Chapter 8:

Digitalization, Bureaucracy and Merit in Public Administration: The ÇAM Digital Bureaucracy-Merit Analytical Framework

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Abstract

This chapter examines how digital transformation reshapes the relationship between bureaucracy and merit in public organizations from the perspective of middle level managers. Drawing on a qualitative study of 12 public managers, the chapter uses semi-structured interviews and thematic analysis supported by MAXQDA. The dataset contains 430 coding instances distributed across digitalization (150), merit (143), and bureaucracy (137). The findings indicate that digitalization does not eliminate bureaucratic organization. Rather, rules, hierarchy, control, record-keeping, and administrative procedures are reconfigured through digital systems. At the same time, merit is interpreted more broadly than formal education or appointment criteria, encompassing competence, experience, performance, responsibility, managerial capability, ethical judgement, and the capacity to work effectively with digital systems. Complementary Pearson correlation indicators calculated from case-level coding measures show positive associations between digitalization and merit ($r = .695$, $p = .0061$), digitalization and bureaucracy ($r = .642$, $p = .0122$), and especially bureaucracy and merit ($r = .991$, $p < .001$). These coefficients are interpreted as complementary relational indicators that inform the analysis of joint meaning-making rather than as evidence of causality. Integrating functionalist and interpretive perspectives, the chapter argues that digital transformation is better understood as a reconfiguration of the bureaucracy-merit relationship than as a transition from bureaucracy to bureaucracy-free administration. The chapter's distinctive contribution is the ÇAM Digital Bureaucracy-Merit Analytical Framework, which brings digitalization infrastructure, the integrated bureaucracy-merit dimension, algorithmic management, institutional outcomes, and environmental conditions into a single analytical field without treating these elements as a deterministic causal chain.

Keywords: digital transformation, public administration, bureaucracy-merit relationship, managerial competence, digital competence, algorithmic management, middle-level managers, qualitative research

1. Introduction

Digital transformation has become a central concern in public administration because digital technologies increasingly mediate how public organizations process information, coordinate work, exercise control, and make decisions. Yet digital transformation should not be reduced to the introduction of new software, electronic records, or automated procedures. It also changes the organizational conditions under which rules are interpreted, authority is exercised, responsibilities are allocated, and managerial competence is evaluated. This chapter therefore approaches digital transformation as an organizational and managerial process rather than as a purely technical modernization project.

One of the central questions raised by this transformation concerns the relationship between bureaucracy and merit. Bureaucracy provides a structure for authority, specialization, formal rules, documentation, accountability, and continuity. Merit concerns the principles through which people are selected, assigned responsibilities, evaluated, promoted, and trusted on the basis of relevant competence and performance. In public organizations, these dimensions are not independent institutional domains. Merit is enacted through positions, procedures, responsibilities, reporting arrangements, and decision processes that are themselves bureaucratically organized. The chapter consequently treats bureaucracy and merit as an integrated analytical dimension rather than as separate variables.

Classical bureaucratic theory provides the starting point for this argument. Weber's account of rational-legal authority identifies hierarchy, formal rules, specialization, competence, and written documentation as central characteristics of modern bureaucracy (Weber, 1978). These characteristics create predictability and organizational continuity, but they can also generate tensions when formal procedures become detached from substantive organizational purposes. Merton (1940) highlighted this problem by showing how bureaucratic structures may produce dysfunctional consequences when conformity to rules becomes an end in itself.

Digitalization adds another layer to this long-standing relationship. Information and communication technologies can strengthen standardization, traceability, and control while also changing the location and form of administrative discretion (Bovens & Zouridis, 2002). Digital systems can therefore reproduce bureaucratic principles in new technological forms rather than simply replacing bureaucracy. Cordella (2007) and Cordella and Tempini (2015) similarly show why electronic government should not automatically be understood as the disappearance of bureaucracy.

Algorithmic routines and artificial intelligence make this relationship even more consequential. Omidvar et al. (2023) demonstrate that organizations may adapt technologically while continuing to reproduce established assumptions, categories, and ways of organizing. Their concept of dynamic inertia is useful for understanding why a digital process may be faster and more traceable than a paper-based process while leaving the underlying distribution of authority and responsibility largely unchanged.

Against this background, the chapter examines how middle-level managers interpret digital transformation in relation to the integrated bureaucracy-merit dimension. Middle-level managers are particularly important because they occupy an interface position between organizational rules, senior-level decisions, professional expertise, personnel practices, digital systems, and operational realities. Their interpretations provide an empirical window into how formal structures and technological systems are experienced in everyday organizational practice.

The chapter is based on a qualitative study of 12 public managers. It uses semi-structured interviews, MAXQDA-supported thematic analysis, and complementary analysis of case-level coding relationships. The analysis does not treat digitalization, bureaucracy, and merit as independent variables in a deterministic model. Instead, it examines how these dimensions are jointly constructed in managerial accounts and how their relationships can be interpreted theoretically.

The chapter's distinctive contribution lies in bringing these elements into one analytical field. Existing discussions often examine digital government, bureaucratic transformation, managerial competence, or merit separately; the ÇAM framework instead asks how digitalization reconfigures the institutional relationship through which rules, responsibilities, competence, discretion, and accountability are enacted together. In this sense, the framework does not claim a new causal mechanism. Its contribution is analytical: it makes visible a bureaucracy-merit nexus that can otherwise remain fragmented across separate strands of public administration research.

The chapter first establishes the theoretical problem and the literature from which the integrated bureaucracy-merit perspective is developed. It then explains the qualitative design and analytical procedures, presents the empirical findings, interprets them through the functionalist-interpretive synthesis, and develops the ÇAM framework. The final sections specify the framework's theoretical, managerial, and policy implications and clarify its scope and limitations.

2. Theoretical Background

2.1. Digitalization and the Transformation of Public Administration

Digitalization in public administration involves the development and use of digital systems, data infrastructures, integrated platforms, artificial intelligence, automation, analytics, and electronic public services. Its organizational consequences, however, extend beyond technology. Digital transformation requires changes in processes, competencies, leadership practices, organizational culture, and institutional capacity. Technology is therefore better understood as an enabling infrastructure than as an autonomous explanation of organizational change. OECD (2020) similarly frames digital government as a multidimensional transformation involving digital-by-design, data-driven government, platform approaches, openness, user orientation, and proactiveness.

From a systems perspective, technology, people, data, procedures, and organizational structures form an interconnected whole (Bertalanffy, 1968). From the perspective of bounded rationality, information systems can expand decision-makers' access to information without eliminating the cognitive and organizational limits surrounding decisions (Simon, 1947). Digitalization therefore changes the conditions under which administrative decisions are produced rather than removing the need for managerial judgement.

Digital public organizations increasingly integrate technological and institutional elements. Data become organizational resources; digital records strengthen traceability; automated workflows redistribute tasks; and integrated systems connect units that previously operated through fragmented procedures. Such changes can improve efficiency and transparency, but they can also reproduce existing organizational arrangements in digital form. A paper procedure transferred into an electronic system may remain bureaucratic even when its interface is digital.

2.2. Bureaucracy, Merit, and Their Institutional Relationship

Weber's conception of bureaucracy remains a central reference point for understanding modern public organizations. Rational-legal authority is organized around formally defined competencies, hierarchical relationships, written documentation, specialized roles, and rules expected to be applied impersonally (Weber, 1978). Bureaucracy in this sense is not simply a synonym for delay or excessive paperwork. It is a form of organizational rationality seeking predictability, continuity, calculability, and orderly coordination.

The relationship between bureaucracy and competence is especially relevant to this chapter. Weberian bureaucracy assumes that office-holders occupy positions on the basis of technical qualification and that authority is attached to the office rather than to the personal characteristics of the office-holder (Weber, 1978). Merit therefore has a structural affinity with

bureaucratic organization. A bureaucratic organization requires people capable of carrying out specialized responsibilities, while a merit-oriented personnel system seeks to align appointment and progression with relevant qualifications and performance.

Merit should not be reduced to formal educational credentials. In public organizations, it can include technical knowledge, professional experience, performance, problem-solving capability, responsibility, leadership capacity, ethical judgement, and the ability to perform a role effectively (Ingraham, 1995). Peters and Pierre (2004) also demonstrate that civil-service systems remain embedded in broader questions of political control and administrative responsiveness. In the Turkish public administration literature, merit has likewise been treated as an important principle while implementation challenges continue to be identified (Yıldız, 2016).

The central theoretical point is therefore that bureaucracy and merit are mutually embedded. Bureaucracy defines positions, responsibilities, authority, procedures, and documentation; merit concerns the competence and suitability of people operating within those arrangements. The two intersect in recruitment, promotion, task assignment, performance evaluation, professional development, and everyday decision-making.

2.3. Bureaucratic Rationality, Bounded Rationality, and Managerial Judgement

Administrative decision-making is shaped by limits on human information processing. Simon's (1947) concept of bounded rationality challenged assumptions that decision-makers possess complete information and unlimited analytical capacity. Public managers make decisions within constraints created by information availability, organizational routines, time, institutional expectations, and the need to coordinate with others.

Digital systems can alter these conditions by increasing access to information and providing decision support, but they do not remove bounded rationality. A manager may possess substantial professional competence but still operate within formal authorization structures.

Conversely, a formally compliant digital system may produce consistent decisions without capturing all contextual knowledge that a competent manager considers relevant. The bureaucracy–merit relationship therefore involves an ongoing interaction between formal organizational rules and the capabilities of the people who enact them.

2.4. From Traditional Bureaucracy to Digital Bureaucracy

Digitalization changes the form through which bureaucratic principles are enacted. Paper records become electronic records; physical signatures become digital approvals; manual monitoring becomes dashboard-based monitoring; and procedural sequences may become embedded in software. These changes can reduce transaction costs and increase traceability, but they can also preserve the same underlying hierarchy and authorization logic.

Bovens and Zouridis (2002) describe a movement from street-level to system-level bureaucracy in which information technologies can relocate discretion from individual officials toward standardized systems. Cordella (2007) similarly argues that electronic government can generate an e-bureaucratic form rather than a post-bureaucratic organization. Cordella and Tempini (2015) further show that ICT and bureaucracy can be mutually reinforcing in public service delivery.

Digital-era governance represents an important transformation in the organization of public administration (Dunleavy et al., 2006), but it should not be interpreted as the complete disappearance of bureaucratic principles. Digital systems frequently require rules, classifications, access rights, authorization structures, audit trails, and standardized workflows. The technological medium changes, while many organizational principles remain.

Bannister and Connolly (2014) emphasize that digital transformation should also be evaluated in relation to public values. Efficiency and technological capability are not sufficient by themselves. Accountability, transparency, fairness, privacy, responsibility, and institutional legitimacy remain central. This reinforces the argument that digital transformation should be analyzed through organizational relationships rather than technology alone.

2.5. Functionalist and Interpretive Perspectives

Burrell and Morgan's (1979) paradigmatic framework provides a useful basis for bringing functionalist and interpretive readings into dialogue. A functionalist perspective highlights organizational order, standardization, performance, control, coordination, and system functioning. An interpretive perspective focuses on the meanings actors attach to organizational practices and technological change.

These perspectives are treated here as complementary rather than mutually exclusive. Digital transformation has material and organizational properties, yet its consequences depend on how digital systems are interpreted and enacted by organizational actors. The functionalist lens helps identify how digitalization changes procedures and control, while the interpretive lens helps explain why the same digital arrangement may be experienced as simplification by one manager and as additional control by another.

2.6. Algorithmic Management as an Emerging Institutional Layer

Algorithmic management refers in this chapter to the use of data-driven decision processes, automation, digital monitoring, performance systems, and decision-support technologies in managerial and administrative activities. It represents an advanced layer of digital transformation because organizational decisions increasingly depend on data infrastructures and computational tools.

Omidvar et al. (2023) provide an important bridge between technological change and organizational continuity through the concept of dynamic inertia. Their analysis suggests that organizations may respond to environmental change while reproducing established assumptions through routines. In public organizations, a paper authorization process may become an electronic authorization process; a manual reporting routine may become an automated dashboard; and a hierarchical chain may be encoded into software permissions. Technological adaptation therefore does not guarantee organizational adaptation.

Algorithmic consistency should not automatically be equated with substantive merit. A system can apply a criterion consistently while the criterion itself is incomplete, outdated, or poorly aligned with organizational objectives. Digital managerial competence consequently includes the ability to evaluate data, understand system limitations, communicate with technical specialists, and exercise critical and ethical judgement.

2.7. Middle-Level Managers as Mediating Actors

Middle-level managers occupy a distinctive position in public organizations. They translate strategic decisions into operational practice, coordinate employees and procedures, interpret institutional rules, and communicate implementation problems upward. Their position makes them particularly important for understanding digital transformation.

Their role becomes more consequential when bureaucracy and merit are considered together. Managers decide how rules are applied, how responsibilities are distributed, how competence is recognized, and how digital tools are integrated into work. They therefore mediate between formal institutional arrangements and operational realities. This mediating role is a central component of the ÇAM framework.

2.8. The Theoretical Propositions of the Chapter

P1. Digitalization and bureaucracy are jointly structured in middle-level managers' accounts.

P2. Bureaucracy may facilitate or constrain digital processes depending on how rules are designed and enacted.

P3. Merit is connected with digital competence and emerging algorithmic management practices.

P4. Algorithmic management has potential implications for performance, transparency, and accountability.

P5. Institutional outcomes are related to managerial perceptions and subsequent assessments of digitalization.

P6. Legislation, digital competence, and managerial culture gain importance alongside technological change.

P7. Middle-level managers mediate between strategic decisions and operational practice.

These propositions are analytical rather than deterministic. They organize the empirical assessment in Table 3 and guide the interpretation of the framework developed in Section 6.

3. Research Methodology

3.1. Research Approach and Design

The study employs a qualitative case study design. This design is appropriate because the research examines how public managers interpret and experience digitalization within the organizational context of public administration, with particular attention to the integrated relationship between bureaucracy and merit. The approach is interpretive in that organizational realities are examined through the meanings participants attach to their experiences. At the same time, functionalist dimensions such as standardization, control, performance, and organizational order are considered because they are visible in managerial accounts.

3.1.1. Research Questions

For the purposes of this chapter, the seven sub-questions developed in the doctoral thesis were consolidated into five integrated research questions in order to preserve their substantive scope while providing a more concise structure for the chapter.

The study is guided by the following questions:

RQ1: How do middle-level managers perceive digitalization and the role of Management Information Systems in public administration?

RQ2: How are middle-level managers' perceptions of bureaucracy shaped during digitalization processes?

RQ3: How do middle-level managers' perceptions of merit emerge in relation to digitalization and the use of information systems?

RQ4: How do middle-level managers evaluate artificial intelligence and algorithmic management in relation to managerial decision-making, performance, and merit?

RQ5: How are bureaucracy and merit jointly interpreted in relation to organizational outcomes and digital transformation?

3.2. Research Context and Participants

The empirical context consists of Turkish public organizations. The study group comprises 12 middle-level managers, including managers with department-head-level and comparable managerial responsibilities. Participants were selected through purposive sampling in accordance with the research purpose and research questions. This sampling strategy was used to obtain information-rich accounts from managers with relevant experience of organizational processes and digitalization.

3.3. Ethical Considerations and Confidentiality

The privacy and confidentiality of participants were protected by representing all participants through anonymized case codes (K1…K12). Participants' views are presented without including any personal or

directly identifying information, and, where necessary, findings are reported in aggregated form or paraphrased while preserving their substantive meaning in accordance with the confidentiality principles of the study. As the available research records do not specify an identifiable formal ethics committee approval number, no unverified ethics approval number is reported in this chapter.

3.4. Data Collection

Data were collected through semi-structured interviews. This technique provided a common thematic structure across interviews while allowing participants to explain experiences and interpretations in their own terms. The approach was appropriate because the study was concerned not only with what digital systems do but also with how managers understand their organizational consequences.

3.5. Data Analysis

Interview data were systematically coded and analyzed using MAXQDA. The analysis generated three principal thematic domains—digitalization, merit, and bureaucracy—with a total of 430 coding instances: 150 related to digitalization, 143 to merit, and 137 to bureaucracy. These frequencies describe the distribution of coding within the dataset and are not treated as measures of causal importance.

Table 1. Distribution of coding instances across the three principal themes

Principal theme	Coding instances
Digitalization	150
Merit	143
Bureaucracy	137
Total	430

Note: Author's analysis based on the interview dataset.

3.6. Bureaucracy-Merit as the Central Analytical Unit

The analytical procedure did not assume that bureaucracy and merit represented separate empirical worlds. Instead, their overlap was treated as substantively meaningful. A statement about rules could simultaneously concern competence, responsibility, performance, or suitability; likewise, a statement about managerial competence could concern the rules and organizational procedures through which that competence was exercised. This integrated treatment is central to the chapter's analytical contribution.

3.7. Analysis of Code Relationships

The results reported in the thesis indicate positive relationships between digitalization and merit ($r = .695$, $p = .0061$, $N = 12$), digitalization and bureaucracy ($r = .642$, $p = .0122$, $N = 12$), and bureaucracy and merit ($r = .991$, $p < .001$, $N = 12$). The exceptionally strong bureaucracy-merit relationship is analytically important because it is consistent with the qualitative interpretation that these dimensions were frequently constructed together in participants' accounts.

As a complementary analysis, Pearson correlations were examined using case-level coding measures for the three principal themes. For each of the 12 cases, the coding count assigned to digitalization, merit, and bureaucracy was used as the corresponding case-level measure. Pearson's product-moment correlation was selected because the purpose of this supplementary analysis was to describe linear associations among these case-level measures, rather than to test a causal model. The coefficients therefore function as descriptive relational indicators that complement the qualitative thematic analysis. No normalization or transformation of the case-

level coding counts is reported in the underlying analysis used for this chapter. The reported p-values and coefficients are reproduced from the underlying thesis analysis and are not recalculated in this chapter. Accordingly, the chapter does not use these statistics to claim statistical generalizability or causality.

Table 2. Pearson correlation indicators based on case-level coding measures

Code pair	r	p	Interpretation
Digitalization-Merit	.695	.0061	Positive association
Digitalization-Bureaucracy	.642	.0122	Positive association
Bureaucracy-Merit	.991	< .001	Very strong association

Note: Author's analysis based on case-level coding measures derived from the interview dataset. N = 12

3.8. Methodological Boundaries

The coefficients reported above are not interpreted as causal effects. They are Pearson correlation coefficients calculated from the case-level coding measures reported in the thesis and are used here as complementary evidence of relational patterning. They do not establish that digitalization causes changes in bureaucracy or merit. The qualitative design also does not support statistical generalization to all public organizations. Its value lies in identifying patterns of meaning, organizational relationships, and theoretically relevant mechanisms.

4. Empirical Findings

4.1. Overview of Findings

Across the 12 cases, digitalization was discussed together with questions of bureaucratic procedure, competence, managerial responsibility, performance, and institutional capacity. The distribution of the three principal coding domains-150 digitalization, 143 merit, and 137 bureaucracy-shows that all three themes received substantial analytical attention in the dataset; their interconnection is established through the

qualitative coding relationships and case-level analysis rather than through frequency proximity alone.

4.2. Digitalization as Organizational Reconfiguration

Managers' accounts indicate that digitalization changes procedures, information flows, responsibilities, monitoring arrangements, and decision-making conditions. Digital records can strengthen traceability; integrated systems can connect organizational units; automated workflows can redistribute tasks; and digital reporting can increase visibility. Yet these changes do not automatically alter the institutional logic underlying the process.

4.3. Bureaucracy-Merit as an Integrated Dimension

Participant K1 defines merit in strongly practice-oriented terms: "Merit is the person who performs the job best and knows the job best." (translated from Turkish).

Participant K10 similarly links competent personnel and effective bureaucracy: "Meritorious staff ensure that the process is managed properly, while effective bureaucracy guarantees the sustainability of the process." (translated from Turkish).

These excerpts are illustrative rather than exhaustive; the broader interpretation is based on the cross-case analysis of K1…K12.

The findings show that managers do not experience bureaucracy and merit as independent organizational dimensions. Bureaucracy is associated with rules, hierarchy, control, legal security, standardization, continuity, and predictability, but also with procedural burden, delay, excessive paperwork, and slower decision-making under certain conditions. Merit is understood in multidimensional terms, including competence, experience, performance, responsibility, managerial capability, professional knowledge, ethical judgement, and role suitability.

This duality is important. The data do not support an interpretation in which bureaucracy is inherently negative and merit inherently positive. Instead, the organizational value of rules and competence depends on how they are enacted together. Rules can protect merit by creating transparent procedures, while rigid procedures can prevent competent managers from responding effectively to context.

4.4. Digitalization and the Bureaucracy-Merit Relationship

Digitalization does not eliminate bureaucracy. Instead, bureaucratic elements are reconfigured through digital systems. Rules can become workflow requirements, paper records become electronic records, physical approvals become digital authorizations, and manual monitoring can become dashboard-based control. At the same time, digitalization changes the conditions under which competence is exercised and recognized.

The strongest complementary relationship in the analysis is between merit and bureaucracy ($r = .991$, $p < .001$, $N = 12$). This coefficient is not evidence of causality. Rather, it indicates a very strong association in the analyzed case-level coding measures. This result is consistent with the qualitative interpretation that managers frequently construct competence and merit through the organizational structures in which authority, responsibility, rules, and decisions operate.

4.5. Digital Competence and the Transformation of Merit

The findings indicate that participants understand merit as a multidimensional managerial capacity rather than merely as a formal qualification or appointment criterion. Expertise and experience remain important, but they are increasingly accompanied by digital competence, adaptability, problem-solving capacity, performance orientation, and ethical responsibility.

Digital competence should not be interpreted narrowly as technical skill. It includes the ability to interpret digital information, recognize limitations in data, understand system-generated recommendations, communicate with technical specialists, and make responsible decisions when digital outputs conflict with professional knowledge. In this sense, digital competence becomes a contemporary component of managerial merit.

4.6. Bureaucratic Processes as Both Constraint and Capacity

Managers' accounts reveal a dual perception of bureaucracy. Rules and formal procedures can provide legal security, accountability, order, and predictability. Conversely, unnecessary approval chains, repetitive documentation, and rigid procedures may create delay and reduce flexibility. Digitalization can intensify either dimension depending on whether existing procedures are redesigned or merely transferred into digital form.

4.7. Algorithmic Management and Human Judgement

Algorithmic management appears as an explanatory layer connected to digital competence, decision support, control, performance, and technological change. The findings do not justify treating algorithmic management as an independent causal variable. Instead, they indicate that data-driven systems can strengthen consistency, speed, monitoring, and traceability while creating new questions concerning transparency, accountability, data quality, human oversight, and professional discretion.

Managers who operate or supervise data-driven systems therefore require not only technical familiarity but also the capacity to understand the limits of automated outputs, recognize contextual differences, and maintain responsibility for administrative decisions. Algorithmic

management consequently strengthens rather than eliminates the need for qualified human judgement.

4.8. Institutional Outcomes and Feedback

Institutional outcomes such as efficiency, transparency, accountability, digital maturity, and citizen satisfaction should not be understood as automatic products of technology. They emerge through interaction among infrastructure, organizational rules, managerial practices, human capabilities, and institutional context. Outcomes can also influence subsequent managerial evaluations of digitalization and future organizational practices.

4.9. Legislation, Organizational Culture, and Institutional Capacity

The findings indicate that technological change alone is insufficient to explain transformation outcomes. Legislation, digital competence, managerial culture, organizational capacity, and institutional assumptions remain important. This supports an understanding of digital transformation as a socio-organizational process in which technology interacts with the institutional environment. This interpretation is also consistent with the OECD's review of Türkiye, which emphasizes institutional capacity, digital skills, governance, and data capabilities alongside technological development (OECD, 2023).

4.10. Middle-Level Managers as Mediating Actors

Middle-level managers are positioned between strategic decisions and operational implementation. Their interpretations shape how formal policies are translated into everyday practice. They decide how rules are applied, how responsibilities are distributed, how competence is recognized, and how digital tools are integrated into work. Their position therefore makes managerial perception an important part of the implementation process.

4.11. Proposition-Based Assessment

Table 3. Proposition-based assessment of the empirical findings

Proposition	Statement	Assessment	Evidence
P1	Digitalization and bureaucracy are jointly structured in managerial accounts.	Supported	Qualitative evidence
P2	Bureaucracy may facilitate or constrain digital processes depending on how rules are designed and enacted.	Supported	Qualitative evidence
P3	Merit is connected with digital competence and emerging algorithmic management practices.	Partially supported	Qualitative evidence
P4	Algorithmic management has potential implications for performance, transparency, and accountability.	Partially supported	Qualitative evidence
P5	Institutional outcomes are related to managerial perceptions and subsequent assessments of digitalization.	Supported	Qualitative evidence
P6	Legislation, digital competence, and managerial culture gain importance alongside technological change.	Strongly supported	Qualitative evidence
P7	Middle-level managers mediate between strategic decisions and operational practice.	Supported	Qualitative evidence

Note: Author's qualitative analysis.

5. Discussion

5.1. Digitalization as Reconfiguration Rather Than Replacement

The first major implication is that digital transformation should not be understood as a transition from bureaucracy to a non-bureaucratic organization. Digital systems often strengthen traceability, standardization, access control, documentation, and procedural consistency. These are recognizably bureaucratic functions even when implemented electronically.

This finding is consistent with Bovens and Zouridis (2002) and Cordella and Tempini (2015). Rather than disappearing, bureaucracy can become embedded in software, databases, workflows, permissions, and algorithmic routines. Digital modernization therefore does not necessarily equal organizational modernization.

5.2. The Bureaucracy-Merit Relationship as an Organizational Nexus

The strongest case-level association between bureaucracy and merit is theoretically important because it supports their conceptualization as an integrated organizational relationship. A person's competence becomes organizationally meaningful through the position they occupy, the responsibilities they receive, the rules under which they work, and the discretion available to them.

This interpretation also explains why merit can be experienced differently across institutional settings. Where rules are transparent and roles are clearly defined, bureaucratic arrangements can provide an institutional basis for merit. Where procedures become excessively rigid or personnel practices do not effectively recognize competence, the same arrangements may constrain merit-based practice (Ingraham, 1995; Peters & Pierre, 2004).

5.3. Dynamic Inertia and Organizational Continuity

Omidvar et al. (2023) provide a particularly useful contemporary lens for interpreting the coexistence of technological change and organizational continuity. Their concept of dynamic inertia explains how organizations may respond to environmental changes while continuing to reproduce established assumptions through routines. This helps explain why replacing a paper process with a digital process may change speed and visibility without changing the underlying logic of the process.

The distinction between technological adaptation and organizational adaptation is consequently central. An organization may become more technologically sophisticated while remaining institutionally similar. This is especially relevant when digital systems encode existing approval sequences, categories, authority structures, or performance assumptions.

5.4. Digital Competence as Contemporary Merit

The findings support an expanded interpretation of managerial merit. Professional competence, experience, responsibility, and performance remain important, but digital competence becomes increasingly necessary as public work is mediated by information systems, data, automation, and algorithmic routines. Contemporary merit is therefore multidimensional: it combines professional knowledge, managerial capability, digital competence, and critical and ethical judgement.

This interpretation is compatible with Simon's (1947) bounded rationality perspective. Digital systems can improve the information environment without eliminating cognitive and organizational limitations. Indeed, by structuring what is visible and actionable, systems may create new forms of bounded rationality. Competent managers remain necessary even when decision support becomes increasingly sophisticated.

5.5. Managerial Discretion Between Rules and Digital Systems

Digital systems can strengthen administrative accountability by making decisions more traceable and procedures more standardized. Yet excessive standardization may constrain contextual judgement. The central issue is therefore not whether discretion should disappear, but where discretion should be located and how it should be made accountable.

Middle-level managers occupy a critical position in this relationship. They translate formal rules into operational decisions and interpret system outputs in specific organizational contexts. Their role can therefore be understood as an interface between bureaucratic rationality and digital rationality. This interface is also where merit becomes visible through actual performance and responsibility.

5.6. Functionalist and Interpretive Integration

The combined functionalist and interpretive approach provides a more complete account than either perspective alone. A functionalist analysis highlights standardization, control, performance, and organizational order. An interpretive analysis reveals how managers assign meaning to these changes and how institutional experience shapes their responses.

This combined perspective is particularly useful because digital transformation is neither technologically deterministic nor entirely subjective. Digital systems have material and organizational properties, but their consequences depend on how they are designed, embedded, interpreted, and enacted. The empirical findings therefore support a relational and interpretive account of transformation.

6. The ÇAM Digital Bureaucracy-Merit Analytical Framework

6.1. Purpose and Position of the Framework

The label "ÇAM" refers to the author's surname and is used as the identifying name of the analytical framework developed in this chapter. It is not an acronym. The label is retained to distinguish this framework from other digital-government and bureaucracy frameworks and to identify the specific analytical structure developed from the present study.

The ÇAM Digital Bureaucracy-Merit Analytical Framework is developed from the intersection of the literature on digitalization, bureaucracy, merit, bounded rationality, algorithmic management, and the

empirical findings of the qualitative study. Its purpose is not to establish a deterministic causal model or a statistically validated path model. It is an analytical guide for examining how technological, organizational, managerial, and institutional dimensions are experienced and connected in public organizations.

6.2. The Five Analytical Layers

Layer 1: Digitalization Infrastructure

Artificial intelligence, big data, e-government, cloud systems, integrated information systems, automation, analytics, and decision-support technologies constitute the technological infrastructure of transformation.

Layer 2: Integrated Bureaucracy-Merit Dimension

This layer brings rules, hierarchy, authority, control, accountability, flexibility, expertise, experience, digital competence, performance, ethics, and role suitability into one analytical dimension. Bureaucracy and merit are not treated as separate axes.

Layer 3: Algorithmic Management

Data-driven decision processes, digital monitoring, automation, performance systems, and decision-support tools represent an advanced explanatory layer through which organizational routines may be reinforced or reconfigured.

Layer 4: Institutional Outcomes

Efficiency, transparency, accountability, digital maturity, service quality, and citizen satisfaction are considered outcomes through which the organizational consequences of digital transformation can be interpreted.

Layer 5: Environmental and Institutional Conditions

Public digitalization policies, legislation, technological development, organizational culture, institutional capacity, and prevailing assumptions surround and condition the other layers.

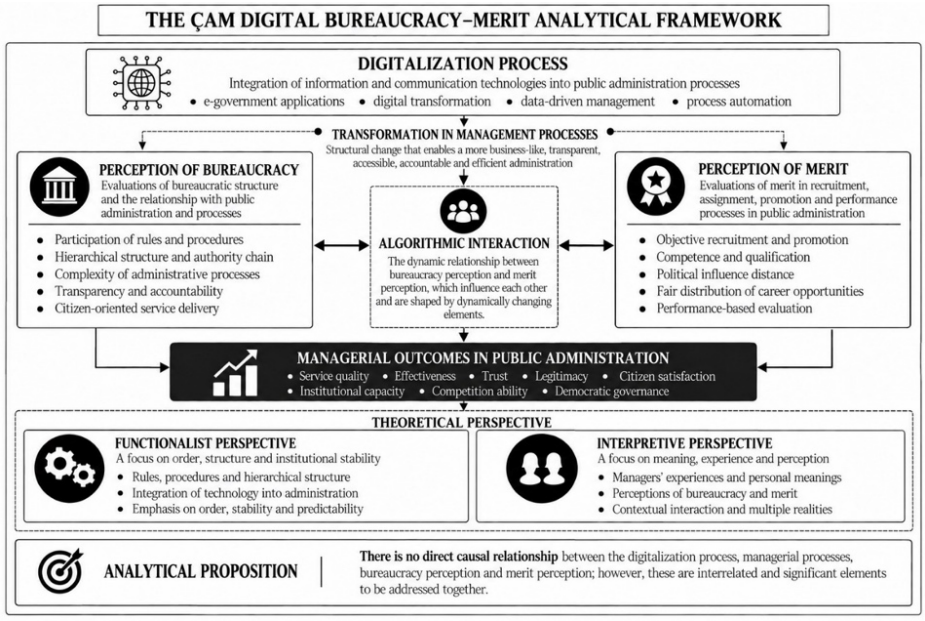


Figure 1. The ÇAM Digital Bureaucracy-Merit Analytical Framework

Note: The framework was developed by the author as part of ongoing doctoral research. The figure presents an analytical ordering device; it does not represent a deterministic causal pathway.

6.3. Analytical Flow

Digitalization Infrastructure → Bureaucracy-Merit Interaction → Algorithmic Management → Institutional Outcomes → Feedback

This sequence is an analytical ordering device rather than a statistical causal pathway. The empirical research supports the analysis of interaction, relational patterning, interpretation, and meaning-making among the elements. It does not establish that one element mechanically produces another.

6.4. Feedback and Cyclical Transformation

Institutional outcomes do not simply conclude the transformation process. Successful digital processes may strengthen confidence in digitalization and encourage further adoption, while unsuccessful processes may reinforce perceptions of bureaucratic rigidity, insufficient competence, or organizational resistance. The framework is therefore cyclical and feedback-oriented rather than strictly linear.

6.5. Middle-Level Managers within the Framework

Middle-level managers occupy a mediating position across the framework. They interpret digital systems, apply rules, allocate responsibilities, evaluate competence, and translate strategic decisions into operational practice. Their role connects technological infrastructure with the integrated bureaucracy–merit dimension and with institutional outcomes.

6.6. Theoretical Contribution of the Framework

The distinctive contribution of the ÇAM framework is its treatment of digitalization as an institutional reconfiguration of the bureaucracy-merit relationship rather than as a technological replacement of bureaucracy. This contribution is developed through seven related propositions.

First, the framework rejects a simple opposition between digitalization and bureaucracy. Digitalization can reduce unnecessary procedural burdens while simultaneously creating new digital forms of recording, monitoring, standardization, authorization, and control.

Second, the framework reinterprets merit in the digital context. Competence, experience, performance, professional knowledge, responsibility, and ethical judgement remain central, while digital competence becomes an increasingly relevant component of managerial capacity.

Third, and most centrally, the framework treats bureaucracy and merit as a single integrated analytical dimension. The exceptionally strong association in the case-level coding measures is consistent with their joint interpretation in participants' accounts. This is not presented as causal evidence; rather, it supports examining the two dimensions together instead of treating them as independent analytical axes.

Fourth, the framework positions algorithmic management as an explanatory layer within digital transformation rather than as an independent causal variable. Its consequences depend on the interaction of technology, rules, human competence, discretion, and accountability.

Fifth, the framework introduces a feedback-oriented structure in which institutional outcomes can influence subsequent managerial evaluations and future digitalization practices. Digital transformation is therefore understood as cyclical and adaptive rather than as a one-way technological progression.

Sixth, the framework recognizes that legislation, digital competence, and managerial culture condition how technological change is interpreted and enacted within public organizations.

Seventh, the framework explicitly positions middle-level managers as mediating actors between strategic policy and operational practice. Their interpretations and decisions connect technological infrastructure with the integrated bureaucracy-merit dimension and with institutional outcomes.

7. Implications

Taken together, these contributions distinguish the ÇAM framework from approaches that isolate digital technology, bureaucracy, or merit. Its value is not to provide a universal causal model, but to offer a parsimonious analytical structure for examining how these dimensions become connected in the lived and interpreted practice of public organizations.

7.1. Theoretical Implications

The chapter contributes to digital public administration research by conceptualizing bureaucracy and merit as an integrated organizational dimension. It also reframes digital transformation as institutional reconfiguration rather than the replacement of bureaucracy. The use of dynamic inertia provides a contemporary explanation for why technological adaptation can coexist with organizational continuity.

Finally, the chapter extends the concept of managerial merit by incorporating digital and critical capabilities into professional and managerial competence.

7.2. Managerial Implications

Digital transformation should not be treated as an information technology project alone. Public managers need continuous digital competence development, including data interpretation, system evaluation, responsible use of automation, and ethical judgement. Managers should also have sufficient decision responsibility to question digital routines when those routines reproduce outdated assumptions or create unintended organizational consequences. This is consistent with OECD guidance emphasizing the development of digital talent and skills as a core condition of successful digital government (OECD, 2021; Burtscher et al., 2024).

7.3. Policy Implications

First, public organizations should strengthen continuous digital competence development for managers and employees.

Second, merit-based personnel practices should recognize competence, relevant experience, role suitability, performance, professional responsibility, and digital competence rather than relying on formal qualifications alone.

Third, bureaucratic simplification should preserve rules that ensure legality, legal security, and accountability while redesigning unnecessary approval chains, repetitive documentation, and avoidable transaction burdens.

Fourth, digital and algorithmic systems used in administrative decision-making should incorporate transparency, accountability, human oversight, review mechanisms, and clear responsibility for decisions.

Fifth, organizations should distinguish between digitizing an existing procedure and redesigning the procedure itself. Before automating

a bureaucratic routine, they should examine whether the underlying rule remains necessary and whether the distribution of responsibility remains appropriate.

8. Conclusion

This chapter examined digital transformation through the relationship between bureaucracy and merit in public organizations. The qualitative findings indicate that digitalization does not eliminate bureaucracy. Instead, it reconfigures rules, hierarchy, control, documentation, and administrative processes through digital systems. Bureaucracy is experienced both as a source of order, legal security, standardization, and continuity and as a potential source of procedural burden and delay.

Merit is likewise interpreted broadly. Managers associate merit with competence, experience, performance, responsibility, managerial capability, professional knowledge, ethical judgement, and organizational role suitability. Digital transformation adds a further requirement: the capacity to work effectively and critically with digital systems. Merit in digital public administration therefore becomes increasingly connected to digital competence without being reducible to it.

The very strong bureaucracy–merit association supports the conceptualization of an integrated bureaucracy-merit analytical dimension. The positive relationships between digitalization and the other dimensions likewise indicate that these concepts are frequently constructed together in managerial accounts. These correlations are not causal estimates; they complement the qualitative interpretation by indicating relational patterns in the case-level coding measures.

The ÇAM Digital Bureaucracy-Merit Analytical Framework brings these findings together in a five-layer analytical structure comprising digitalization infrastructure; the integrated bureaucracy-merit dimension; algorithmic management; institutional outcomes; and environmental and institutional conditions. The framework emphasizes interaction and feedback rather than a deterministic sequence.

The central conclusion is that digital transformation should be understood through both technology and organizational meaning. Public organizations do not simply become digital; they reorganize the ways in which rules, responsibilities, competence, discretion, and accountability are enacted. The future of digital public administration therefore depends not on eliminating bureaucracy, but on developing an adaptive relationship among digital technologies, bureaucratic structures, managerial competence, and merit-based practice.

8.1. Limitations and Directions for Future Research

The study is based on 12 middle-level managers and a qualitative case study design. Its findings should therefore not be statistically generalized to all public organizations. The case-level coding relationship analysis is complementary and does not establish causal relationships. Future research could examine the ÇAM framework through larger quantitative samples, comparative studies across organizational types and administrative traditions, longitudinal designs, and direct investigation of artificial intelligence and algorithmic management in public administration. Further research could also examine whether digital competence becomes an institutionalized component of merit or remains an informal expectation.

Declarations

Ethics Committee Approval: This chapter is derived from the author's doctoral thesis. Ethical requirements related to the original research were addressed within the scope of the doctoral study.

Use of Artificial Intelligence: In this chapter, AI-assisted language editing was used solely to improve grammar, clarity, readability, and academic English. The author retains full responsibility for the research design, empirical analysis, interpretation of findings, and substantive content of the chapter.

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