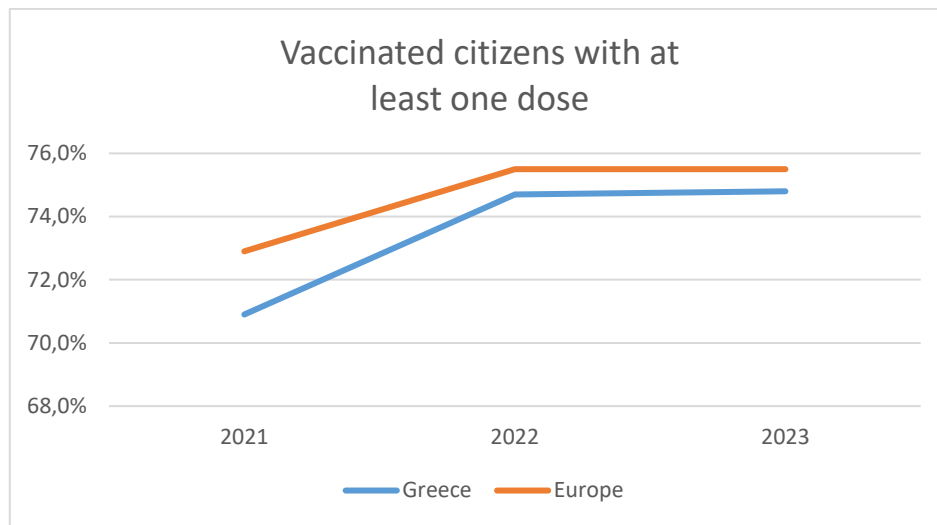
The program was a success and through time, new needs occurred by the Contracting Authority, regarding the COVID-19 vaccination program and its extensions, thus new tender calls were announced. For example, on 26th of May 2021, Information Society S.A., using ESIDIS platform again, assigned the contract for “Provision of consulting services on Data Analysis to the COVID-19 emergency management team” with a value of 19.500,00€ and duration of six (6) months. Later on November 4th 2021, the Contracting Authority assigned the “Expansion of logistics & distribution system for COVID-19 vaccines” in a value of 912.980,00€ and duration thirteen (13) months. Lastly, on December 1st, 2022 the contractor was assigned with the contract “Expansion Services of the appointment creation and management system as well as the execution of vaccinations within the framework of the National COVID-19 Vaccination Program” for nine (9) months duration, plus nine (9) months of extension, for 5.805.800,00€ in total (Promitheus.gov.gr, 2026).

The electronic platform emvolio.gov.gr created for the above purposes, was launched on January 2021 and gave the opportunity to all citizens to timely and accurately set their vaccination appointments in the nearest health center, as well as to arrange their repeat doses.



Figure 3: emvolio.gov.gr platform (Data: Hellenic Republic, Ministry of Health, 2026)

During the years 2021-2023, 73,1% of the population in Greece used the emvolio.gov.gr platform to arrange at least one required vaccination dose, when the respective European population was 75,5% and more than 22 million vaccines were administered to the population of Greece (Promitheus.gov.gr, 2026).

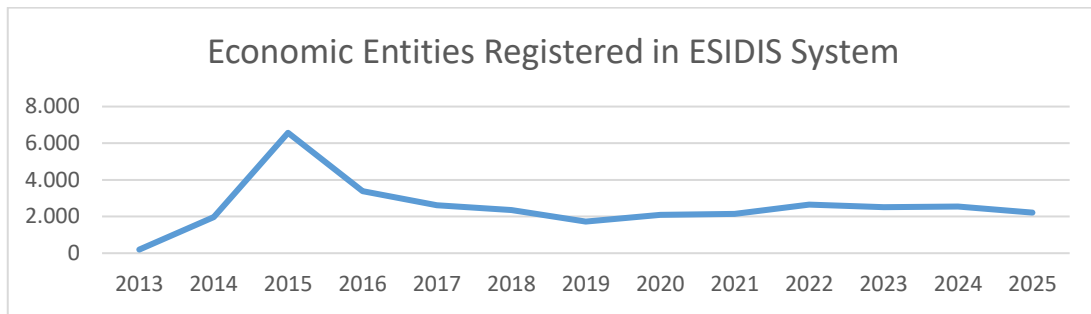


Graph 1: Vaccinated citizens with at least one dose Greece vs Europe
(Data: European Centre for Disease Prevention and Control, 2026)

This dissertation does not evaluate the medical or epidemiological effectiveness of the vaccination program. Instead, it focuses on the procurement-related and governance aspects of the case, with emphasis on how ESIDIS supported or constrained public-private collaboration and digitally mediated bureaucratic procedures.

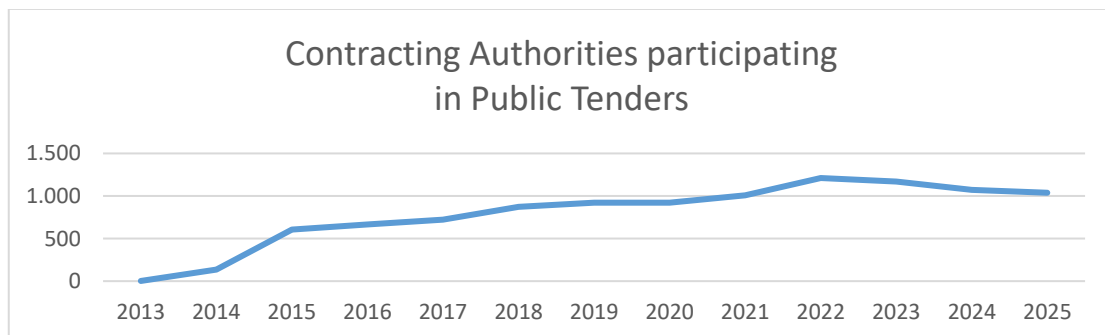
4.3 Analysis of the ESIDIS data and public procurement processes

Since the implementation of law 4412/2016 regarding public tenders in Greece, more than 32.900 private economic operators have been registered in ESIDIS Platform. At the same time, more than 1.800 public bodies have published over 98.900 tenders via ESIDIS for public procurement. The total budget of public procurement tenders via ESIDIS platform, during period 2013 – 2025 was over fifty-five (55) billion euros (Promitheus.gov.gr, 2026). In the following charts, we are analyzing the data provided by ESIDIS (Promitheus.gov.gr, 2026) portal:



Graph 2: Economic Entities Registered in ESIDIS platform years 2013 – 2025 (Data: Promitheus.gov.gr, 2026)

In graph 2, we observe that the majority of private economic bodies registered in ESIDIS platform was in year 2015, two (2) years after the presentation of the program. Later, a stability in the registrations is presented during years 2016 – 2025. This trend indicates the gradual institutionalisation and wider adoption of ESIDIS by economic operators. However, the number of registered users should not be interpreted alone as direct evidence of efficiency. Rather, it shows the expansion of the platform as a mandatory digital environment for public procurement. This increase in year 2015 indicates that the obligation of the implementation of ESIDIS platform was adopted by the economic entities and the gradual institutionalization and wider use of the platform by the market.



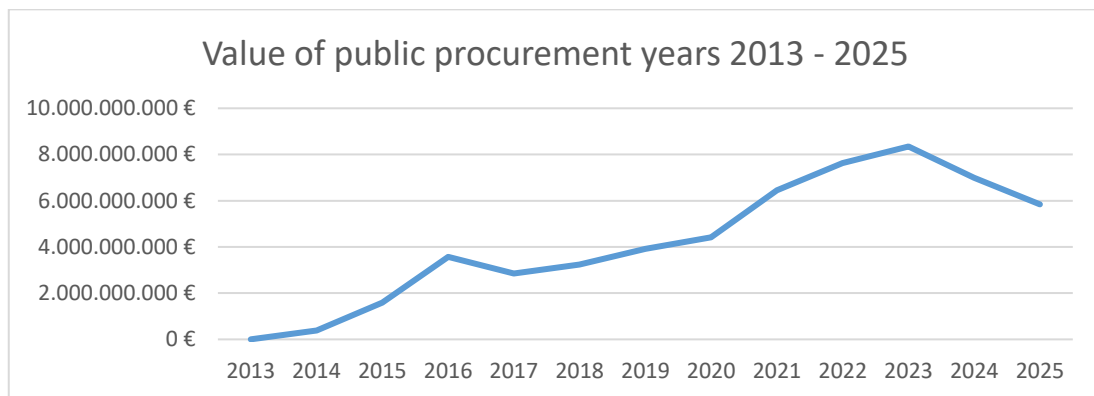
Graph 3: Contracting Authorities participating in Public Tenders years 2013-2025 (Data: Promitheus.gov.gr, 2026)

In graph 3, the public organizations that announce public tenders present a steady increase up to year 2022 and a slower decrease the following years. Once again, this escalation indicates that the obligation of the implementation of ESIDIS platform was adopted by the economic entities.



Graph 4: Tenders published and led to contract years 2013- 2025 (Data: Promitheus.gov.gr, 2026)

The published tenders by public organizations (Graph 4) reached up the number of 13.415 in 2023 and then we observe a decline until 2025. The increase in the number of tenders published through ESIDIS indicates the growing use of the platform in public procurement. Nevertheless, further evidence is required to assess whether this increase translated into faster or more efficient procurement procedures.



Graph 5: Value of public procurement years 2013-2025 (Data: Promitheus.gov.gr, 2026)

Finally, the budget of the published tenders raised continuously, with two pick points on from year 2016 to year 2023. The rise in the tenders value during years 2013 – 2023 shows that the government expanded significantly the scope of procurement platforms including a broader range of lower value procurement contracts. In parallel, the European Recovery Funds and Public Investment Programs were directed through transparent digital process. We observe that the tenders evolved over the years with an increase up to year 2023, and then a slight decrease in years 2024 and 2025. Between 2013 and 2023 the numbers of published tenders and their values increased substantially. This indicates a scaling-up of public procurement over the years and the contribution of ESIDIS platform in the tender

procedure. Especially, years between 2021 and 2025 include the majority of public tenders published, highlighting the adaptivity of the electronic procurement system by the public and the private sector. After year 2023, we notice a decline, both in number of tenders published and the total value of them. However, even though the number of tender during those two years was lower than year 2023, it is important to refer to the fact that the value of these tenders is higher and steady compared to years before 2022.

Concluding, we can observe that the e-procurement system was expanding during 2013 – 2023 and then entered a phase of maturity.

It is important to mention that during period 2018-2023 an excessive number of published tenders is observed due to the fact that the ESPA 2014-2020 was activated and the Recovery and Resilience Fund (RRF) was running, providing the Greek market with monetary funds, intended for growth purposes (Promitheus.gov.gr, 2026).

A table follows connecting the evidence which occurred from the research and the related research question:

Table 6: Data Sources and Evidence for ESIDIS Analysis

Data / evidence used	What it shows	Related RQ
Number of economic operators registered in ESIDIS	Adoption and institutionalisation of the platform by market actors	RQ01, RQ03
Number of contracting authorities	Use of ESIDIS by public bodies	RQ03, RQ04
Number of tenders published through ESIDIS	Expansion of digitally mediated procurement procedures	RQ03
Value of public procurement through ESIDIS	Scale and importance of the platform in public procurement	RQ03, RQ04
Interview evidence	Perceived enabling and constraining mechanisms	RQ04, RQ05
Vaccination program / emvolio.gov.gr case evidence	Procurement-related contribution to crisis implementation	RQ06

4.4 Findings from interviews and documentary evidence

The interview findings are presented thematically and are organised around the research questions. The five participants had direct or relevant experience with ESIDIS, public procurement procedures and/or the implementation context of the COVID-19 vaccination project. The analysis focuses on six main themes: ESIDIS as a reformer of bureaucracy, embodiment of bureaucratic principles, digital mediation of procurement procedures, enabling mechanisms, constraining mechanisms and contribution to the vaccination program.

As analysed in chapter 3.3, the five (5) interviewees are mainly employees of the economic entity responsible for the development of emvolio.gov.gr portal, contract they signed with the Contracting Authority and held different roles and seniority within the company.

For reasons of convenience, the interviewees roles are cited in the following table.

Table 7: Interviews participants roles

Participant	Role
Participant 1	President of the Hellenic National Public Health Organization – EODY
Participant 2	Partner Public Sector – Economical Body
Participant 3	Director of Public Tenders (Public Sector) & European Projects – Economical Body
Participant 4	Project Manager of emvolio.gov.gr project – Economical Body
Participant 5	Contract’s Manager – Economical Body

4.4.1 Role of ESIDIS as a mechanism of digital bureaucracy

Exploring the role of ESIDIS in transforming bureaucracy into digital form within the framework of public-private collaboration during the Greek National COVID-19 Vaccination Program, most participants believe that ESIDIS platform and the new electronic procedures haven’t changed radically since the older physical bureaucratic systems. They support that ESIDIS has eliminated significant volume of paperwork and files, however, the procedure is the same and it just accelerated the time framework but not the total procurement procedure. Participant 3 in this context stated that the transition from paper to digital workflow has not eliminated the bureaucratic mindset, but transformed it. Participants 2, 3, 4 and 5 mentioned that even though the procedures have left behind the physical forms of submission and turned into electronic form, they still hold their intense

bureaucratic character and have negative impact on how the tenders operate. On the other hand, Participant 1 felt fully contented with the implementation of ESIDIS in this project and emphasized that the platform minimized the usual tender process time framework and helped the evaluation committees to proceed to their reports without the need of being present, simply by accessing the tender documents on their personal computers.

4.4.2 Embodiment of bureaucratic principles in ESIDIS

Examining how traditional bureaucratic principles are embedded in the design and operation of ESIDIS, all participants agree that ESIDIS system incorporates most of the bureaucratic characteristics, giving examples such as the strict formal hierarchical steps the platform is following in a tender and the division of labor. Moreover, the impersonal character of the process was also mentioned as well as the centralized control by the system which acts as a central documents and procedures repository. Participant 5 highlighted the embodiment of the relevant legal framework in the digital tender process and that decisions are made due to objective criteria, rather than personal relationships

4.4.3 Role of ESIDIS as a digital mediator of public procurement procedures

Focusing on the role of ESIDIS as a digital mediator of public procurement procedures, all participants mentioned that ESIDIS provides an end-to-end procurement system, managing all procurement workflows. They believe that ESIDIS helps standardizing and tracking the whole tender life cycle for all high budget tenders. They supported that the platform appears to promote transparency by providing real time and secure information into KIMDIS and to minimize corruption ensuring compliance to the relevant legislation. Particularly, Participant 2 mentioned that ESIDIS connects all public sector contracting authorities with economic operators, functioning under open and trustworthy procedures.

4.4.4 Enabling mechanisms created by ESIDIS

Detecting the mechanisms created by ESIDIS, in terms of efficiency, transparency, traceability, accountability and coordination, most participants agreed that ESIDIS gives the impression that helps improving traceability and documentation, mentioning once again the digital repository created for each tender, fully accessed. Participants 1, 3 and 5 particularly emphasised the importance of digital records and formalised communication. However,

Participants 2 and 4 noted that the platform remains technically demanding and not fully user-friendly.

4.4.5 Constraining mechanisms in ESIDIS

Identifying remaining constraints in ESIDIS, particularly regarding legal rigidity, procedural complexity, usability barriers and technical limitations, most of the participants referred to the strict and outdated legislative environment ESIDIS is operating in and the stringent bidding rules, which are remaining of an older mindset, minimizing competition and hindering development opportunities. Participants 2, 3 and 5 supported that the platform is not user-friendly and presents sometimes instability and technical issues, which lead economic entities to feel insecure about the process. Furthermore, Participant 5 also exposed the lack of interoperability between ESIDIS and the other related procurement platforms which leads to work overload and data oversharing and reusing.

4.4.6 ESIDIS contribution to the procurement-related implementation of the Greek National COVID-19 Vaccination Program

Focusing on the contribution of ESIDIS in the implementation of the Greek National COVID-19 Vaccination Program, all participants agreed that ESIDIS platform accelerated tender procedures and implemented all respective legislative regulations, by simplifying tender steps, contributing to COVID-19 Vaccination Program implementation to the fast possible way. Participant 4 mentioned that ESIDIS appears to enable the increase of traceability and accountability and contributed to the transparency of the tender and the fast and accurate coordination of the parties, concluding to a timely and efficient procurement process. Finally, Participant 5, stated that ESIDIS created a feeling of a solid procurement process, without bypassing the institutional framework that was necessary and expedited the COVID-19 Vaccination Program, however she indicated the lack of process inclusivity since ESIDIS accommodated only the tender and award procedure excluding further steps of the COVID-19 Vaccination Program implementation.

The following table summarises the main findings of the research:

Table 8: Main findings of the Research

Theme	Main finding from interviews	Supporting evidence	Related RQ
ESIDIS as digital bureaucracy	ESIDIS preserves bureaucratic rules but transfers them into digital workflows	Participants referred to formal procedures, documentation and digital submission	RQ01, RQ02
Digital mediation	ESIDIS supports electronic submission, communication and traceability	Participants highlighted reduced physical paperwork and centralised documentation	RQ03
Enabling mechanisms	ESIDIS supports transparency, accountability and coordination	Participants referred to traceability, equal treatment and structured procedures	RQ04
Constraining mechanisms	Legal rigidity, technical problems and usability barriers remain	Participants mentioned training needs, system complexity and technical malfunctions	RQ05
Vaccination program	ESIDIS supported procurement-related coordination but did not manage all post-contract activities	Participants noted its importance up to contract signature and formal procurement stages	RQ06

From the interviews above, it is important to note that the contribution of ESIDIS should be understood primarily in relation to the procurement-related and contractual aspects of the vaccination program. ESIDIS did not manage the operational delivery of vaccinations; rather, it provided the digital procurement environment through which formal procedures, documentation, transparency and accountability were supported.

4.5 Evaluation of bureaucratic digital tools and outcomes

Taking into consideration the literature and the interviews analyzed above, we conclude in the need for digitalization of public administration and radical transformation of bureaucratic processes. In the last two decades, we observed the evolution of traditional

bureaucratic structures into digital systems, forcing public administration to adapt to the new era. E-governance, digital tools and artificial intelligence have contributed to the fundamental reshape of public governance but at the same time emerged challenges that triggered discussions and hesitation regarding legislation, rights and hesitation of stakeholders to embrace change.

ESIDIS transformed most of the bureaucratic procurement processes into digital form and became a coordination tool between parties offering opportunities for further development. It is a procurement platform that concentrated all necessary documentation and implemented the respective complicated legislation into a digital mechanism, as occurred from the interviews.

The bureaucratic function ESIDIS digitized is the Greek Public Procurement Process dictated by the law 4412/2016 and its amendments and the interview findings suggest that ESIDIS contributed to the improvement of time framework, coordination, tender evaluation and transparency. Along with ESIDIS, other tools have also been implemented, such as advanced digital signature, which are also requirement for participation in public procurement process.

Comparing ESIDIS to older tactics in public tenders, we observe that the new bureaucratic digital tools appear to have reduced time framework, from the beginning of a procurement process until the contract assignment. Digitalization presents to have set specific boundaries and implemented the relevant legislation by dismissing any ambiguity. Though, it seems it hasn't eliminated any steps in the procurement process, since the respective legislation hasn't been fundamentally amended. However, the interview findings suggest that ESIDIS assisted in competition evolution, by giving the opportunity to any citizen or entity having access to the procurement documentation and participating in any tender process, as long as they meet the criteria. It also seems to have minimized error rates and invalidated duplication of work. All these indicators reflect to Weberian theory of efficiency gains, where speed, effectiveness and accuracy are achieved via Weber's ideal type of bureaucratic organization (Akter & Islam, 2021).

Digital tools indicate the acceleration of public services efficiency, by standardizing procedures, increasing transparency and traceability and developed a more effective government structure. The core bureaucratic principles have not been bypassed but on the contrary, they have been reinforced for a more effective public governance (Bulman, 2026).

Unlike other government digital tools, ESIDIS presents malfunction issues, according to the interviewees, and is characterized by impracticality, as well as outdated interface. Users seem to meet difficulties during the use of the system and need special and long-term training in order to cope with the requirements of the platform. However, they appear to trust the process believing that ESIDIS platform is fair and impervious. In general, they supported that the system presents to have set boundaries in the relationship between stakeholders and revealed procedures that were vague before the digital transformation.

The purpose of the implementation of the Electronic Procurement Platform ESIDIS, along with other government digital tools, is to increase transparency and integrity and reduce corruption, to make the public and private sectors collaboration more direct and effective and eventually not to de-bureaucratize the public administration, but to redesign bureaucracy in order to adapt to the modern era (Dollah et al., 2025).

These findings are further discussed in Chapter 5, where they are interpreted in relation to the literature on bureaucracy, digital governance, e-procurement and public-private collaboration.

5. Discussion

This chapter discusses the empirical findings presented in Chapter 4 in relation to the literature reviewed in Chapter 2 and the research questions of the dissertation. The discussion focuses on how ESIDIS transforms traditional bureaucratic procedures into digitally mediated workflows, what enabling and constraining mechanisms emerge from its use, and what implications these findings have for public-private collaboration and governance in the context of the Greek National COVID-19 Vaccination Program.

5.1 Interpretation of key findings

The findings suggest that ESIDIS does not eliminate bureaucracy but reconfigures it in digital form. This supports the argument that digital transformation in public administration does not necessarily lead to de-bureaucratisation. Instead, formal rules, documentation and accountability mechanisms are embedded into digital workflows. This finding is consistent with the Weberian understanding of bureaucracy as a system of rules, hierarchy and formal procedures, but it also shows how these principles are adapted to a digital procurement environment.

Moreover, the findings indicate ESIDIS platform is reinforcing specific positive characteristics of bureaucracy, such as transparency, traceability, accountability and standardization. ESIDIS seems to provide the opportunity to any party have access to the respective information, create a documentation repository, follow specific procurement stages and decisions and implements the relevant legislation, adopting the Weberian theory of formal rules and regulations and standardization of procedures.

The research suggests that ESIDIS plays an important role in facilitating coordination between public authorities and private-sector, as Public-Private Partnerships (PPPs) theory indicate, especially because it creates a unified digital environment for public procurement. The platform enables stakeholders to interact through a common standardized framework, where both parties contribute with their capacity, leading to technological development, economic growth and quality of public services.

The findings also demonstrate that the respective legislation hasn't been amended, but implemented in a digital form and ESIDIS is still accompanied by several operational and structural limitations. The technical difficulties and usability barriers of the platform lead

users to be concerned about the system's dependability. Also, ESIDIS complexity, the ongoing need for training and the non support of post-award stages are in line with Crozier's arguments about bureaucracy and the "red tape" mindset. At this point, the research reveals the need of balance between rules and flexibility which is linked to digital governance, New Public Management and post-bureaucratic approaches.

Finally, the findings emphasize that ESIDIS's role in the National Vaccination Program should primarily be understood as institutional and procedural, rather than causal in terms of overall program success. In practice and as described in former chapters, ESIDIS operates as a digital platform that structures and facilitates public procurement processes, such as COVID-19 Vaccination Program procurement process.

5.2 Comparative insights of Bureaucracy and digital transformation

Comparative insights of bureaucracy and digital transformation describe a comparative analysis of public administration policies and the implementation of digital transformation. It analyses how public bureaucratic systems are influenced and transformed by the presence of electronic systems and the modernization of processes (Dunleavy et al., 2006). In this chapter, we will examine the reaction of bureaucratic systems across public sector in their transformation by digital technologies and ESIDIS platform comparing to other public digital tools.

Digital transformation seems to have contributed to the way citizens interact with public organizations. New technologies offer tools for the transformation of public administration into a new and open model of communication. Public services are more people-centric, promoting transparency, trustworthiness, accountability and active participation of citizens. The modern public administration enables the adoption of new technologies by offering new tools for interaction with the public sector (Xanthopoulou et al., 2024).

Even though Greek public administration preserves high anelastic bureaucratic characteristics, it seems to adopt new radical technologies and reshapes public sector services. Digital platforms reframe collaboration, transparency and public administrative efficiency. The centrality of the decision-making public structures is changing by reducing concentration of authority, for example, in economy. Challenges occurred by the tendency of the government to by-pass strict rules and regulations instead of fundamental changes and transformation of the public administration (Ongaro & Spanou, 2008).

Digital multilevel management can support and promote effective and efficient public administration by eliminating authority and decision-making in high levels and reallocate responsibility to subordinates. Furthermore, reevaluation of responsibilities in all administrative levels and implementation of wider, more flexible policies and procedures can lead to open and productive public management. It is government's obligation to create mechanisms and regulations which will give priority to proactive approaches preventing uncertainty and transform public governance into a more efficient and trustworthy organization (Nasios, 2024).

ESIDIS platform, compared to the other bureaucratic systems for example tax administration, and social healthcare platforms, has been affected in different levels by digital transformation.

As mentioned in the interviews, platform ESIDIS was a milestone for the public procurement processes by digitizing tenders' procedures. However, it is characterized as outdated and does not reflect current technological needs. Similar platforms were examined such as Gov.gr, MyAADE and mykep.gr, which are continuously updated to synchronize with public needs and trends. They present a different interface which is more user friendly and keep implementing new features depending on the current demands.

The case of ESIDIS shows that digital transformation does not necessarily remove bureaucracy from public administration. Rather, it changes the form through which bureaucracy operates. Paper-based procedures, physical submission and fragmented communication are replaced by electronic workflows, digital documentation and traceable platform-based interaction. However, the underlying legal and procedural framework remains largely bureaucratic. Therefore, ESIDIS should be interpreted as an example of digital bureaucracy rather than as a complete departure from bureaucratic administration.

5.3 Implications for Public-Private collaboration and governance

The findings indicate that private sector expertise can play an important role in the implementation of complex digital public projects. This is due to economic measures and practical reasons because government may lack the necessary resources for the volume of the projects they implement.

Public-private collaboration can be strengthened in digitally mediated environments. Electronic procurement platform ESIDIS, as well as other bureaucratic digital tools, appear

to promote synergy reallocating responsibility across stakeholders. As evidenced in literature and the interviews, government retains its strong bureaucratic character, with small steps to modernization. This new hybrid model of governance, with resources from the private sector, challenges the classical Weberian bureaucratic hierarchy and introduces reallocation of authority. Thus, effectiveness and efficiency of the public services depend on the reconfiguration of governance and on redistribution of responsibility creating shared accountability.

Since one of the most important factors in public-private collaboration is trust, the findings suggest the broad acceptance of a meritocratic digital platform, characterized as reliable and fair.

The limited investment by the government, on the other hand, in modernization of such an important tool, as ESIDIS is, creates challenges in the relationship between stakeholders. Standardization of procedures, templates and specific procedures support can support predictability and elimination of risk. However, the flexibility the platform offered during the COVID-19 Vaccination Program procurement process promoted accountability and seems to have allowed both parties to respond effectively in short time framework.

The results of the research imply that digital systems integration into data governance is mandatory for effective collaboration in PPPs and it occurs by the interviews that the ideal model of governance includes formal procedures along with flexibility in decision-making. The findings suggest that digital procurement platforms can enhance public-private collaboration by providing a common procedural environment based on transparency, documentation and accountability. In this sense, ESIDIS contributes to a governance model in which public authorities retain institutional responsibility, while private actors contribute technical expertise and implementation capacity. They operate within the same digital infrastructure where processes and decisions are standardized and visible, minimizing phenomena of discretion.

However, effective collaboration also depends on several conditions. Apart from bringing together public and private sectors, it requires usability and users training so users can operate in confidence, technical reliability for uninterrupted operation and mechanisms for project monitoring beyond the contract award stage to reinforce better coordination.

The following table connects research questions, main discussion points, and basic findings of the research.

Table 9: Research Questions, Findings and Interpretation

Research question	Main discussion point	Interpretation
RQ01	ESIDIS transforms traditional bureaucracy into digital bureaucracy	Bureaucratic rules remain, but are embedded into digital workflows
RQ02	Bureaucratic principles are embedded in ESIDIS	Rules, documentation, hierarchy and accountability are preserved digitally
RQ03	ESIDIS digitally mediates procurement procedures	Tendering, submission, communication and documentation are platform-based
RQ04	ESIDIS creates enabling mechanisms	Transparency, traceability, coordination and perceived efficiency are strengthened
RQ05	Constraining mechanisms remain	Legal rigidity, technical problems, usability barriers and limited post-award coverage persist
RQ06	ESIDIS contributed to the procurement-related implementation of the vaccination program	Its contribution concerns mainly procurement-related and contractual coordination, not the full operational success of the program

Overall, the discussion indicates that ESIDIS should be understood as a mechanism of digital bureaucracy rather than as a tool that eliminates bureaucracy. It preserves the formal principles of public procurement while transforming their implementation through digital workflows, documentation and traceability. This creates important enabling mechanisms for public-private collaboration, but it also reveals persistent constraints related to legal rigidity, technical complexity and usability. These insights provide the basis for the conclusions and recommendations presented in the next chapter.

6. Conclusions and Recommendations

This chapter concludes the dissertation by summarising the main findings in relation to the research questions. It reflects on the role of ESIDIS as a form of digital bureaucracy in Greek public procurement and discusses its contribution to transparency, traceability, accountability, coordination and public-private collaboration. The chapter also acknowledges the limitations of the study and proposes directions for future research and practical improvement.

6.1 Summary of major findings

This study examined the role of bureaucracy in contemporary public administration presenting the case of implementation of COVID-19 National Vaccination Program and the contribution the electronic procurement system ESIDIS in this endeavor.

Blending literature, as described above, semi-structured interviews and thematic analysis, the research has revealed the following major findings:

1. Digital Governance preserves main characteristics of traditional bureaucracy

The findings suggest that Digital Governance is applying Weberian principles, such as hierarchy of authority, formal rules and regulations, procedures and division of labor. It looks like Weberian theory is applicable up to these days with minimum alterations and adjustments. Even the use and implementation of digital tools haven't changed this strategy. On the contrary, formal procedures aren't replaced by more flexible or alternative tools, but they have been transformed in a digital form. Digitization follows the guidelines of bureaucracy and appears to be used as an enabler. ESIDIS seems to be built in the concept of bureaucracy philosophy and illustrates the presence of traditional bureaucracy in electronic framework.

2. ESIDIS as a mechanism of digital transformation

The implementation of ESIDIS, as electronic bureaucratic procurement platform, is presented as a transformer the old-fashioned formal procedures by replacing physical documentation and on-site presence of stakeholders with automated procedures, less

paperwork, and by increasing the sense of traceability. The respective legislation, which is not fundamentally remodeled, seems to be leading the way and dictating the path ESIDIS and other bureaucratic electronic systems are shaped in. Thus, the findings show that digital platforms and electronic systems are regarded as enablers of bureaucratic procedures and not simplifiers or transformers of the law, where bureaucracy is not eliminated, but applied through a digital platform.

3. ESIDIS creates enabling mechanisms

Findings from both literature and interviews show that efficiency and effectiveness seems to be accelerated by saving valuable time in procurement procedures, such as documents preparation and submission process, evaluation steps and contract award stage. Coordination appears to be improved and the relationship among stakeholders seems also expedited. ESIDIS platform, is perceived as an accelerator of procurement process and facilitator for COVID-19 Vaccination program implementation in regards to the procurement process.

Findings also suggest that ESIDIS installed a rather formal procurement framework process and defined the boundaries for all stakeholders. Older fears or tactics of non-permissible methods or irregular tender procedures seem to be minimized. Economic bodies and contractual authorities have no choice but to comply with regulations and coordinate in a lawful manner. Equal access to information and documentation traceability can be interpreted as enabler of clarity and trustworthiness. ESIDIS platform is perceived as transformer of ambiguous process into an accountable meritocratic procedure, by abolishing behaviors of corruption and discrimination.

4. ESIDIS maintains constraining mechanisms

As mentioned above, digital systems such as ESIDIS seem to have not fundamentally changed procedures but replicated existing methodology in an electronic form. Procurement process is still highly formalized and complex and hasn't yet achieved the ideal flexibility level. Even though the implementation of ESIDIS platform has eliminated most of the excessive burden of the procurement processes, inflexible outdated legislation is still hindering evolution and preserves antiquated routines.

Even though revolutionary for the government procurement process, ESIDIS appears to present malfunctions that make operators anxious and concerned about the capability of the platform. Interviews showed that in many cases, especially during the first years of ESIDIS platform implementation, it was quite common for the platform to collapse or not to operate as expected. It seems that these problems are minimized as possible, however it carries a negative reputation.

Furthermore, the system is not designed to accommodate full procedure including contract management apart from tender procedure, which limits documentation traceability and confuses stakeholders.

The results suggest that the platform shows a high degree of configuration complexity and even the most capable long-time users are expressing concerns about the limited user-friendliness of ESIDIS platform.

5. ESIDIS procurement aspect

The contribution of ESIDIS should be interpreted mainly as a procurement-related and contractual enabler in regards to the vaccination program. ESIDIS did not coordinate the the operational delivery of vaccinations, but provided the digital procurement environment through which formal procedures, documentation, transparency and accountability were supported.

6. Public-Private collaboration enhancement

Public-Private collaboration is also regarded as enabled and promoted under the scope of structured, transparent procedures digital governance can offer. Private sector seems to feel more comfortable with digital governance and the steps the government is taking towards a new era, within a framework of clear rules, documentation, reliability and auditability.

6.2 Conclusions on Bureaucracy as an enabler of efficiency

It is quite common for bureaucracy to be interpreted as a constraint rigid tool. The findings of this study suggest that bureaucracy can act as an enabler of efficiency when its formal principles are embedded into transparent, traceable and standardised digital workflows. In the case of ESIDIS, bureaucratic features such as documentation, hierarchy, rules and

accountability are not removed, but are digitally mediated. This can support coordination and trust in public-private collaboration. However, bureaucracy becomes enabling only when digital systems are usable, reliable and supported by an updated legal and organisational framework.

Even though the traditional form of bureaucracy is vivid and active, the new hybrid mode of bureaucracy demonstrates, according to the interviews, high levels of productivity and effectiveness.

The standardization and the formalization of procedures, as presented through ESIDIS platform, seem to be the main pillars of bureaucracy efficiency. All documentation along with rules and regulations are open to public, which can be interpreted as elucidator of procurement procedures. We can say that interviews and available data show a perceived improvement in coordination, documentation and traceability.

The results show that the hierarchy of bureaucracy can create a formal-shaped environment for proper communication, aligning stakeholders in the common purpose of success. The ESIDIS platform was perceived to have operated in the COVID-19 Vaccination Program as a “single point of truth”, centralizing all the necessary information and functioning as a leading channel for the communication of the public and private sectors.

The traceability and accessibility, ESIDIS seemed to offer, may have enhanced transparency and accountability. Contracting authorities and private actors appeared to feel more secure with a well-documented procedure, where opportunities for non-transparent practices may be reduced. ESIDIS demonstrated transparency which may have lead to minimization of control, time-consuming procedures and eventually to faster decision making. The government digital tools which were included in the procurement process, such as DIAVGEIA, ESIDIS and KIMDIS provided all stakeholders with an open and visible procedure during all stages of the COVID-19 vaccination program tender.

The Weberian characteristic of division of labor is a key aspect of ESIDIS platform. According to literature and interviews, the workload allocation, such as tender evaluation, legal reviewing, contract awarding, can allow different divisions to focus on their tasks and run the procedure faster with reduced risk of error, concluding in a high-level outcome of procurement process. Moreover, the award decision was made due to the participant's capacity and not due to discretion, enabling the productivity and effectiveness of the procedure.

It is also very important to refer to the digital transformation of the government's bureaucratic tools, where systems such as ESIDIS present to modernizing outdated procedures and set foundations for further improvement of governmental services. Physical paperwork, time-consuming submission and evaluation steps seem to be replaced by logical, well structured digital procedures, shortening process timelines and at the same time preserving high-quality formal procurement processes. The COVID-19 Vaccination Program demanded, due to urgency, a fast, accurate and meritocratic procurement process, where the findings show that ESIDIS contributed to this endeavor, by the implementation of the relevant legislation.

6.3 Limitations and suggestions for future research

6.3.1 Limitations of the study

Despite the fact the findings showed the aspects of the contribution of bureaucracy as an enabler of efficiency, this study presents the following limitations. Firstly, the research examines only one case-study, which is ESIDIS platform in regards to the COVID-19 National Vaccination Program. Furthermore, the interview data collected was restricted to a small sample (five interviewees), thus the findings cannot be statistically generalized. Although additional interviews could have further enriched the analysis, the selected participants provided relevant insights due to their specialised roles and experience. Moreover, this analysis concentrates mainly on the tender phase and public procurement aspect of ESIDIS platform, and not to the whole life-cycle of the contract, such as contract execution, monitoring, delivery and post-award evaluation. Finally, the case of the pandemic had a special character and conditions of urgency, so the conclusions must be transferred with caution to other cases.

6.3.2 Suggestions for future research

A suggestion for future research would be the conduct of a comparative analysis of ESIDIS with other digital platforms of public procurement processes in Greece or across European countries that operate under similar regulatory frameworks. This kind of analysis would permit a more balanced understanding of how organizational, legal and technological factors affect the design, the operation and the effectiveness of a public procurement platform.

Furthermore, future research could incorporate a quantitative analysis based on a larger and more representative sample of ESIDIS users, such as contracting authorities, legal mediators and economic entities, in order for aspects of usability, training, technical malfunctions and perceived effectiveness. Such an approach would enable the identification of patterns, and potential gaps in system performance, while providing empirical evidence on how different user groups experience, perceive and evaluate the platform in practice.

Another suggestion would be comprehensive analysis of the entire cycle of a public procurement process, starting from the announcement of the public tender and extending through all phases of the process, until the execution, the monitoring, the delivery and finally the evaluation of the project. This analysis could provide an inclusive understanding of how digital procurement platforms, such as ESIDIS, operate through all stages of the procurement process rather than focusing only on the tender phase.

A particularly valuable recommendation for future research would be the examination of the relationship between the legislative framework and the digital simplification, with specific reference to L. 4412/2016 and on what point the legal framework is enabling or hindering the digital transformation of procurement process. By critically analyzing the structure and the rigidity of the legal framework, this inquiry would explore how legislation applies to digital platforms, as ESIDIS, and whether they hinder or facilitate their efficiency. Finally, a suggestion for future research would be the exploration of the integration of emerging technologies, such as artificial intelligence (AI), data analytics or automated controls, in public procurement, with an emphasis on transparency, accountability and compatibility with the legal framework. This analysis could assess both the possible benefits and the challenges associated with the adoption of new technologies, especially in environments with high regulatory measures, like procurement.

6.4 Conclusions and recommendations

In this chapter, several practical recommendations are made for future application.

1. Improvement of the ESIDIS platform usability.
2. Systematic user training, both from the public and private sectors.
3. Better technical support and reduction of malfunctions.
4. Strengthening interoperability with systems such as KIMDIS and DIAVGEIA.

5. Extending traceability beyond the award stage, i.e. to contract monitoring and project delivery.
6. Simplifying and updating the relevant legislative framework where necessary.
7. Defining KPIs for evaluating the efficiency of electronic public procurement.

Table 10: Identified issues and practical recommendations

Issue identified	Practical recommendation
Usability barriers	Improve interface design and user guidance
Training needs	Provide systematic training for contracting authorities and economic operators
Technical malfunctions	Strengthen technical support and platform reliability
Limited post-award visibility	Extend digital monitoring to contract execution and project delivery
Legal rigidity	Review and simplify procurement rules where possible
Need for performance assessment	Introduce KPIs for procurement efficiency, transparency and user satisfaction

In conclusion, this dissertation has shown that bureaucracy should not be understood only as an obstacle to efficiency. In the case of ESIDIS, bureaucratic principles such as rules, documentation, hierarchy and accountability are digitally mediated and can support transparency, traceability and coordination in public procurement. At the same time, the study shows that digital transformation does not automatically eliminate rigidity or complexity. The future improvement of ESIDIS depends on the combined modernisation of digital infrastructure, legal frameworks, user support and post-award monitoring. Therefore, ESIDIS represents both the potential and the limits of digital bureaucracy in contemporary public administration.

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Appendix A: “Interview Guide”

Open-Ended Questions:

Section A: Background

1. What is your role in relation to the ESIDIS platform and the COVID-19 vaccination project?
2. How many years of experience do you have with public procurement processes?

Section B: Adoption & involvement

3. What were the main reasons for adopting or participating in ESIDIS in this project?
4. How did stakeholders respond to the transition from traditional to electronic procurement systems, and what challenges did this transition involve?
5. What types of resources (technological, human, organizational) were required for the implementation or use of ESIDIS?

Section C: Bureaucracy and processes

6. How would you describe the role of bureaucratic procedures within the ESIDIS platform?
7. Do these procedures facilitate or hinder the procurement process? Why?
8. How were the project requirements (vaccination program) defined and communicated among stakeholders?
9. How would you evaluate the ESIDIS process in terms of speed, complexity, and usability? Could you provide examples?
10. What challenges emerged during the implementation or use of ESIDIS in this project?

Section D: Impact of ESIDIS

11. To what extent did ESIDIS support the implementation of the Greek National COVID-19 Vaccination Program?
12. How does ESIDIS compare to previous procurement practices in terms of efficiency and transparency?
13. How do you evaluate the credibility, accuracy, and trustworthiness of the system?
14. What impact did ESIDIS have on the overall effectiveness of the project?

Section E: Collaboration

15. How did ESIDIS influence collaboration between stakeholders involved in the project?

16. What role did digital governance, through ESIDIS, play in enabling coordination between public and private actors?

Section F: Reflection & future perspectives

17. Based on your experience, what are the main strengths of ESIDIS?
18. What improvements would you suggest for future implementations?

Author's Statement:

I hereby expressly declare that, according to the article 8 of Law 1559/1986, this dissertation is solely the product of my personal work, does not infringe any intellectual property, personality and personal data rights of third parties, does not contain works/contributions from third parties for which the permission of the authors/beneficiaries is required, is not the product of partial or total plagiarism, and that the sources used are limited to the literature references alone and meet the rules of scientific citations.