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DATA-BASED PUBLIC ADMINISTRATION AS A DEVELOPING ACTOR OF DIGITAL AGE GOVERNANCE

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ABSTRACT

Especially with the 2000s, the technological revolution accompanied by globalization has opened the doors to the digital information society. Many innovations brought by the digital age have significantly changed the lives of individuals and societies. In the new order, individuals have risen to the position of not only consuming online information, but also producing it by contributing to it. The bring of information technologies into the use of dense populations in a very wide geography around the world has deeply influenced not only individuals and societies, but also institutions. In such an environment, the important concept that provides inter-network communication has emerged as "digital age governance". Focusing on the electronic dimension of governance, this concept supports a transformation of the existence of public institutions, first of all, the transfer of information and public administration structure and functioning to the digital environment.

Today, when the digital age governance is effective, public institutions have to shape all their administrative processes and relations with the citizens with the effects of digital transformation. With the transfer of public institutions' activities to the digital world, the importance of data in service delivery has come to the forefront even more. At this point, it has become an absolute necessity for public institutions to tend to data-oriented analyzes and to reflect the obtained findings to managerial business processes with the development of technology and thus the emergence of new tools/methods. In the light of the aforementioned requirement, new business setups and strategies are developed by public institutions with the intention of adapting to digital transformation; Thus, it is aimed to satisfy the target audience by providing more transparent, participatory, accountable, quality, effective and efficient service.

In this context, the aim of the study is to discuss the process and power of digitalization in transforming public administration. In the study, it is argued that a data-based transformation in the structure of public administration provides advantages in many aspects such as service delivery, efficient use of public resources, and functionalization of governance principles. And possible risks bear by the digital world are revealed and suggestions are made that are thought to facilitate the implementation.

Keywords: Data, Govenance, Digital Age Governance, Data-Based Public Administration.

INTRODUCTION

Where information plays a strategic role; many systems -especially social and economic relations- begin to change shape today. The digital age and developments in information and communication technologies pave the way for serious transformations in many areas from our individual and public life to service procurement and delivery, from the operation of objects to their communication and interaction with each other. With the widespread use of these technologies, large volumes of numerical data begin to be produced, and also with the increase of large and small data, the transition to digital age governance starts, which simultaneously supports analytics and data-based decision making. One of the areas which is deeply affected by the process in question is the structure and functioning of public administration. The fact that institutions begin to develop business methods and practices based on data causes all business processes and relations between stakeholders to gain a new shape, not only in the private sector but also in the public sector.

Digital age governance advocates reintegrating functions in the public sphere, adopting holistic and needs-based structures, and further digitizing administrative processes. So, information technologies are at the center

of this understanding, focusing on the change that this process has brought about in the structure and functioning of the public administration. From this point of view; the expectation of forming public institutions that act smarter about data reveals the concept of "data-based public administration" in this process. Data-based public administration primarily aims at a structure in which there are public institutions that prevent, develop, and direct the problem areas that may arise in service delivery by analyzing the collected data through predictive modeling and analytical tools. By the effective implementation of this structure, it is accepted that advantages such as the increase in accountability of decision makers, efficient use of public resources, functionalization of governance principles, and fast and high-quality service delivery will be provided. Additionally, data-based public administration shares the risks of the digital world and also carries some difficulties that are unique to itself.

In this context; the first part of the study focuses on the digital age governance and the features that make up this concept. The second part of the study discusses the transformative effect of digitalization on public administration from a historical perspective. The concept of data-based public administration, which is the last link of public administration structure and operation, is evaluated within the scope of digital age governance and so its advantages and disadvantages are explained. The study finally makes suggestions thought to facilitate the implementation of data-based public administration in terms of structure and functioning.

1. Digital Age Governance

With the 2000s, information and communication technologies brought about important transformations in the structure and functioning of the state. This period of change is expressed as "digital age governance"[1] by some authors (Sarica, 2017: 148-149). Digital age governance, in its most general sense, is a democratic and synergy-based network governance that provides inter-network communication. The digital age governance, which supports the horizontal organizational structure, envisages the participation of all relevant stakeholders in the state administration with network-type organization. According to another definition, it is the application of a governance approach that is aimed at an accountable and transparent management style to administrative functions under the influence of information technologies. Digital age governance expresses an understanding that shapes the nature of all government activities and citizen-state relations beyond the electronicization of office transactions in public administration (Ozer, 2017: 467). In addition, the concept describes an effective management style that provides great savings in public transaction costs by supporting the use of information technologies and electronic tools for almost every activity in public administration (Demirel, 2010: 69-70).

Digital age governance is shaped by three basic features. The first of these is *reintegration*. This feature refers to the *reintegration* of public institutions on the basis of technology use, after the *New Public Administration* decomposed public administration into single-purpose small institutions. Accordingly, while the divergence experienced with the new public administration approach brought the coordination problems to the agenda on the one hand, it increased the distance between the citizen and the state on the other hand. However, with the widespread use of technology in public institutions; the cooperation between public institutions disconnected from each other was restored and so the coordination became easier (Dunleavy et al., 2005: 480; Yerlikaya and Agcasulu, 2017: 286). The second important feature of digital governance is *needs-based holism*. The aim of this feature is to structure all relations between the state and the citizen on a simpler system. It is desired to prevent unnecessary steps, cost, and control in bureaucracy with administrative blocks to be formed in a wider, inclusive, and interconnected manner. In this way, the public administration is able to have a structure that can take decisions quickly and adapt to changes. The third and another important feature is *digitalization*. For digital governance; this concept means that communication technologies are truly transformative rather than complementary to traditional public or private business processes. This feature, which includes a transformation towards the existence of public institutions, foresees the replacement of bureaucracy by internet-based public institutions (Aldemir and Sahin, 2017: 206; Dunleavy et al., 2005: 480; Yavuz, 2015: 276; Yerlikaya and Agcasulu, 2017: 286). As of 2010; the digital age governance approach has further

[1] The concept of 'governance' was used in a modern sense for the first time in a report prepared by the World Bank in 1989. In this usage, the adjective "good" was put before the concept of governance and the concept started to be used as "good governance" in this way. According to this report by the World Bank, good governance is defined as "a clear and predictable decision-making process; a professional bureaucratic administration, a government responsible for actions and operations, and civil society actively participating in the public process, and an order in which the rule of law prevails" (World Bank, 1989).

consolidated these three features and incorporated such new technological applications as social media, cloud computing, and the internet of things (Dunleavy and Margetts, 2010: 13-14). In this context, digital age governance is considered as the 'last link' of 21st century management theories as a result of the understanding of continuous reform in public administration (Karacay, 2020: 89).

Digital age governance, which enables to be carried out successful work by increasing the value of information, significantly helps to improve the capacity and ability of an organization to better fulfill its duty. The governance approach in mention, which increases transparency regarding performance and practices, focuses on automation that refers to the change in the processes enabling the reception, storage, processing, discovery, and transmission of information; the support of information processes, information, and new information processes that means disseminating information throughout the society; and transformation that means expanding these processes in practice (Ozer, 2017: 467-468). In this sense, public sector activities are also transformed thanks to the digital age governance. By these transformations; efficiency in service delivery, transparency and participation in management are ensured by using the most advanced technologies such as artificial intelligence, internet of things, big data, and data mining.

The most important issue, in line with the aims adopted by digital age governance, is that the solutions offered by the governance approach in said include information and communication technologies at a high rate (Yerlikaya and Agcasulu, 2017: 286). However, the reflection of digital age governance in practice shows itself in the provision of state services, in the regulation of public services, and in every area where citizens come into contact with public administration (Demirel, 2010: 69-70). Therefore, considering the rapid and continuous development in information and communication technologies, it is not possible for the public administration, as an important actor in governance, to remain indifferent to this transformative effect.

2. Digitalization and Change in Public Administration

Although the effect of the waves of change that emerged in information technologies with the 1990s was limited at first, the process of harmonizing public institutions with digitalization has become comprehensive over time. This process has been adapted to be compatible with the pre-existing corporate culture and thus the transition to digitalization has begun in the delivery of public services (Dunleavy et al., 2005).

2.1 Reflection of Digitalization on Public Administration

While the foundations of administration were laid with the Cameralism, which emerged in Germany in the 18th century, it began to gain its current meaning with the studies that were carried out in the United States in the 19th century. The "Chairs of Cameral Sciences" emerged as a result of the process that aimed to centralize the German state structure, to increase the power of the authority and the area of intervention. This period in which the field of public administration began to be examined scientifically, systematically, and functionally and was taught in a disciplined manner expressed the first period of public administration; in other words, the understanding of "Public Administration 1.0" (Gurkan, 2007: 218; Eryilmaz, 2016: 34; Gocoglu, 2019: 110). The concept of bureaucracy, which was integrated with Max Weber in the 20th century, determined the general framework of public administration with its structure that such dominates features as organizational growth, specialization, division of labor, hierarchy, written rules, centralism, and formality in the understanding of state administration. The public administration of this period was accepted as "Public Administration 2.0" (Eryilmaz, 2016; Dursun, 1992; Gocoglu, 2019: 111). Since the 1980s, the effects of capitalism, globalization, and New Right policies, which gained weight, were added to the process, and this situation started the New Public Administration understanding; that is, the "Public Administration 3.0" period. This new understanding, which aims to build a participatory, transparent, and accountable state building with a more minimal and flexible organizational structure, has designed a management process which supports local service delivery by putting the citizen at the center (Sobaci, 2005: 168; Yilmaz and Mecek, 2021). With the 2000s, a transformation began to take place both in the social structure and in the public administration. By the widespread use of the internet, it has become easier for people to access information, and the dimension of communication between the state and citizens has changed its shape once again in the new system that consists of internet networks.

Technological developments make rapid progress, and the process of obtaining, storing, processing, analyzing, and using larger data as a product easily, quickly, and at less cost becomes widespread (Gezici, Taspinar, and Kocaoglu, 2021: 912-913). Local, national, regional and even global data are integrated; the renewed technologies used affect the flow of information and services. Machines, smart devices, applications and objects are also included in the relationship and communication network that exists between people. In this context, the digital transformation in public administration begins to be expressed with the concept of "Public Administration 4.0" (Yilmaz and Mecek, 2021: 104). The most concrete form of the digital transformation taking place in the obtaining of public services during this period is the e-government applications carrying the use of services to the electronic environment. E-government applications, -as an output of the information society-, increase the speed, prevalence, and effectiveness of all services that the government has to offer. With e-government applications reducing service costs to a large extent; bureaucratic and stationery service approach is replaced by a quality and efficiency-oriented service approach; the understanding of the existence of the individual for the state, by the understanding of the existence of the state for the individual (Carikci, 2010: 96). In other words; the Public Administration 4.0 aims to establish a professional, transparent, participatory, auditable, and accountable public administration and service delivery approach under the dominance of two-way communication.

The last stage of digital public administration is called "Public Administration 5.0". This new stage, which is accepted as another "people-oriented" and "sustainable" form of Public Administration 4.0, is formed on the basis of society and management and draws a public administration profile that focuses on the welfare and happiness of individuals (Yilmaz and Mecek, 2021: 120). The integration of such technologies as artificial intelligence, internet of things, big data, which are among the tools of digital transformation, into social life and public administration is one of the main motivations of the Public Administration 5.0 understanding. Because in this period, the close relationship of public services with the quality of life and sustainability puts the adaptation of technological transformation to public services among vital issues that need to be emphasized (Uysal Sahin, 2021: 235).

2.2. Data Driven Public Administration

Information, the source of innovative methods and technological developments, is also among the important elements of good management. As of today; one of the ways to produce information is to act on the basis of data. With the reflection of digital transformation on service delivery, the effective use of data in this field comes to the fore, and in this way, it is aimed to contribute to the quality of public services on the one hand and to increase the success rates of public policies on the other. In this context, the data-based public administration that accepts data as an asset and sees it as an integral part of policy-making (policy), service delivery, organizational management, and innovation has begun to emerge.

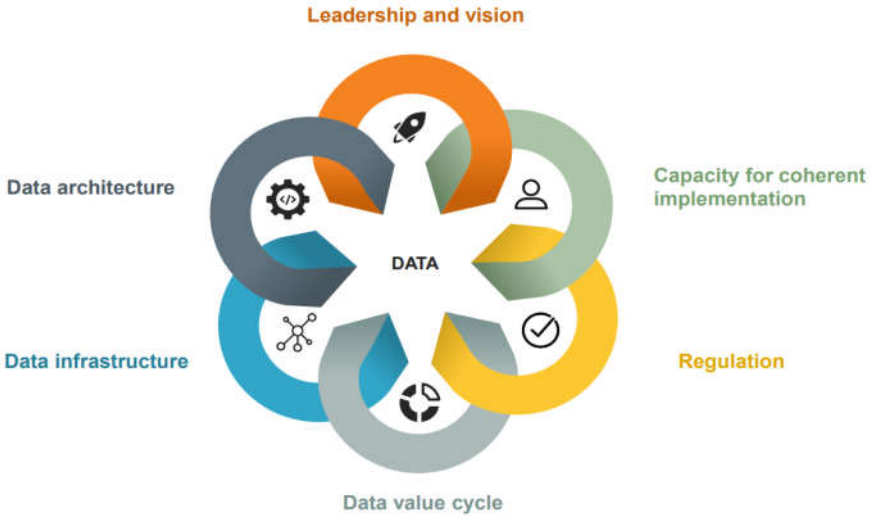
Data-driven public administration is closely related to improve the ability of administrations to use data to better prepare for the future. Administrations which develop this ability will gain a significant power in the design and delivery of policies and services. Because while data provides effective solutions to understand the problems in the social field, it facilitates the participation of the public in the process. Additionally, it paves the way for access to information to improve public services in meeting the needs of the people. Therefore, while the data-based public management means more efficiency of the public sector, it shows the performance management in terms of better evaluation of policies and impact on the other hand (Ubaldi, Van Ooijen and Welby, 2019: 4). The data-driven public administration process starts with the definition of data as the fundamental building-block for the countries where want to implement and enable the digital management.

The "*Trust and Public Policy*" Report, which was prepared by the OECD, mentions two critical factors that affect citizens' trust for public institutions. These are *the policy competence* and *the inclusion of good governance values into the policy-making process* (OECD, 2017). At this point, the data-based public administration has the potential to provide significant support to the efforts that are made within the scope of both areas. It is the fact, the primary focus of data-based public management is that public institutions best fulfill their roles as data producers and users in different policy sectors, at the international, national, regional, and local levels (OECD, 2015a; OECD, 2016; Ubaldi, 2013). Also, the realization of data-based public administration is closely interested in the establishment of an appropriate model for the whole governmental strategy and data governance. Here the data governance model, formed by the OECD, addresses various

elements that are required for a successful implementation of data-based public administration. Because a consistent strategic approach to data governance is a prerequisite in realizing the data-driven transformation of the public sector (Ubaldi, Van Ooijen and Welby, 2019: 46).

Data governance, for the public sector, takes place within a single organization or among different organizations which share an interest for common data assets. This governance is the exercise of authority, control, and joint decision-making among these organizations in such matters as planning, monitoring (auditing), and implementation over the management of data assets (Ladley, 2019). This data governance model should support the existing and new processes with a collaborative and holistic approach for the correct generation, management, use, and protection of data (Ghavami, 2015). According to Ubaldi, Van Ooijen and Welby (2019: 46); by the data governance, the countries will be able to monitor and evaluate new and existing data-driven initiatives, thereby to strengthen their value propositions, identifying the need for new data and eliminating unnecessary datasets from the system. Besides, they will be able to support prioritizing efforts to produce quality data in line with data governance standards and guidelines, and to help other stakeholders to collect and/or produce specific data on behalf of the public sector. Such a strategy will provide in better identifying and meeting the needs of citizens, while increasing efficiency for both service users and public officials.

Figure 1. Data Governance in the Public Sector



Source: Digital Government Review of Argentina (OECD, 2019)

Particularly, the emergence of smart objects, the development of the internet of things, artificial intelligence, the spread of open-access interfaces, the developments in the field of cyber security, the advances in such applications as blockchain are among the issues to necessitate the transformation of the state into a smart state (Lucke, 2016: 20). The states, with the Public Administration 5.0 period, have to produce innovative policies to integrate information technologies into the system at the point of solving economic and social problems; by developing business models suitable for it, they are building their service understanding on a human-centered system. In this context, the 'smart state' refers to a system in which the states make technology a part of policy-making in every field, by focusing more on sustainability and increasing the quality of life in a world where there are such problem areas, which seriously threaten life, from natural disasters to climate change and epidemics to security problems (Sahin, 2021: 235). So, many countries are signing new formations by considering the logic of digital governance.

For instance; the Mexican Government established a special data lab, *Datalab*, to promote the use and analysis of data for evidence-based policy development, implementation, and evaluation. In Spain, some predictive technologies are used to support the governmental decisions related to research and development grants. Some parts of New Zealand used *OVERSEER®*, a national model for farm-scale nutrient budgeting and loss

estimation, to support the development of environmental policy (OECD, 2015). Additionally, in the Netherlands, the studies are carried out by corporate partners, including local government units, by making some data-based analyzes. Some of these studies are carried out by the policy labs, *Policy Lab*, which is driving on the basis of data. The Policy Labs provide an experimental environment for data-driven policy making and development. Multidisciplinary experts collaborate and use new resources (big data, sensor data, and social media) to formulate policy and methodologies for making policies in an environment of few regulations (https://www.tno.nl/en, 2022). In Turkey, the "*Presidential Digital Transformation Office*", which has the task of leading the digital transformation of the public, was established under the objectives, policies, and strategies that were put forward under the policy of Presidency. According to Atmaca and Karacay (2020: 274); this Office mediates the establishment of digital governance policies.

2.3. Advantages and Disadvantages of Data-Driven Public Administration in the Scope of Digital Age Governance

The data-based public management provides some forecasts to proactively identify developments and future needs with a forward-looking governance approach. The data-based public administration, which can reveal alternative predictions for results in the face of problems, helps the public institutions to improve their interaction with citizens as common value producers. Moreover, a higher quality and evaluation in public services, a continuous improvement, and an effective performance management are among the advantages (Ubaldi, Van Ooijen and Welby, 2019: 18). A data-based public administration, one of the most important functions of which is to increase the transparency of the administration, ensures its accountability after the implementation of the policy in this manner (Cilavdaroğlu 2019: 4). It is believed that public resources can be used more efficiently via data-based public management, and assumed that these resources can be prevented from the division of partisan behavior. The data-driven public management helps reduce uncertainty in decision-making, while helping to save costs, improve service delivery, and lead to new possibilities for interventions (Longo and Mcnutt, 2018: 372). In addition, the data-based public administration, which has the ability to help reveal the problems more clearly, can identify the origins of the problems and enable more rational resource allocation. The data-based public administration, which contributes to the reduction of bureaucracy, accelerates the access of actors to all units of the state with the influence of digital age governance (Biju, 2007: 69-70; Parlak and Dogan, 2019: 12-13). The strategic approach adopted by the governments to build a data-driven public administration order has a positive impact on the results of services that are provided by including good governance values such as honesty, openness, and fairness into the policy cycle, as well as promoting data-driven policy making and data-driven service design (Ubaldi, Van Ooijen, and Welby, 2019: 4).

At the beginning of the difficulties which the administrations may encounter while establishing a data-based public administration system, there are such issues like the quality, suitability, and confidentiality of the data. In this process when data has become an important resource, the blurring of the boundaries of time, space, and people has brought along new risks and threats towards the resource; the phenomenon of "security" has become one of the problem areas of the digital information age. Regardless of the person or institution; protecting the privacy and integrity of the owned data, preventing any damage to the information shared in electronic media; in other words, providing the security of the information and data has formed one of the most important requirements of the digital age (Kocaoglu and Sahnagil, 2021: 261). In this regard, the deficiencies in the legal regulations are also among the disadvantages of the process. Another challenge emerges as *institutional resistance*. Despite the use of governance and information technologies, the public bureaucracy's suspicion for the being "new" can cause the process to progress slowly. Because the bureaucratic institutions and individuals, who are likely to adhere to the traditional way of thinking, can argue that the system they currently apply is in a better condition (Leicester, 1999: 5-6). However, the difficulties of providing the information, skills, and abilities needed for the administrations to make the best use of data are among the factors that make the establishment of data-based public administration difficult. Since the data analysis requires advanced expertise, the complex and insufficient infrastructure and human resources in terms of information and communication technologies are important topics needed to be taken care of. Such factors as the risk of not being able to complete predetermined projects due to the rapid transformation in technological developments, the inability to deliver digital opportunities to all the public institutions across the country in the same way,

the change in the habits of users, and the shyness of citizens in data sharing are among the disadvantages of the process (Coleman, 2008: 9-10; Demirel, 2010: 74-75; Akyuz, 2019: 100-105).

CONCLUSION

The developing technology and management principles of today reveal the need to redefine the usual boundaries and limitations among public sector, private sector, civil society, and individuals, and it requires a managerial approach in which productivity and innovation are used to the fullest in order to solve problems beyond what known. The governance understanding of this period is expressed as the 'digital age governance' based on democracy and synergy that provides inter-network communication. The change and transformation in question also affects the understanding of public administration, and it is tried to benefit from the opportunities offered by information and communication technologies in the service delivery of public institutions. This situation brings with it a process in which the public administration begins to be reshaped on the basis of data.

The data-based public administration, based on the thesis that the policies on systematic data can produce better results, refers to a structure in which both the actors who implement the policies and the service providers make better decisions and reach the results by using their best data that is obtained from various sources as a result of research and evaluation. Because a public administration where data management and use are strategically used has the potential to support the public sector reform towards more inclusive and sustainable governance. In the data-based public management, the organizations can operate more efficiently, and they become more productive and have the capacity to transform the design and delivery of public policies and services in a way that improve the social value and affect the social welfare. In such a table, the linkage between the people and the administration is strengthened, and the satisfaction with the service supply is provided more easily. In order to realize this potential, it is critical that the governments discover and understand the innovative and transformative value of data and form the institutional and structural conditions that are necessary to exploit this value.

Within the scope of digital age governance; the ways of obtaining and sharing information should be developed and secured so that the data-based public administration can be implemented in a healthy way. The issue of where and how information and data are obtained should be clear and confidential, and it should be provided confidentiality and security to the satisfaction of actors in the technology-supported processes. All kinds of information, the personal data at first, must be collected, stored, processed, transformed into information again, and shared in the network-based systems, and so the continuity of all these should be ensured. Additionally, it is an important requirement to equip the processes in mention with a legal infrastructure to be developed in accordance with the principles and norms of the rule of law. Especially, it should be determined which data and information can be a part of policy processes in the real life, and so it must be revealed the effect levels of social science research on policy processes. Moreover, it will be better to be implemented some experimental and conceptual studies with broader and innovative methodologies in order to understand the impact of data on management and policy processes.

As a result, one more important issue for the data-based public administration to be effective in all areas where the state is responsible for providing services is the placement of a data-based work culture in the public sector, especially among the public staff. Raising awareness of the personnel who uses data and information systems through trainings and adopting a flexible approach based on corporate culture and innovation will help minimize the disruptions which will be caused by the human dimensions of risks and threats.

REFERENCES

Akyüz, A.M. (2019). Dünyada E-Yönetişim ve En İyi Uygulama Örnekleri. B. Parlak ve K.C. Doğan. (Ed.). *E-Yönetişim* (ss. 97-114). İstanbul: Beta Yayıncılık.

Aldemir, C., Şahin, D. (2017). *Dijital Çağ Yönetişim Kavramının Karşılaştırmalı Literatür Analizi*. M. Okcu ve H. Gül. (Ed.). Kayfor15 Özetler Kitabı. Isparta: Süleyman Demirel Üniversitesi, 205-207.

Atmaca, Y. ve Karaçay, F. (2020). Türkiye'deki Kamu Yönetimi Reformlarında Dijitalleşme ve E-Yönetişi. *IJMA*. 4(8): 26-280.

Biju, M.R. (2007). *Good Governance and Administrative Practices*. New Delhi: Mittal Publications.

Cilavdaroğlu, A. A. (2019). *Türkiye'de Parlamenter Sistem İçinde Kanıta Dayalı Politika Yapımı.* Doktora Tezi. Ankara: Ankara Üniversitesi Sosyal Bilimler Enstitüsü.

Coleman, S. (2008). Foundations of Digital Government. H. Chen, L. Brandt, V. Gregg ve R. Traunmüller. (Ed.). *Digital Government: E-Government Research, Case Studies, And Implementation* (s. 3-19). New York: Springer Business Media.

Demirel, D. (2010). Yönetişimde Yeni Bir Boyut: E-Yönetişim. *Türk İdare Dergisi*. (466): 65-94.

Dunleavy, P. ve Margetts, H. (2010). The Second Wave of Digital Era Governance. *Paper to the Annual Conferance of the American Political Science Association.* Washington.

Dunleavy, P., Margetts, H., Bastow, S. ve Tinkler, J. (2006). New Public Management is Dead-Long Live Digital-Era Governance. *Journal of Public Administration Research and Theory*. 16(3): 467-494.

Ghavami, P. (2015). *Big Data Governance: Modern Data Management Principles for Hadoop*, NoSQL & Big Data Analytics, Peter K. Ghavami.

Ladley, J. (2019). *Data Governance: How to Design, Deploy and Sustain an Effective Data Governance Program*. Academic Press.

Leicester, G. (1999). Viewpoint: The Seven Enemies of Evidence-Based Policy. *Public Money and Management*. 19(1): 5-7.

Longo, J ve Mcnutt, K. (2018). From Policy Analysis to Policy Analytics. M. P. Howlett ve L. Dobuzinskis (Ed.). *Policy Analysis in Canada* (s. 367-389). Bristol: Bristol University Press.

Karaçay, F. (2020). *Dijital Çağ ve Yönetişim Türk Kamu Yönetişimi Sistemine Katkıları Bağlamında Bir Değerlendirme*. Yüksek Lisans Tezi. Van: Van Yüzüncü Yıl Üniversitesi Sosyal Bilimler Enstitüsü.

Kocaoğlu M. ve Şahnagil S. (2021). "Dijitalleşme Sürecinde Kişisel Bilgilerin Güvenliği ve Korunması", Kocaoğlu M. ve Usta S. (Ed.), *Kurumsal Bilgi Yönetimi ve Teknolojik Eğilimler.* (s. 259-275). Nobel Yayıncılık.

OECD (2015a). *Open Government Data Review of Poland: Unlocking the Value of Government Data,* OECD Digital Government Studies, OECD Publishing, Paris, Open Government Data Review of Poland : Unlocking the Value of Government Data | OECD Digital Government Studies | OECD iLibrary (oecd-ilibrary.org)

OECD (2015b). *OECD Public Governance Reviews: Estonia And Finland: Fostering Strategic Capacity Across Governments And Digital Services Across Borders*, OECD Public Governance Reviews, OECD Publishing, Paris, OECD Public Governance Reviews: Estonia and Finland : Fostering Strategic Capacity across Governments and Digital Services across Borders | OECD Public Governance Reviews | OECD iLibrary (oecd-ilibrary.org)

OECD (2016). *Open Government Data Review of Mexico: Data Reuse for Public Sector Impact and Innovation*, OECD Digital Government Studies, OECD Publishing, Paris, Open Government Data Review of Mexico : Data Reuse for Public Sector Impact and Innovation | OECD Digital Government Studies | OECD iLibrary (oecd-ilibrary.org)

OECD (2017). *Trust and Public Policy: How Better Governance Can Help Rebuild Public Trust, OECD Public Governance Reviews, OECD Publishing*, Paris, Trust and Public Policy : How Better Governance Can Help Rebuild Public Trust | OECD Public Governance Reviews | OECD iLibrary (oecd-ilibrary.org)

OECD (2019). *Digital Government Review of Argentina*, OECD Publishing.

Özer, M. A. (2017). Yönetişimden Dijital Yönetişime: Paradigma Değişiminin Teknolojik Boyutu Hak-İş. *Uluslararası Emek ve Toplum Dergisi*. 6(16): 456-479.

Parlak, B. ve Doğan, K.C. (2019). E-Yönetişim: Kuramsal Bir Analiz. B. Parlak ve K.C. Doğan. (Ed.). *E-Yönetişim* (s. 7-18). İstanbul: Beta Yayıncılık,

Sarıca, S. Ö. (2017). Kamu Yönetimi Yaklaşımları Çerçevesinde Dijital Çağ Yönetişimi ve İdari Kapasite. M. Okçu ve H. Gül (Ed.). *Kayfor15 Özetler Kitabı* (s. 148-151). Isparta: Süleyman Demirel Üniversitesi.

Ubaldi, B. C., Van Ooijen, C., ve Welby, B. (2019). *A Data-Driven Public Sector Enabling The Strategic Use Of Data For Productive, İnclusive And Trustworthy Governance.* 09ab162c-en.pdf (oecd-ilibrary.org).

Uysal Şahin, Ö. (2021). Toplum 5.0 ve Kamu Hizmeti: Türkiye Üzerine Bir Değerlendirme. *Journal of Awareness*. 6(4): 229-246.

Yavuz, N. (2015). Dijital Çağ Yönetişimi: Kamu Yönetiminde İhtiyaç Temelli Bütünleşme Çabası. M. Z. Özer Köseoğlu (Ed.). *Kamu Yönetiminde Paradigma Arayışları* (s. 273-293). Bursa: Dora Yayıncılık.

Yerlikaya, B., ve Ağcasulu, H. (2017). Yeni Kamu Yönetimi Anlayışının Bir Eleştirisi Olarak Dijital Çağ Yönetişimi. M. Okçu, ve H. Gül (Ed.). *Kayfor15 Özetler Kitabı* (s. 285-287). Isparta: Süleyman Demirel Üniversitesi.

World Bank (1989). *Subsaharan-Africa: From Crisis To Sustainable Growth*. World Bank Publication.