



Yazar(lar) / Author(s)

Arş. Gör. Dr. Gökçe Nur Şafak 
Aksaray Üniversitesi İktisadi ve İdari Bilimler
Fakültesi, Siyaset Bilimi ve Kamu Yönetimi
Bölümü, Aksaray, Türkiye.

E-posta: gokcenursafak@aksaray.edu.tr
(Sorumlu Yazar/Corresponding author)

Arş. Gör. Dr. Selçuk Denek 
Aksaray Üniversitesi İktisadi ve İdari Bilimler
Fakültesi, Siyaset Bilimi ve Kamu Yönetimi
Bölümü, Aksaray, Türkiye.
E-posta: selcukdenek@aksaray.edu.tr

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An Analysis of the Zero Waste Project from the Perspective of Public Value

Abstract

Due to the complexity of the environmental issues on today's international agenda, it is no longer considered sufficient to develop and implement policies solely at the national level. Combating climate change and global environmental problems is a multidimensional process that requires cooperation between public authorities, private sector, civil society, and citizens to create shared values. The intersection of voluntary and consensus-based environmental actions and actions carried out under the coercive power of public authorities creates an area with the potential to generate public value in social, cultural, political, economic, and ecological contexts.

The public value approach is defined as a set of services that are meaningful to society as a whole and presents the public value generated by intersectoral collaboration. The study aims to evaluate the public value generation potential of the Zero Waste Project, as a waste management project. The scope of the study is defined as the public value approach and the Zero Waste Project. Using document analysis as a qualitative method, the Zero Waste Project's public value production was examined, and the study concluded that the Project produces public value in social, political, economic, and ecological contexts.

Keywords: Public Value, Zero Waste Project, Waste Management, Environmental Governance, Public Policies.

Sıfır Atık Projesi'nin Kamu Değeri Yaklaşımı Açısından İncelenmesi

Öz

Günümüz uluslararası gündemindeki çevre sorunlarının karmaşıklığı nedeniyle, yalnızca ulusal düzeyde politikalar geliştirmek ve uygulamak artık yeterli görülmemektedir. İklim değişikliği ve küresel çevre sorunlarıyla mücadele, kamu otoriteleri, özel sektör, sivil toplum ve vatandaşlar arasında ortak değer yaratmak için iş birliği gerektiren çok boyutlu bir süreçtir. Gönüllü ve toplumsal uzlaşmaya dayalı çevre eylemleri ile kamu otoritelerinin zorlayıcı gücü altında yürütülen eylemlerin kesişim noktası, sosyal, kültürel, politik, ekonomik ve ekolojik bağlamlarda kamu değeri yaratma potansiyeline sahip bir faaliyet ve politika alanı oluşturmaktadır.

Kamu değeri yaklaşımı, toplumun tamamına anlamlı gelen bir dizi hizmet olarak tanımlanmakta; sektörler arası iş birliğinden üretilen kamusal değeri ifade etmektedir. Çalışma, bir atık yönetimi projesi olan Sıfır Atık Projesi'nin kamu değeri yaratma potansiyelini değerlendirmeyi amaçlamaktadır. Çalışmanın kapsamı, kamu değeri yaklaşımı ve Sıfır Atık Projesi olarak tanımlanmıştır. Nitel bir yöntem olan doküman analizi kullanılarak Sıfır Atık Projesi'nin kamu değeri üretimi incelenmiş ve çalışma, Proje'nin sosyal, politik, ekonomik ve ekolojik bağlamlarda kamu değeri ürettiği sonucuna varmıştır.

Anahtar Kelimeler: Kamu Değeri, Sıfır Atık Projesi, Atık Yönetimi, Çevre Yönetimi, Kamu Politikaları.

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1. Introduction

The complex risks brought about by global environmental problems and climate change have been placed on the international agenda through the initiatives of global organizations. In response, nation-states have begun to develop policies and implement measures by making various commitments on issues ranging from environmental pollution to climate change. However, due to the complexity of contemporary environmental issues, which now demand proactive measures at a global scale, it is no longer considered sufficient for nation-states alone to generate and implement policy. Addressing climate change and global environmental problems has become a multidimensional process that requires collaboration among public authorities, the private sector, civil society, and citizens to co-produce shared values.

The intersection between voluntary, environmentally beneficial activities and those mandated by public authorities represents a field that holds the potential to generate public value across socio-cultural, political, economic, and ecological dimensions. Based on this premise, the current study evaluates the Zero Waste Project, initiated in Türkiye in 2017, not only for its potential to produce meaning and benefit for society but also for its capacity to generate environmental value. Within this scope, the study identifies the Zero Waste Project as a potential model for producing environmental value as a form of public value, and problematizes its capacity to generate such value.

The study first introduces the concept of public value and the Zero Waste Project, and then discusses the project's potential to create public value. The theoretical foundation of the study is grounded in the public value approach, and the Zero Waste Project serves as the case study. Accordingly, a qualitative research design has been adopted, and the study has been conducted through literature review and document analysis.

2. Theoretical Framework

2.1. Public Value

The shortcomings of the New Public Management (NPM) paradigm, which conceptualized citizens primarily as customers, have prompted new theoretical pursuits within the field of public administration. Among these, the concept of public value, which emphasizes the inclusion of all stakeholders in governance processes, has gained increasing prominence. To fully grasp this approach, it is essential to first clarify what is meant by public value.

Public value can be defined as a set of services and outcomes that are meaningful to the society as a whole. In this respect, it holds a broader meaning than traditional concepts such as public interest or public service. Not all public services or outcomes that serve the public interest can be considered public value. Therefore, public value carries a deeper and more comprehensive significance, which requires a contextual understanding of its emergence.

The origins of the public value concept are commonly attributed to Mark Moore's seminal 1994 work, "Public Value as the Focus of Strategy." Moore begins by stating that the primary goal of managers in the private sector is to undertake actions that enhance shareholder wealth (1994: 296). When turning to the public sector, Moore poses critical questions: What should public managers aim to produce, and how should their performance be evaluated? His answer: the objective of public managers is to create public value (1994: 296).

It is not possible to define public value as a one-dimensional or linear process. Rather, public value emerges through a process of political consensus and is intended to benefit society as a whole (O’Flynn, 2007: 358). In this context, it is not solely the result of individual preferences, but rather the product of collaboration and agreement among various stakeholders within society (Stoker, 2006: 42). This perspective reinforces the idea that public value is not monopolized by a specific institution or academic domain but is continuously (re)defined through social and political interaction (Smith, 2004: 68). Since each society’s needs and issues vary and evolve with changing conditions public value must also be continuously revisited and redefined (Alford, 2008: 361). Crucially, the people must not be ignored in this process, as public value is fundamentally defined by citizens’ perceptions of what contributes meaningfully to the public realm (Candel & Paulsson, 2023: 2). The first step in creating public value is thus to identify what is genuinely considered valuable by diverse societal groups (Candel & Paulsson, 2023: 2).

Traditionally, governments have defined public value in terms of safeguarding national security, maintaining clean and safe public spaces, educating children, and protecting citizens from both natural and man-made disasters (Moore, 1994: 296). However, as we enter the information age, societal needs are diversifying, and political demands are becoming increasingly dynamic. Consequently, public managers are expected to respond flexibly to these evolving political contexts (Moore, 1994: 297). As these examples suggest, the concept of public value is not static, it evolves with time and societal change.

In his 2003 work, Moore shifts his focus to the measurement of public value. While he acknowledges that financial performance metrics are widely used in the private sector, he argues that public value, though more difficult to quantify, can be evaluated through adapted models such as the Balanced Scorecard (Moore, 2003: 11). In this context, Moore introduces the concept of a “public value strategy,” explaining it through his “strategic triangle” model (2003: 11).

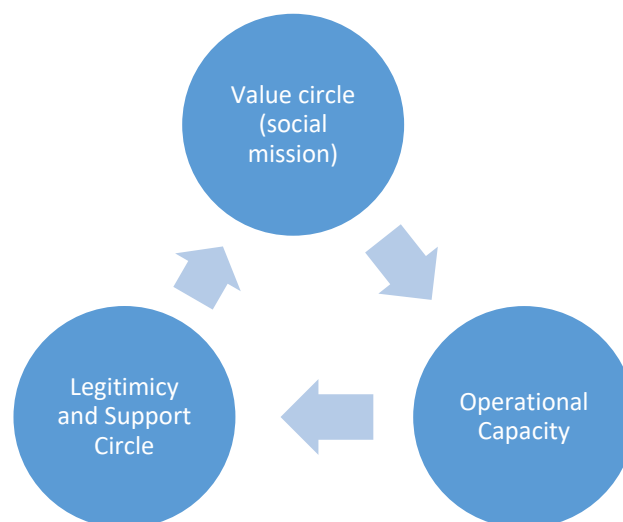


Figure 1: Strategic Triangle (Moore, 2003: 25)

As illustrated in Figure 1, the first corner of Moore’s Strategic Triangle is the “value circle” component, which focuses on the ultimate value that organizations strive to produce (2003: 11). In the private sector, this value creation process centers on sustaining profitability or maximizing shareholder returns (Moore, 2003: 12). In non-profit and public organizations,

however, the goal is not profit but rather the production of socially meaningful outcomes such as alleviating hardship, addressing inequalities, or delivering widely appreciated public services (Moore, 2003: 12). These aims should be understood as morally significant and socially beneficial. For example, street cleaning may appear as a routine service, but if it is reframed during the design process to contribute to “a city experience worthy of human dignity,” it begins to generate public value. Such values, though not easily expressed in monetary terms, can be produced by non-profit or public organizations in ways that support vulnerable groups or promote critical social conditions (Moore, 2003: 12). Moore’s conceptualization is thus considered foundational for understanding the public value concept.

The second corner of the strategic triangle is the “legitimacy and support circle” component, which entails forming an authorized stakeholder coalition that includes actors from the public sector, private sector, and third sector (Benington & Moore, 2011: 4; Moore, 2003: 12). In this context, non-profit organizations differ from for-profit businesses in that the latter typically rely on direct payments from individual customers, while the former operate through donations from third parties who may not directly benefit from the services provided (Moore, 2003: 12). Moreover, governments often support non-profit activities through public grants or by commissioning services that address collective needs. These resources are gathered not for financial return, but to achieve public value (Moore, 2003: 12). In this way, a multi-stakeholder structure is established, providing the legal and political foundation necessary for the generation of public value.

The third corner of the triangle refers to “operational capacity.” Unlike for-profit organizations, which typically possess sufficient internal capacity to achieve their objectives, non-profit and public organizations often require collaboration with others in their ecosystem (Moore, 2003: 12-13). This means that public value production is rarely accomplished in isolation; rather, it depends on partnerships and coordinated actions. The strategic triangle thus offers a roadmap for non-profit organizations to develop value-creation strategies and evaluate their public value outcomes (Moore, 2003: 13).

An originality of the public value concept also emerges in its perspective on the definition and mission of political activities. Politics is understood as more comprehensive than political party policies. The power of politics as a unique mechanism stems from its capacity to ensure social coordination. This linkage between politics and social coordination lays the foundation for public value formation based on at least three reasons (Stoker, 2006: 46-47). The first reason is that it enables individuals to cooperate and make decisions based on motives beyond market individualism (Stoker, 2006: 47). In this regard, politics is considered a mechanism that invigorates the entire process (Stoker, 2006: 46). The second reason is that the flexibility of political decision-making allows easier coping with uncertainties and unexpected changes in an unpredictable world (Stoker, 2006: 47). The third reason is that politics can act for societal purposes without necessarily involving the distribution of interests (Stoker, 2006: 47). These three reasons illustrate the central themes of the public value concept by emphasizing coordination, cooperation, and social benefit. Furthermore, public value posits that politics should be employed for a higher purpose beyond party politics. At this point, the provision of services should not be limited to public authorities but rather entrusted to the actor, whether public sector, private sector, or nonprofit organizations, that can best perform the task (Stoker, 2006: 48). This condition necessitates an authority to manage the process of public value

formation and production. Consequently, the network governance approach emerges as prominent in the management of public value. One of the leading scholars in this field, Stoker, argues that network governance is closely related to the public value concept (Stoker, 2006: 42). Stoker maintains that public value arises through negotiations among all stakeholders in society and contends that the concept encompasses a broader meaning than the preferences of service producers and consumers (2006: 42). Public value focuses on integrating government actions with resource management based on collaborative governance and democratic management (Bayansar and Uzun, 2022: 1845).

In the literature, it is asserted that public value cannot be directly defined by public managers; however, public managers play a significant role in identifying issues and objectives that contribute to value formation within the framework of assessing existing conditions and circumstances (Alford, 2008: 361). Consequently, public intervention and guidance assume a prominent role in the production of public value (Stoker, 2006: 47). Moreover, while public sector activities possess legitimacy in a structure that includes all stakeholders, other actors may lack such legal grounding (Stoker, 2006: 47). At this point, the activities of other actors must also be established on a legitimate basis. Necessary legal regulations, formal structures, and governmental support contribute to securing this legitimacy. Furthermore, an open-minded approach is required to determine which stakeholders will participate in the production process to ensure effectiveness in public value creation (Stoker, 2006: 48). Enabling greater stakeholder participation in the process of developing and implementing public policies contributes significantly to the easier and faster creation of public value (Bayansar ve İrdem, 2021: 852).

The process known as “co-creation,” which involves two or more actors (public sector, private sector, civil society) collaboratively addressing a problem, challenge, or task by leveraging diverse knowledge, resources, ideas, and competencies, occupies a central position in public value production (Candel and Paulsson, 2023: 3). Each sector may be more capable than others in producing public value in specific areas due to their inherent dynamics. Therefore, the question of which sector (public, private, or third) is most suitable should be determined through negotiation. Thus, the emphasis lies not on who produces public value, but rather on how public value can be effectively realized. From this point onward, the significance of collaborative work emerges, and relevant institutions and organizations must learn how the process should function (Stoker, 2006: 49). In this phase, characterized by the emergence of network governance practices, the crucial factor is to ensure the effective functioning of the mechanism established for public value production.

The healthy functioning of the public value production process enhances trust in policymakers and service providers (Kelly et al., 2002: 21, 32). Maintaining this trust is closely linked to continuously monitoring and involving citizens' demands in the process (Kelly et al., 2002: 31-32). Additionally, factors such as detailed knowledge of service delivery methods, clarity about which groups can receive specific services, tailored service provision in response to demands, and the identification of actors responsible for delivering services constitute key issues to be addressed in public value production (Kelly et al., 2002: 33). Moreover, it is emphasized that public value should be defined by consumers rather than the producers (public sector, private sector, and civil society) of that value. Citizens evaluate services not only based on direct

benefits but also within the context of societal objectives such as equality, justice, and environmental protection (Alford and Hughes, 2008: 131-132; Cordella and Bonina, 2012: 516).

Another critical issue in public value production concerns the existence of legitimate state authority and the state's prioritization of a better societal purpose when producing value (Moore, 2014: 466). This strengthens the state's position in the eyes of citizens and increases the value of the services provided. Therefore, the state must act virtuously by prioritizing justice, equality, and the delivery of necessary services to those in need when offering any service. This approach ensures that the state directs its service provision toward genuinely needed areas, significantly contributing to the formation of public value. Effective use or allocation of resources, the proper delivery of services to those genuinely in need, and the commitment to achieving a better society rather than merely providing services will create the conditions for public value to emerge spontaneously.

2.2. The Zero Waste Project

After conceptually defining public value, examining the nature of the Zero Waste Project, which constitutes the case study of this research, will assist in discussing it from the perspective of public value. Fundamentally, the Zero Waste Project is a waste management initiative. During the early Republican period, the Public Health Protection Law (no. 1593) and the Municipality Law (no. 1580) adopted an approach aimed at environmental cleanliness and the protection of public health. Since the 1970s, this approach has broadened to encompass environmental protection, with the original version of the Environment Law even characterizing the environment as "a common asset of citizens" (art. 1).¹ Ultimately, Article 56 of the 1982 Constitution affirmed everyone's right to live in a healthy and balanced environment and stated that the development, protection, and pollution prevention of the environment are duties of both the state and citizens.

Regarding the history of waste management in Türkiye from a legislative standpoint, the early Republican era saw the enactment of the Public Health Protection Law (no. 1593) and the Municipality Law (no 1580) in 1930. The Public Health Protection Law required municipalities to clean streets, dispose of and incinerate waste ("süprüntü"), and mandated that those with populations exceeding 50,000 establish facilities to process such waste (art. 248). The Municipality Law assigned responsibilities to municipalities for cleaning public areas and for the systematic and technical collection, removal, and destruction of waste from both public and private places (art. 15). The Environment Law, published in the Official Gazette on August 11, 1983, defined the concept of "waste" and adopted principles not only for pollution elimination but also for environmental protection. In its initial form, the Environment Law regulated "the treatment, removal, and neutralization of all types of waste," and addressed hazardous chemical substances separately. The Law on the Management of Metropolitan Municipalities (no. 3030), published in 1984, also designated duties to metropolitan and district municipalities, such as identifying collection sites for garbage and industrial waste and establishing, operating, or having established the necessary facilities for their disposal (art. 6). This legislation also embraced the principle of environmental protection alongside environmental health. The

¹ The phrase "the common asset of citizens" was changed in 2006 to "the common asset of all living beings".

Metropolitan Municipality Law (no. 5216) envisaged waste management within the framework of sustainable development principles (art. 7).

Waste management was first addressed in Türkiye's national development plans in the Sixth Five-Year Development Plan (1990-1994), focusing on municipal solid waste disposal, establishment of common storage facilities, separate disposal of medical and industrial waste, and storage of medical nuclear waste (SPO, 1989: 40, 313, 359). Waste management continued to feature in all subsequent development plans. The Eleventh Development Plan additionally envisaged raising public awareness about solid waste recycling (2018: 164). The 2007-2009 Medium-Term Program mentioned municipal solid waste management (SPO Undersecretariat, 2006: 19), and later Medium-Term Programs established principles for source separation, disposal, and recycling of waste as an economic contribution. The first Regulation on the Control of Solid Waste in Türkiye was published in 1991. From the 2000s onwards, the alignment of waste management planning with European Union *acquis* became a priority, resulting in the preparation of numerous plans and strategic documents.²

The Zero Waste Project was launched in 2017 under the Ministry of Environment, Urbanization and Climate Change of the Republic of Türkiye. It was initially spearheaded by Emine Erdogan, spouse of the President, and implemented at the Presidential Complex and the Grand National Assembly of Türkiye, later expanding nationwide. The project encompasses the prevention of waste generation at the source, categorical separation of waste, storage in temporary facilities, and transfer to licensed companies for recycling (Birpınar and Gürtepe, n.d.: 31-32).

The 2022-2024 Medium-Term Program explicitly emphasized the expansion of waste management to include households, directly referencing the Zero Waste term (2021: 15). This emphasis has been maintained in subsequent Medium-Term Programs. The Eleventh Development Plan (2019-2023) endorsed the dissemination of the Zero Waste Project. Similarly, the Twelfth Development Plan (2024-2028) acknowledged the project, adopting policies to strengthen the zero waste system, expand its implementation, raise public awareness, integrate the application into all levels of formal education, and initiate pilot zero waste programs in selected universities.

Regarding its evolution, the Zero Waste Information System was established in 2018, and with the amendments to Article 3 of the Environment Law (no. 2872) in the same year, the dissemination of zero waste and the principles of "recovery participation fees, reduction in the use of plastic bags or packaging, and single-use materials" were formally adopted. The Environment Law also provides incentives by the Ministry to municipalities, provincial special administrations, institutions, organizations, and enterprises that establish and implement zero waste systems (art. 29), and imposes administrative fines on those obligated to establish such systems but failing to do so (art. 20). In 2019, the Zero Waste Regulation and Zero Waste Management System Implementation Guides were published. The Türkiye Environment Agency (TÜÇA) was established in 2020, (no. 7261) and in 2022, the Waste Collectors Circular was issued. TÜÇA is a legal entity subject to private law regulations except for provisions specified by law and is affiliated with the Ministry of Environment, Urbanization and Climate

² Technical Assistance Project for the Planning of High-Cost Environmental Investments 2005, Solid Waste Master Plan 2006, Waste Management Action Plan 2008-2012, European Union National Environmental Approximation Strategy 2016, National Recycling Strategy Document and Action Plan 2014-2017.

Change. The Agency embraces circular economy and zero waste approaches, aiming to ensure efficient use of resources and to develop a national deposit system. In 2022, the United Nations General Assembly designated March 30 as “International Zero Waste Day.” In 2023, the Zero Waste Advisory Board was established under the United Nations.

Within the Ministry of Environment, Urbanization and Climate Change, the General Directorate of Environmental Management houses the Department of Zero Waste Practices. Following Türkiye’s ratification of the Paris Agreement, the Climate Change Mitigation Strategy and Action Plan (2024-2030) includes transition to zero waste as one of its climate mitigation strategies. The plan’s strategies include updating and implementing provincial zero waste management system plans; incorporating zero waste topics into formal education curricula; raising awareness and developing human resources among all stakeholders and trainers involved in waste management; and participatory updating of waste-related legislation.

3. Prominent Dimensions of the Zero Waste Project from the Perspective of Public Value

As previously noted, the concept of public value varies across societies and over time. In addition to this variability, public value can also be diversified in terms of its subject matter. In this context, public value can be thematically classified according to the domain in which it emerges, or it can be examined in detail based on the characteristic or outcome of the value created. According to Candell and Paulsson, the generation of value and contribution in social, cultural, political, and ecological spheres is a consequence of public value production (2023: 2). While different classifications are possible, Benington distinguishes public value based on the characteristic of the value it generates, identifying it as the production of socio-cultural, political, economic, and ecological values. Accordingly, public value created in areas such as social capital, social relations, equitable access, social solidarity, cultural identity, and individual and societal welfare is considered “social and cultural value”; public value generated in democratic dialogue and active citizen participation is considered “political value”; public value related to the stimulation of economic activities and employment is defined as “economic value”; and public value created in the promotion of sustainable development and the reduction of public harms such as pollution, waste, and global warming is termed “ecological value” (Benington, 2011: 45-46; Candell and Paulsson, 2023: 2). In other words, public value can manifest and be actualized in political, cultural, ecological, and other forms. This section of the study builds on this categorization to address the public value generated by the Zero Waste Project in its various dimensions, according to the nature of the value produced.

3.1. The Creation of Public Value by the Zero Waste Project from Socio-Cultural and Political Perspectives

As previously indicated, the production of public value is a comprehensive process that transcends market individualism and partisan politics. Due to this broad scope, the creation of public value is inherently multi-stakeholder, relying on coordination, collaboration, and the generation of societal value. When examining the legislation and implementation of the Zero Waste Project, it can be argued that from its inception the Project has been oriented towards multi-stakeholder public value creation, suggesting a definitional overlap between the multi-stakeholder nature inherent in the Project and that required by the concept of public value. Directly in this context, it can be asserted that the Project aims at generating societal value.

The legislation underpinning the Zero Waste Project highlights specific issues that have the potential to produce societal value.

Fundamentally, the concept of public value assumes that societies are dynamic, different societies have different needs and values, and the needs and values within each society can change over time. Each differentiation in societal needs and values corresponds to a distinct public value production process. Within this framework, producing public value based on culturally specific values of each society is crucial. Waste management in Türkiye can be described as a relatively recent public policy domain. Although voluntary organizations and individual citizens have emphasized waste separation, waste management has primarily been conducted in a top-down manner from public authorities to citizens. Therefore, the role of public authorities in educating and raising awareness among the public regarding waste management is evident. Over time, the education of human resources has emerged as an important social value produced as public value by the Zero Waste Project.

The Twelfth Development Plan (2024-2028) includes the policy of raising citizen awareness and promoting zero waste practices across all levels of formal education within the scope of the Zero Waste Project, which is part of the human resource education process. Furthermore, the Presidency's Human Resources Office digital education platform "Distance Education Gateway" offers training on Zero Waste Management aimed at public employees. As can be seen, education and awareness activities carried out within the framework of the Zero Waste Project can be considered one of the social values produced under the umbrella of public value.

The second area of social value production corresponds to what Benington, and Candel and Paulsson define as political value. Our legislation allows voluntary participation in provincial special administration and municipal services. Article 77 of Law no. 5393 on Municipality and Article 65 of Law no. 5302 on Provincial Special Administration regulate voluntary participation in municipal and provincial special administration services, listing "environmental services" as one of the areas where voluntary participation may occur. Additionally, Article 76 of the Municipality Law cites "environmental sensitivity" as one of the principles that city councils strive to implement. Accordingly, city councils are composed of representatives from professional chambers with public institution status, trade unions, notaries, universities (if any), relevant non-governmental organizations, political parties, public institutions and organizations, and neighborhood headmen (mukhtar), along with other stakeholders. City councils thus represent multi-stakeholder platforms established to implement certain principles in urban life, encompassing voluntary stakeholders, civil society organizations, and professional associations from various sectors. The Regulation on Voluntary Participation in Provincial Special Administration and Municipal Services, published in the Official Gazette no. 25961 on 09.10.2005, also includes environmental services among the service areas in which citizens may volunteer.

This emphasis on stakeholder participation and voluntarism in framework regulations continues within the scope of the Zero Waste Project. Article 2 of the Zero Waste Regulation published in 2019 permits voluntary organizations to establish zero waste management systems. Public participation is also listed as one of the principles of zero waste management in the Regulation's fundamentals (art. 5). Moreover, the Regulation foresees citizens bringing and depositing waste at (mobile) waste collection centers (art. 14). According to the Regulation, encouraging the

public to separate and store waste separately is among the duties of local administrations (art. 9).

The “Procedures and Principles Regarding the Establishment and Operation of Waste Collection Centers and Zero Waste Practices,” effective as of 2021, introduced a liability system within the zero waste collection system that includes various private sector businesses such as Organized Industrial Zones (OIZs), shopping malls, airports, plazas, and restaurants, alongside public institutions and organizations (art. 5). This regulation does not directly impose obligations on citizens; instead, local governments are tasked with organizing activities aimed at raising citizens’ awareness and consciousness, encouraging participation, and expanding implementation. Cooperation with civil society and private sector organizations alongside public institutions is also envisaged in these activities (art. 5). As understood from this regulation, rather than imposing direct obligations on citizens, participation in zero waste management is facilitated through voluntary engagement by establishing separation systems in publicly accessible and reachable areas by local administrations (art. 10). However, the provision of equipment for recyclable waste in sites, apartment complexes, and villa-type residences can be regarded as a preliminary step toward citizen obligations (art. 7). Overall, the Zero Waste Project facilitates voluntarism and encourages citizen participation, gradually introducing obligations, thus paving the way for participation and democratic dialogue, thereby generating public value in the form of political value.

3.2. The Creation of Public Value by the Zero Waste Project from Economic and Environmental Perspectives

Waste management is regarded as a two-dimensional issue encompassing both environmental and economic aspects. The first concern is preventing the indiscriminate disposal of waste without accounting for its environmental harm. The second concern involves the economic utilization of energy and raw materials generated during waste disposal processes. In this context, waste management holds the potential to generate both economic and environmental value. The careless release or disposal of waste causes significant damage to soil, air, and water due to the release of toxic substances. A sound waste management system minimizes environmental damage while simultaneously producing environmental value indirectly through economic value generation by reducing energy and raw material consumption. Consequently, in the literature, waste management is frequently considered within the scope of public value (Piatak & Jensen, 2024: 11).

From a public value perspective, it can be asserted that the Zero Waste Project possesses the capacity to generate both economic and ecological public value. Between 2017 and 2023, the Project reportedly provided education to 19.2 million people; transitioned 166,000 buildings to zero waste management; and increased the recycling rate from 13% in 2017 to 30.13% in 2022. Additionally, the Project reclaimed 25.4 million tons of paper-cardboard, 6.6 million tons of plastic, 2.6 million tons of glass, 0.7 million tons of metal, and 10.2 million tons of organic and other recyclable waste, reintegrating these materials into the economy. As a result of these recycling activities, an economic gain of 96 billion Turkish Lira was realized, alongside savings of 703 million kWh of energy, 711 million cubic meters of water, and 82 million cubic meters of storage space. Moreover, the Project prevented the emission of 4.9 million tons of greenhouse gases, saved 432 million trees, and conserved 108 million barrels of petroleum (“Recycling Rate Reached 30.13% with Zero Waste,” n.d.).

As summarized above, the outputs of the Zero Waste Project's public value generation simultaneously evoke ecological and economic values. The notion of public value is often described as relatively ambiguous and vague (Barrutia et al., 2022: 2). This ambiguity problematizes which areas of public service generate public value and how it can be measured. Public value thinking is roughly categorized into three dimensions: efficiency, effectiveness, and societal challenges (Barrutia et al., 2022: 2). In the context of waste management, reducing the cost of waste management corresponds to "efficiency"; addressing previously unmet needs and enhancing the quality of traditional services corresponds to "effectiveness"; and better preservation of cultural heritage, fostering social participation, and reducing carbon emissions are understood as public value production in the realm of "societal challenges" (Barrutia et al., 2022: 2). Drawing upon this distinction, it can be argued that the Zero Waste Project produces public value in terms of efficiency by lowering costs, introduces an innovative waste management model that diverges from traditional public service requirements in terms of effectiveness, and contributes to societal challenges through its ecological impacts.

In conclusion, the Zero Waste Project contributes to the production of both environmental and economic public value. Environmental value encompasses preventing environmental harm caused by waste, minimizing environmental problems, preserving ecological balance, combating global warming and climate change, enabling sustainable environments, and reducing carbon emissions. The Project's core promise of zero waste is itself oriented primarily toward the generation of environmental public value. Therefore, considering both direct and indirect effects, it can be clearly stated that the Zero Waste Project significantly contributes to environmental value creation and is likely to continue doing so in the future.

4. Has the Zero Waste Project Created Public Value for Türkiye?

When the Zero Waste Project is evaluated in terms of its potential to generate public and environmental value, several key conclusions can be drawn. Firstly, beyond ecological value creation, the Project's vision to generate socio-economic and political value could contribute significantly to the formation of public value.

Stoker (2006) argues that public value should be regarded as a transcendent concept that surpasses government electorally-driven party politics. In this regard, it can be posited that the Zero Waste Project qualifies as a depoliticized initiative by producing both social and ecological value. The Project is more than a mere waste management process; it constitutes a multi-stakeholder process under public authority stewardship, involving volunteers, civil society, the private sector, and public institutions, thus generating social value. As a waste management initiative, it simultaneously produces ecological value, and because of these dual characteristics, it transcends partisan politics.

As explained above, the strategic triangle serves as a functional tool in measuring *public value*. The strategic triangle not only elucidates the public value formation process but also facilitates our understanding of potential value and outcome production.

When viewed through the lens of the strategic triangle, the Zero Waste Project, as a waste management initiative, can first be said to generate socio-cultural and political value in terms of the value circle, as discussed above. Furthermore, since waste management inherently aims at ecological and economic value creation, it can be argued that the project explicitly targets

the production of ecological and economic public value, achieving relative success based on available data.

The second dimension of the strategic triangle is *legitimacy and support circle*. Examining the Zero Waste legislation reveals that the establishment and implementation of zero waste systems by municipalities, provincial special administrations, institutions, organizations, and enterprises is permitted, with voluntary citizen participation enabled. In other words, the Project's legal framework facilitates the involvement of stakeholders categorized as the public sector, private sector, civil society, and volunteers, thus providing a legitimate and lawful basis for their participation and activities. Additionally, municipalities, provincial special administrations, institutions, and enterprises are supported with incentive mechanisms by the Ministry to establish zero waste systems, while citizens are encouraged by local administrations to separate waste. The enactment of these regulations indicates the fulfillment of the legitimacy and support dimension of the strategic triangle. The creation of a legal framework that promotes stakeholder participation reflects the public authority's acknowledgment that it does not hold a monopoly on public value creation and that such value generation in fields requiring stakeholder involvement (such as waste management) is achievable through collective participation.

The third dimension of the strategic triangle is *operational capacity*. In addition to national policy documents and legislation supporting zero waste management, institutional elements enabling the participation of the third sector and volunteers enhance the Project's operational capacity. The institutional embedding of zero waste management within the Ministry of Environment, Urbanization, and Climate Change's General Directorate of Environmental Management, specifically the Department of Zero Waste Applications, as well as the role of the Türkiye Environment Agency and local governments as public actors, strengthen and constitute the Project's operational capacity.

Moreover, the institutional and legal framing of the Zero Waste Project allows us to comment on the areas Stoker associates with the relationship between politics and social coordination in the public value formation process. The Project includes the private sector and generates a profitable industry; however, it also produces economic value as a public value and creates superior social value that transcends market individualism and profitability goals through the socio-cultural, political, and ecological public values it generates. Secondly, the public value created through the Zero Waste Project transcends party politics and political agendas. Furthermore, as the Project is based on stakeholder participation, it necessitates the adoption of a flexible governance approach in decision-making and problem-solving mechanisms, enabling the Project to function as a governance laboratory in forthcoming years.

Finally, the question of who delivers public services holds central importance in policy-making and decision processes (Piatak & Jensen, 2024: 3). One of the rationales for the inherently multi-stakeholder nature of public value creation is ensuring that the most competent actors provide services within their areas of expertise and capability (Stoker, 2006: 48). Flexibility and participation, which require continuous and adaptive solutions to changing conditions, are critical components of public value. Ensuring the continuity of waste management through flexible and participatory solutions is thus of great importance. Numerous studies in the literature suggest that the public sector's role as the primary actor in waste disposal and recycling can contribute to value creation, and that public procurement may produce

sustainable value (Malacina et al., 2022: 8). This is stated to contribute to environmental protection, the generation of environmental innovations, and long-term problem-solving (Malacina et al., 2022: 8). On the other hand, the content of provided services can influence citizens' preferences. Citizens tend to prefer the state for public services related to equality and resource distribution, while favoring the private sector for services where efficiency is prioritized (Piatak & Jensen, 2024: 13-14). For instance, Piatak and Jensen note that while private sector involvement is preferred in cost-reduction and efficiency-focused services like waste collection, the state or non-profit organizations are preferred in equality-focused services such as street maintenance (2024: 13). These assessments suggest that involving the private sector in waste management can contribute more substantially to public value creation. Indeed, licensed firms play a fundamental role in waste source disposal, segregation, and storage processes within the Zero Waste Project.

Nonetheless, certain shortcomings in terms of public value can be identified in the Zero Waste Project. First, the concept of public value centers society and is understood as a collective and multifaceted construct emerging from citizens' preferences (O'Flynn, 2007: 358). Public preferences are regarded as the core of *public value*, with democratic societies allowing only citizens to determine what is genuinely valuable to them (Kelly et al., 2002: 6). The Zero Waste Project cannot be described as a bottom-up process driven by grassroots demands and shared societal meaning. Although awareness-raising and educational efforts may shape various societal demands toward zero waste practices in the future, the Project has been implemented with a top-down approach from the outset. While the Project produces social value through education and awareness-raising activities and political value through fostering voluntary participation, it cannot be said that the initial phase was propelled by societal demand. However, the initiation of the public value formation process by the public authority through identifying conditions, current status, and problem areas aligns with the public value concept. Moreover, even without a broad societal consensus, the creation of ecological value that affects the general public indirectly results in public value. It can also be argued that social demand sought over time may emerge through awareness, education, and encouragement of participation in implementation and decision-making processes. Citizen awareness itself may be interpreted as a positive externality contributing to the formation of (social) public value.

5. Conclusion and Discussion

As will be seen in the discussion section of this study, the Zero Waste Project's public value creation strategy aligns closely with Moore's conceptualization of the strategic triangle. In fact, in terms of operational capacity, the Project has surpassed Moore's original foresight with the establishment of the Department of Zero Waste Applications within the General Directorate of Environmental Management under the Ministry of Environment, Urbanization and Climate Change, as well as the founding of the Türkiye Environment Agency.

The Zero Waste Project can be subject to critique from the perspective of the public value concept. Public value emerges from the negotiation and consensus of stakeholders. At the initial phase of the Project, promotional materials and the process since its inception indicate the prominent role of the public authority. However, it remains unclear whether demands have emerged from citizens, civil society, or the private sector—that is, whether any negotiation or consensus has formed outside the public authority sphere. Nevertheless, throughout the process, the public authority has been observed to make efforts to include other stakeholders

and activate participatory mechanisms. From a public value standpoint, the inclusion of other stakeholders by the public authority in the zero waste process is meaningful both in terms of fostering participation and legitimizing these stakeholders on a lawful and legitimate basis.

On the one hand, the Zero Waste Project may facilitate the establishment of citizens' rights to live in a healthy environment through political decisions; on the other hand, it enables citizens to participate in environmental value creation, thus allowing for the generation of public and environmental value. In this respect, the Project holds the potential to generate the social and political consensus inherent in the public value concept.

Another issue where the Zero Waste Project may be criticized regarding public value is the measurement of public value. Although economic gains, savings, and environmental benefits obtained within the scope of the Project from 2017 to 2023 are illustrated with quantitative data in this study, there is no clear evidence concerning how these were measured and the reliability of these measurement methods. The public authority's undertaking of qualitative and quantitative measurements by collecting data from the private sector, citizens, and civil society, and transparently publishing the findings, results, and strategic documents based on these would not only increase trust in the Project but also enable the measurement of the public value generated. Moreover, whether public value is produced soundly and whether citizens' trust in public authorities and other service providers increases as a result should be measured qualitatively and quantitatively. Additionally, disaggregating collected data within socio-cultural, political, economic, and ecological contexts would allow for healthier and more detailed insights into public value measurement.

Since the Zero Waste Project is currently a top-down initiated waste management project, one of its most salient social outcomes is the education of human resources. As the process advances, with increased citizen awareness, bottom-up, citizen-based negotiation and consensus opportunities may emerge, enabling public value creation through the participation of all stakeholders. A non-negotiable prerequisite for this is transparency at every stage, from processes to outcomes, from measurement methods to implementations, and the implementation of participatory processes throughout every phase of the Project. The public authority's leadership in this regard poses no obstacle concerning the public value concept.

Finally, the public value concept itself is open to criticism. Firstly, public value inherently entails variability due to differing societal needs across different times and societies. This nature may lead to the abstraction and ambiguity of public value. Secondly, this ambiguity results in the difficulty of measuring public value. To overcome this uncertainty, one recommendation of this study is to analyze public value by subdividing it into sub-disciplines such as education, health, social security, environment, and others.

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