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CATCHWORD

Data Donations: Data Disclosure for the Common Good

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Abstract Similar to financial donations, which have developed into a multi-billion-dollar sector, data donations have the potential to advance public interest goals and promote the common good by enabling access to rich, individual-level behavioral data. However, the concept of data donation remains theoretically underdeveloped, and its practical implementation is still in its early stages. The paper proposes a definition of data donation that integrates different disciplinary perspectives and outlines the concept's key characteristics. Furthermore, the paper outlines major challenges that currently prevent data donations from realizing their full potential. Specifically, it discusses issues related to public awareness, motivation to donate, ensuring continuity of data donations, privacy concerns, informed consent, data access and data quality. These are all challenges which call for further research to better understand the theoretical foundations of data donations and to explore how their potential can be effectively unlocked in practice. The paper argues that Information Systems scholars are well-positioned to address these questions, contribute to an improved theoretical underpinning of data donations, and promote their effective implementation in practice.

Keywords Data donation · Prosocial data disclosure · Data sharing · Privacy · Altruism · Ethical data use · Value of data

1 Introduction

Access to individual-level data enables better-informed decision-making, as famously demonstrated by digital services and platform businesses that have built their commercial success on data-driven value creation. As a result, individuals now share large amounts of their data with private organizations in exchange for the personal benefits these services provide.

Similarly, access to individuals' data can be of significant value for advancing the common good, i.e., for the benefit of society as a whole. In a digital world, data access is increasingly recognized as an essential requirement for addressing the world's greatest challenges, such as global health and sustainability. For example, better access to individual data could accelerate research on humanity's most severe diseases and take personalized medicine to a global scale (Adams 2015). Similarly, non-medical data, such as shopping data, may facilitate the early detection and possibly the prevention of various diseases (Dolan et al. 2023a, b). At the same time, shopping data can enable effective personalized recommendations for reducing carbon footprints, contributing to sustainability goals (Lee et al. 2024). Likewise, access to individual-level mobility data could significantly benefit smart city planning and sustainable mobility solutions (Sörries et al. 2023), among other applications.

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However, in contrast to data-rich businesses, public-sector bodies and organizations serving the common good often lack direct access to the necessary data. Moreover, businesses frequently have insufficient incentives to share their data with external parties, and commercial data sharing and data markets are prone to market failure due to the unique characteristics of data as an economic good (see, e.g., Ichihashi 2021; Jones and Tonetti 2020). In addition, data protection regulations may pose barriers for sharing personal data between organizations, even when intended to serve the common good. To address these issues, *data donations* have been proposed as a form of data altruism to promote the common good in digital societies (Skatova et al. 2014). The COVID-19 pandemic, in particular, has illustrated the potential of voluntary data donations to protect societal well-being, while accounting for individuals' privacy concerns and adhering to data protection regulations (Fast and Schnurr 2025; Trang et al. 2020). Data donations are typically of much higher granularity and quality than memorized self-reports (Ohme et al. 2021), creating new opportunities to promote the common good through data analytics, AI and digital automation. Indeed, the success of financial donations, which have evolved into a multi-billion-dollar sector, demonstrates that prosocial behavior and motivations are not confined to niche contexts, but that donations can generate substantial value for societies, especially in areas where other approaches fall short (Frey and Meier 2004). Consequently, the idea of increasing data availability for the common good through voluntary data sharing has quickly garnered significant attention, not only among academics and practitioners, but also among policymakers.

Notably, the European Union (EU) has introduced a landmark regulatory framework for data donations with the Data Governance Act in 2022, which establishes an EU-level register, transparency rules, and data sharing tools for recognized data altruism organizations to promote trust and legal certainty for data donations. In addition, the recent European Data Act expands individuals' rights to data portability (Kranz et al. 2023), as established under the General Data Protection Regulation (GDPR), to any data generated by the use of Internet of Things (IoT) devices and related services. Moreover, the Data Act aims to improve the quality of the data that individuals and third parties can access by enabling continuous and real-time data access. Ultimately, these regulations seek to empower citizens to unlock their data and make it available for secondary use and value generation (cf. von Scherenberg et al. 2024).

Despite its intuitive appeal, data donation remains an ill-defined concept theoretically and is still in its infancy in practice. As research on the phenomenon emerges across disciplines, scholars have adopted different terms and emphasized varying characteristics (see, e.g., related work referring to prosocial data disclosure (Ghaffar and Widjaja 2023), sharing personal data for public good (Skatova et al. 2014), and data donation (Alashoor et al. 2025)), sometimes leading to contradictory notions of what qualifies as a data donation (see, e.g., recent work on donations of tracking data (Fast and Schnurr 2025), which contrasts with the conceptualization in Bietz et al. (2019)). From a practical perspective, a clear delineation of boundaries is equally important, as data donations may be legally privileged over other forms of data sharing (see, e.g., the above-mentioned regulatory provisions on data altruism by the European Union 2022).

The lack of conceptual clarity has resulted in varying criteria for what constitutes a data donation (see Sect. 2). This is particularly relevant because data donations are associated with new theoretical phenomena and a combination of properties that distinguish them from related concepts. For example, unlike other forms of donation, the non-rival nature of data allows a single donation to be shared multiple times (Jones and Tonetti 2020). Data donations also involve uncertain and long-term risks related to potential privacy violations (Alashoor et al. 2025). Furthermore, compared to data disclosure in commercial contexts, the benefit structure and associated motivations are more complex, as both prosocial motives and personal benefits can influence the willingness to share data (Ghaffar and Widjaja 2023). In practice, privacy concerns, difficulties in accessing data, and insufficient public awareness represent only some of the key challenges that hinder the full realization of data donations' societal benefits (see Sect. 3). Addressing these theoretical and practical barriers through future research (see Sect. 4) will be pivotal in making data donations a viable, large-scale, and effective approach to support the welfare of digital societies, as outlined in the remainder of this article.

2 Key Characteristics of Data Donations

To foster interdisciplinary research and integrate diverse perspectives, we propose a broad definition of data donation that aims to encompass a wide range of specific facets suggested by different academic disciplines and application domains:

Definition (Individual Data Donation) The voluntary disclosure by individuals of data related to themselves, with their informed consent, for the purpose of promoting the common good.

The proposed definition identifies a set of necessary characteristics (Podsakoff et al. 2016) that collectively define a data donation and distinguish it from other forms

Table 1 Key characteristics of data donations compared with related concepts

Key characteristic	Individual data donation	Data disclosure for personal benefits	Citizen science	Crowdsourcing	Scraping	Data brokerage	B2B Industrial data sharing
Disclosing entity	Individuals	Individuals	Individuals	Individuals	Publicly available	Individuals and organizations	Organizations
Promoting the common good	Yes	No	Yes	Possibly	Possibly	No	Typically no
Voluntary and informed consent	Necessary	Possibly	Necessary	Possibly	No	Possibly	Not applicable
Disclosed data	Individuals' data related to themselves	Individuals' data related to themselves	Any data	Any data (incl. ideas and content)	Any publicly disclosed data	Individuals' data (often aggregated)	Non-individual data
Types of data use	Primary and secondary use	Primary use	Primary use	Primary use	Secondary use	Primary and secondary use	Primary and secondary use
Timing	Ex-ante and ex-post	Ex-ante	Ex-ante	Ex-ante	Ex-post	Ex-ante and ex-post	Ex-ante and ex-post
Compensation and incentives	Optional, limited monetary or non-monetary	Monetary or non-monetary (e.g., service access)	Optional, non-monetary (e.g., recognition)	Optional, monetary or non-monetary	None	Monetary	Monetary or non-monetary (e.g., reciprocal data access)
Examples	Individuals sharing electronic health records for research; installation of tracking apps for urban traffic planning	Use of data-driven digital services (such as social networks, search engines); use of loyalty cards in exchange for rebates	Environmental monitoring (such as wildlife, air quality, asteroid identification); documentation of citizen experiments	Collective idea generation and problem solving; contributions to digital services (such as traffic reports, map annotations)	Scraping of publicly available data from social media and app store services; scraping of user reviews	B2B data brokers (such as Acxiom) selling customer insights, Personal data stores enabling users to monetize their data	Sharing of sensor data or inventory data along supply chains; joint tracking of products and their conditions

of data disclosure. Below, we elaborate on each of these four characteristics. To illustrate how the specific combination of these characteristics sets data donations apart, Table 1 compares data donations with related concepts, such as data disclosure for personal benefits or citizen science, and provides illustrative examples for each.

Disclosure of data by individuals: The proposed definition focuses on individuals as data donors, as they have been the primary unit of analysis in the emerging literature on data donations and prosocial data disclosure. Central themes highlighted in this literature, such as privacy concerns (Alashoor et al. 2025), pertain specifically to individual data donors. Furthermore, in practice, most data donation initiatives involve individuals. Nonetheless, the concept could, in principle, be extended to organizations as potential data donors, which aligns with the concept of data philanthropy (George et al. 2019).[1] Integrating this broader perspective could offer novel avenues for future research beyond current conceptualizations of data donations. However, in line with the prevailing body of related work, this paper focuses on individual data donors.

Promoting the common good: In the context of data donations, data disclosure typically involves the transfer of data to a third party that uses or processes it, although placing data in the public domain may also qualify as a data donation. The proposed definition stipulates that such data transfer must serve the purpose of promoting the common good, understood as "those goods that serve all members of a given community and its institutions, and, as such, includes both goods that serve no identifiable particular group as well as those that serve members of generations not yet born" (Etzioni 2015, p. 192)[2] With respect to potential recipients, this requirement is most clearly

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[1] Note that the scope of data philanthropy extends beyond corporate data donations, as it may also include companies' donations of data-science expertise or data technologies for the common good (George et al. 2019).

[2] The proposed definition uses the term *common good* to emphasize that data donations must serve the purpose of promoting the (common) welfare of a community or society as a whole (cf. Etzioni 2015). Note that this meaning is distinct from the economic interpretation of *common goods*, which are defined by the properties of rivalry and non-excludability, as well as from *public goods*, which are defined by non-rivalry and non-excludability.

fulfilled by research institutions and nonprofit organizations. Examples include patients donating health records to improve medical research for future patients, citizens disclosing mobility or environmental sensor data to support urban planning by public authorities, or users donating data to improve AI-based health or energy services when those services are provided by nonprofit organizations. Nonetheless, private organizations may also qualify as recipients of data donations, provided they use the data to advance the common good rather than pursue self-interest or commercial gain (see also Bietz et al. 2019). However, commercially motivated organizations may illegitimately claim common-good purposes, raising concerns about donor intent and recipient legitimacy and creating challenges that parallel those in traditional charitable giving contexts.

Voluntary disclosure and informed consent: To qualify as a data donation, the definition requires that individuals make a conscious decision to disclose specific data, ensuring that the disclosure is both voluntary and based on informed consent. This distinguishes data donations from many data collection practices employed by digital service providers, where forms of "uninformed consent" are common (John 2018; Wenzel and Scherer 2023). Even when digital service providers are legally required to obtain voluntary and informed consent, such as for the collection and use of personal data under the European GDPR, individuals are often unaware of the full extent of data collection, or it is questionable whether consent is genuinely voluntary (Hummel et al. 2019).

Data related to themselves: Data donations have the potential to generate new insights and societal benefits, because they typically comprise granular and behavioral data about the data donor (Zieglmeier et al. 2024). Thus, data donations are regularly associated with privacy risks and influenced by individuals' privacy concerns (see Sect. 3.2). Privacy concerns influence both the willingness to agree to the data collection and the transfer of the data to a third party. This is particularly true when the donated data includes personally identifiable information. Typically, the willingness to share data increases with the degree of anonymization (Schomakers et al. 2019). However, even when data is anonymized or pseudonymized prior to donation, privacy concerns may persist, as sensitive information can still be present. Studies further suggest that anonymization is challenging for granular data (Boeschoten et al. 2021), as data subjects may be re-identified through the combination of data points (De Montjoye et al. 2015). In some contexts, anonymization may even be infeasible for individual data points. For example, in healthcare, patient diagnoses or medical images may reveal personally identifiable information, and anonymizing such data could make it unusable (Kaissis et al. 2020).

In addition to the four necessary characteristics outlined above, we emphasize three additional characteristics of data donations. These additional characteristics help distinguish data donations more clearly from related concepts, which may diverge along these dimensions (see, e.g., crowdsourcing, in Table 1), and point to areas where previous definitions have adopted more restrictive interpretations. Although not individually unique to data donation, these additional characteristics are therefore illuminating in clarifying differences to related concepts.

Types of data use: According to the proposed definition, the disclosure of data for both primary and secondary use can constitute a data donation. Secondary data use refers to the donation of existing data initially created or collected for a different purpose (e.g., sharing of medical records). In contrast, primary data use involves the creation or collection of data specifically for the purpose of the donation and its use. Thus, completing a survey or participating in an experimental study could qualify as a data donation if the other criteria are met. Consequently, the proposed definition is more comprehensive than that of Bietz et al. (2019), which holds that only the disclosure of data for secondary use constitutes a data donation. This narrower perspective is often adopted in the social sciences.

Timing and data collection: The definition is agnostic with respect to the timing of data disclosure relative to data collection. Accordingly, a data donation may occur ex-post, involving data that has already been collected about or by an individual. In the social sciences, data donations are often only recognized as such when they pertain to ex-post data disclosures, as it is argued that only these provide accurate measurements of individuals' behavior because they are less prone to behavioral biases (Sen et al.2021). In contrast, the proposed definition also accommodates ex-ante donations, in which individuals consent to the collection and disclosure of data that will be generated in the future, either over an agreed-upon period or until the donation decision is revoked. Therefore, the proposed definition encompasses the two primary methods of collecting data donations: Data Download Packages (DDPs) for ex-post data donations (van Driel et al. 2022) and user-centric tracking methods for ex-ante data donations (Breuer et al. 2022; Ohme et al. 2023). The use of DDPs, which are archives of digital records capturing user behavior on a digital service (van Driel et al. 2022), has been facilitated by data portability (Kranz et al. 2023; Wohlfarth 2019) and access rights granted to individuals under the European GDPR (Veale and Ausloos 2021; Boeschoten et al. 2022) and more recent EU regulations, such as the Digital Markets Act and the Data Act.

Compensation and incentives: While the proposed definition requires that promoting the common good be the purpose of a data donation, it does not exclude the possibility that donors may receive compensation, including monetary payment. This aligns data donations with other forms of donations, such as blood or plasma donations, which may also involve monetary or non-monetary benefits (Lacetera et al. 2013). Charitable financial donations are likewise often accompanied by donor perks. The broader literature on prosocial behavior in digital contexts has examined the role of incentives, both monetary and non-monetary, for example in the case of online reviews (Burtch et al. 2018). Accordingly, such monetary or non-monetary benefits may serve as additional incentives for data donations (Fast and Schnurr 2025), next to intrinsic motives (see also Sect. 3.1 on the duality of benefits that may motivate data donations). However, for a disclosure to qualify as a donation, its purpose must remain the common good. For conceptual clarity, data donations can therefore be distinguished as either paid or voluntary donations, following the classification commonly applied to blood donations in the US (Food and Drug Administration 2024).

3 Key Challenges of Data Donations

While data donations hold considerable potential to advance the common good, they also face challenges across technical, behavioral, methodological, and regulatory domains, as discussed in this section. Although they share certain characteristics and challenges with other well-known acts of prosocial behavior, their unique combination of characteristics, outlined in Sect. 2, gives rise to novel phenomena and research questions for IS scholars and interdisciplinary collaborators, as elaborated here and in Sect. 4.

3.1 Challenges in Promoting the Common Good

In seeking to promote the common good, data donations encounter key challenges in raising awareness, fostering motivation, and sustaining continuous data disclosure: Traditional approaches to raising awareness may compromise data quality and introduce biases, motivation is influenced by both personal and prosocial motives that may crowd out one another, and addressing donor attrition over time requires the careful design of behavioral interventions and IT artifacts that sustain individuals' interest in donating without provoking annoyance or amplifying privacy concerns.

Raising awareness: A survey of a representative sample of Swiss online users found that only ten percent of respondents were familiar with the concept, indicating limited knowledge and awareness of data donations (Pfiffner and Friemel 2023). As traditional media outlets have so far devoted little attention to the topic of data donations, proactive information provision and mobilization efforts could help raise awareness among the broader public. Digital media and targeted information campaigns have been shown to effectively raise individual engagement in other contexts of prosocial behavior (Boulianne and Theocharis 2020). However, mobilization efforts for data donations must be carefully developed and evaluated to avoid selection biases and other behavioral confounding effects, which could undermine the value of individual data donations (see Sect. 3.3). In contrast to other prosocial contexts, simply maximizing the volume of donations will prove futile, as representative data is often necessary to derive meaningful insights and data of poor quality may even be harmful to value creation. Consequently, raising awareness for data donations poses a distinct challenge that introduces novel issues and warrants further research (see Table 2 for an overview of avenues for future IS research).

Moreover, the observation that "data literacy" is not a universal skill among citizens (Wolff et al. 2016) suggests that data donations could benefit from broader foundational educational efforts. Learning how data can be processed and leveraged to create benefits, as well as how it can be secured and used in a privacy-preserving manner, could empower individuals to choose data donation projects that align with their preferences (cf. Weinhardt et al. 2024). Greater data literacy may also strengthen trust in data donation initiatives, thereby increasing individuals' willingness to disclose data for purposes they perceive as socially beneficial.

Motivating data donations through dual benefits: As data donations serve the common good, they appeal to individuals' prosocial motives (Ghaffar and Widjaja 2023). At the same time, they are non-excludable and characterized by non-rivalry, which may also be referred to as multiplicity (Prainsack 2019). These characteristics make data donations susceptible to the public-good dilemma, where individuals may free-ride by benefiting from others' donations without bearing the costs of donating themselves.[3] Therefore, data donations are likely to be undersupplied by individuals who maximize their own utility but do not internalize the positive social externalities (Rockenbach et al. 2020). This underprovisioning is exacerbated by potential personal costs, such as from privacy risks and

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[3] In some cases, the value generated through data donations can be rivalrous, meaning that some individuals benefit from the resulting data use while the same benefit is not equally available to others. For example, data donations may advance health research that leads to the development of a medicine which, in its physical form, is rivalrous, as a single drug cannot be consumed by multiple individuals. Importantly, in the context of data donations, it is not predetermined who will ultimately benefit, since the donation is made in service of the common good. At the same time, the research insights generated from the data (e.g., the formula for the medicine) are non-rivalrous. Consequently, the public-good dilemma typically still arises.

Table 2 Overview of future IS research directions addressing key challenges of data donations

Overarching objectives	Example research questions	Proposed methods	Selected relevant IS research streams
I. Challenges in promoting the common good			
• Raising awareness	How to design targeted information campaigns for data donations without inducing selection biases? What factors predict individual awareness and comprehension of data donation concepts?	Content analysis, A/B testing, surveys, qualitative studies	Information diffusion (Stieglitz and Dang-Xuan 2013), user awareness of IT security issues (Bulgurcu et al. 2010; D'Arcy et al. 2009)
• Motivating data donations through dual benefits	What prosocial motivational factors (e.g., altruism, warm glow, sovereignty expression, personal benefits) predict data donation behavior beyond stated intentions? How do default settings affect the voluntary willingness to donate data?	Vignette studies, laboratory and field experiments	Digital nudging and message framing (Klein et al. 2024; Weinmann et al. 2016), Prosocial behavior in digital contexts (Burtch et al. 2018)
• Ensuring continuity of data donations	How can data donation apps be designed to reduce user attrition and ensure sustained engagement? Which non-monetary incentives can promote repeated, long-term data donations?	Design science, case studies, randomized controlled trials	IS continuance (Limayem et al. 2007), Long-term effects of incentives (Fast and Schnurr2025)
II. Challenges in voluntary disclosure and informed consent			
• Navigating privacy in prosocial data disclosure	How do extended privacy calculus processes differ between data donation and commercial data disclosure contexts? Does the privacy paradox phenomenon manifest differently in the context of prosocial data disclosure?	Theoretical analysis, surveys, laboratory and online experiments	Extension to the privacy calculus (Alashoor et al. 2025; Ghaffar and Widjaja 2023), Privacy paradox (Norberg et al. 2007)
• Maintaining informed consent	What factors influence individuals' acceptance of broad consent models for data donations? How do they weigh higher benefits from broad data use versus increased privacy risks? How can informed consent be implemented for open access models?	Observational field studies, case studies, vignette studies	Biased perceptions of privacy costs (Wenzel and Scherer 2023), Privacy uncertainty (Zieglmeier et al. 2024), Ethics in IS (Spiekermann et al. 2022)
III. Challenges in accessing and using data related to oneself			
• Enabling individuals' access to their data	How do technical barriers and data access interfaces influence data donation completion rates across different digital services and user populations? Which IT artifacts, organizational practices, and regulations can support individuals in gaining effective access to their data for donations?	Design science, descriptive empirical analyses, natural experiments, game theory models	Data portability (Kranz et al. 2023; Syrmoudis et al. 2021; Wohlfarth 2019), Personal information management systems (Abiteboul et al. 2015), Data management (Labadie and Legner 2023)
• Ensuring the quality of donated data	How do validity gains from donated trace data compare to traditional self-report measures across different behavioral domains? How to detect and mitigate quality defects in donated data sets?	Data science, simulation, theoretical analysis, design science	Handling data quality defects (Hagn et al. 2025; Peng et al. 2023), Data governance (Otto 2011), Privacy-preserving data disclosure (Li and Qin 2017)

associated privacy concerns, which can further discourage data donations (Alashoor et al. 2025).

In this context, the coupling of societal benefits with personal benefits uniquely afforded by data donations presents a promising avenue for encouraging donors and raises novel research questions (Skatova et al. 2014). For example, donors may receive personalized insights, recommendations, or feedback from their data, while also contributing to the common good. This duality of benefits as part of the unique cost-benefit calculus of data donations (Carlsson Hauff and Nilsson 2023) has been explored in early studies in the context of donations of COVID-19 contact-tracing data (Ghaffar and Widjaja 2023) and medical research (Klein et al. 2024). Furthermore, individuals may be provided with additional incentives to donate their data (Fast and Schnurr 2025), including monetary or non-monetary compensation and expense allowances similar to, e.g., blood donations (Lacetera et al. 2013). However, such extrinsic incentives could also have adverse effects (Anderson and Agarwal 2009), potentially crowding out intrinsic motives or causing negative shifts in social norms, image concerns, or trust (Gneezy et al. 2011).

Prosocial motives can serve as strong motivating factors on their own, as illustrated by related contexts of blood and monetary donations (Glynn et al. 2002; Xiao and Yue 2021), as well as user contributions online (Burtch et al. 2018). For example, altruism, characterized as selfless concern for the welfare of others, is often considered a primary predictor of prosocial behavior (Skatova and Goulding 2019). Thus, many blood donation campaigns emphasize altruism to recruit donors. However, beyond pure altruism, various other motives (such as warm glow or indirect reciprocity) can drive individuals to engage in prosocial behavior (Penner et al. 2005). In the context of data donations, the unique characteristics of (personal) data and the value individuals ascribe to disclosing this data may introduce additional new motives. For instance, Hummel et al. (2019) argue that individuals may donate their data not only because of altruistic reasons, but also to assert and advance personal sovereignty, as data donations provide them with a sense of control and autonomy over how and for what purposes their personal information is used and shared.

Approaches involving digital nudging could further encourage data donations, as digital environments offer unique opportunities for personalized and dynamic design (Weinmann et al. 2016). For example, Klein et al. (2024) found that framing messages to emphasize personal benefits and employing positive framing significantly increased individuals' willingness to donate health data. This suggests that subtle changes in message design, consistent with the principles of nudging, can meaningfully influence data donation behavior. However, the acceptance and effectiveness of such approaches in this context remain largely unexplored and are likely to involve unique interaction effects, for instance with individuals' privacy concerns (see also Sect. 3.2). "Becoming the default" constitutes a particular challenge for data donations, with significant implications for participation. This challenge has two facets. First, it refers to data donation becoming the default option in data collection initiatives and platforms across domains (cf. Weinmann et al. 2016). For example, electronic health records could be automatically donated to research unless individuals actively opt out. Second, it may also denote the establishment of data donation as a social norm within a group or society, creating an expectation and shared understanding that donating data represents typical behavior (cf. Burtch et al. 2018).

Ensuring continuity of data donations: In many application contexts, the value of data donations for the common good depends on the continuous collection over the long term. For example, in health contexts, a series of data donations by the same individual may allow for the identification of new patterns and interdependencies that indicate a risk for certain diseases (Zieglmeier et al. 2024). However, the collection of such continuous data donations also introduces additional complexity and challenges. For example, when using monetary incentives or digital nudges to motivate individuals to donate their data, long-term effects significantly differ from short-term effects (Fast and Schnurr 2025). While attrition of data donors can impair data quality, long-term relationships with data donors can also be leveraged to implement trust-building measures or provide personal benefits. In this context, feedback mechanisms that inform data donors about the societal benefits of their donations or enable them to improve their own well-being (e.g., through recommendations for healthy food in the case of shopping data) appear particularly promising (Wu et al. 2025). Continuous donations may also be promoted through the purposeful design of IT artifacts, such as devices and services, that facilitate effortless data sharing or that monitor tracking and potential interruptions. Therefore, future research is needed to both investigate donation behavior and potential stimuli over time (e.g., additional incentives or digital nudges) and to examine technical design opportunities that can support continuous and long-term donations (see Table 2).

3.2 Challenges in Voluntary Disclosure and Informed Consent

Requirements for voluntary disclosure and informed consent pose unique privacy and consent challenges for data donations, distinct from those associated with disclosing data in exchange for personal benefits. Prosocial data disclosure contexts may heighten perceived privacy risks, which individuals must weigh against benefits that extend beyond self-focused considerations captured by traditional privacy calculus theory. Although broad consent for the use of donated data could maximize societal benefits, it also raises critical questions about the criteria and implications of informed consent.

Navigating privacy in prosocial data disclosure: The impact of privacy concerns and context-specific privacy risks on individuals' decisions to share personal data has attracted considerable attention, resulting in a rich body of literature on data disclosure in exchange for personal benefits (Smith et al. 2011; Dinev et al. 2015). Privacy calculus theory suggests individuals rationally weigh benefits against risks when disclosing personal data (Culnan and Bies 2003), yet the well-known privacy paradox shows that actions often deviate from stated privacy intentions (Norberg et al. 2007). When data is shared for societal rather than personal benefits, this discrepancy may be further amplified by "misinformed dissent", whereby individuals overestimate privacy-related costs while underestimating the benefits of data sharing, leading to reluctance to disclose data for prosocial purposes (Wenzel and Scherer 2023).

Despite its long history in IS research and other disciplines, privacy research has mainly focused on data disclosure in return for personal benefits, whereas research on prosocial data disclosure is much more limited. Only recently has the topic of prosocial data disclosure begun to receive increasing attention (see, e.g., Alashoor et al. 2025; Wenzel and Scherer 2023; Zieglmeier et al. 2024). Thus, the implicit assumptions in many privacy theories, which posit that individuals consider benefits and costs of data disclosure solely from a self-focused perspective, must be reassessed (Carlsson Hauff and Nilsson 2023; Ghaffar and Widjaja 2023). As prosocial behavior is often driven by alternative motives and subject to different contextual factors (see Sect. 3.1), it is not clear whether existing theories and phenomena on privacy decision-making and privacy concerns in the context of personal benefits can be directly transferred to the context of data donations, where promoting the common good is the primary purpose of data disclosure. Empirical findings by Hillebrand et al. (2023) suggest that different descriptions of recipients of data transfers can have an impact on the perceptions of associated privacy risks, and thus influence individuals' willingness to disclose data. Moreover, it is unclear whether well-known privacy phenomena such as the privacy paradox extend to prosocial data disclosure contexts, as the benefit structure changes from personal to societal benefits (Alashoor et al. 2025). This calls for empirical investigation and possibly the extension of privacy theories to better understand and predict the privacy implications of prosocial data disclosure.

Maintaining informed consent: To contribute to the common good, donated data must often be combined with other data sets and its processing may need to change over time as technologies and use cases evolve. Data may also need to be shared between different organizations in order to collaboratively derive data-driven insights. Ultimately, social welfare from data use could therefore be maximized by establishing open access to donated data, as the data could then be used for a wide range of different purposes pertaining to the common good, while redundant transaction costs could be avoided (cf. Jones and Tonetti 2020). Consequently, "broad consent" from data subjects, enabling the data to be used for a wide range of purposes, is of particular importance in the context of data donations. Broad consent for data use is increasingly popular in biological and medical research domains, where this allows for advancing biobanking and the utilization of human biological samples (Hansson et al. 2006), as well as the storage and (re)use of clinical data in university hospitals (Leimstädtner et al. 2022). While broad consent can facilitate value creation, it also has significant implications on the associated (perceived) privacy risks and thus the disclosure decision of data subjects (Sheehan 2011). In addition, the absence of a specific purpose and identifiable counterpart may affect individuals' trust and motivation to donate. Hence, more research is needed to better understand the implications of broad consent mechanisms and the factors that determine the associated value-privacy trade-off in the context of data donations (see also Table 2). Open questions also remain about how and under what conditions such regimes can be implemented in practice while respecting regulatory frameworks and fundamental rights from legal and ethical perspectives (cf. Spiekermann et al. 2022). Australia's opt-out system for electronic health records exemplifies this tension. While it increased participation rates and made critical health information readily available, critics argued that the default setting undermined genuine informed consent and enabled problematic secondary data use (McCall 2018). This case illustrates how defaults can expand data availability (see also Sect. 3.1) while simultaneously challenging the voluntariness central to data donations.

3.3 Challenges in Accessing and Using Data Related to Oneself

As data donations comprise individuals' data related to themselves, they pose challenges both in obtaining access to such data and in ensuring its quality for use. Because data donations are inherently tied to individuals' data sharing, they facilitate informed consent but lead to high transaction costs for data access and difficulties in achieving sufficient scale. Although data donations can significantly improve the quality of self-reported individual-level data, they are susceptible to their own sources of error, requiring targeted data management and governance practices.

Enabling individuals' access to their data: Despite regulatory efforts to facilitate data access, individuals still face significant challenges in obtaining adequate data for a data donation. Especially for donations of secondary data, studies document substantial technical barriers for individuals to access and transfer personal data they have created when using digital services (Hase et al. 2024; Syrmoudis et al. 2021). In particular, there is substantial heterogeneity in the scope, completeness, and quality of the DDPs that are provided by digital service providers upon request. Furthermore, there is a lack of standardization, leading to a large variety in data formats that are further subject to frequent changes, which impedes the ready reuse of this data and reduces its usefulness (Boeschoten et al. 2022). These difficulties in accessing and porting data are of particular importance, as studies have demonstrated that long or complicated donation processes lead to significantly reduced follow-through rates even when individuals are willing to donate data (Silber et al. 2022). Hence, transaction costs arising from technical difficulties pose a significant threat to achieving a sufficient scale of data donations. This has sparked recent efforts by researchers to establish data donation frameworks (Boeschoten et al. 2022) and to summarize relevant information on DDPs from popular digital services (see, e.g., van Driel et al. 2022; Wedel et al. 2025, for Instagram and TikTok). Some researchers have successfully cooperated with platform providers to minimize frictions in the recruitment and data donation process (Katzeff et al. 2020; Testa et al. 2019). However, even when data subjects can access their data with relatively low effort, scaling up data donations remains a challenge because of the inherent focus on individual data donors. This contrasts with opportunities for direct data access for researchers at the digital service provider, as envisioned, for example, by Article 40 of the European Digital Services Act (Husovec 2023). Future research should therefore investigate how data donations and other data sources can be effectively combined to maximize their value.

Ensuring the quality of donated data: Data quality poses a fundamental challenge in behavioral research, especially when self-reports are the primary means of studying individual behavior, such as consumer decision-making. Self-reports are prone to biases, including social desirability and recall bias, which may compromise the accuracy and validity of findings (Jenneson et al. 2022; Ohme et al. 2021). In this context, data donations can significantly improve data quality by providing accurate and detailed records of individual behavior. For example, donated purchase and screen time data have demonstrated higher accuracy than self-reports in behavioral research (Tang et al. 2016; Ohme et al. 2021). As a result, research based on data donations has gained traction across disciplines and domains, such as mental well-being (Marciano and Camerini 2022).

Although data donations offer new opportunities for behavioral research, they face their own challenges regarding data quality. The limited scope of data portability and the lack of standards for DDPs may restrict the completeness and thus the quality of the data available for donation. At a fundamental level, a lack of digitization, especially in the public sector, can present significant challenges to unlocking the value of data donations. For example, in Germany, the implementation of a universal electronic health record system is still lagging behind (Strech et al. 2020), which renders the possibility to donate such records to research, as envisioned by the German Patient Data Protection Act, almost unfeasible.

While data donations can mitigate some of the biases inherent in self-reports (see above), they are also prone to their own error sources. Error frameworks show that digital trace data, even when accurately measuring behavior, remain susceptible to various biases (e.g., Boeschoten et al. 2022; Bosch and Revilla 2022; Sen et al. 2021). To derive value from data donations, it is often important that the collected data is representative of the target population (Sen et al. 2021; Boeschoten et al. 2022; Pak et al. 2022). For many goals related to the common good, this means that the data needs to be representative of large parts or even the entire population. As a result, selection bias, social desirability bias, and non-response errors represent central challenges for data donations (Bosch and Revilla 2022). These error sources are especially critical when active measures are taken to increase awareness of data donations or to motivate individuals to donate (see Sect. 3.1), as such efforts may inadvertently amplify biases.

Furthermore, the transaction costs for accessing and donating data as well as the heterogeneity of privacy concerns (see Sect. 3.2) may lead to self-selection bias, where predominantly technology-savvy and less privacy-concerned individuals donate their data. For instance, in the case of donations of shopping data, individuals with loyalty cards may not necessarily be representative of the overall population (Rains and Longley 2021; Wu et al. 2022). To better understand and mitigate such selection biases, the willingness to participate in tracking (Gil-López et al. 2023; Keusch et al. 2019) and willingness to donate DDPs have received growing research attention (Boeschoten et al. 2022; Keusch et al. 2024).

In this context, validation procedures are vital to ensure that collected data adequately captures the constructs of interest. To derive valid insights from data donations, future research can build on the extensive IS literature on mitigating data quality defects (Hagn et al. 2025), establishing data governance institutions (Otto 2011), and employing privacy-preserving disclosure techniques (Li and Qin 2017).

4 Future Directions for IS Research on Data Donations

The challenges outlined in the previous section highlight that significant barriers remain for unlocking the full potential of data donations. These challenges range from technical issues (such as data compatibility and easy-to-use IT artifacts for data donors) to behavioral considerations (such as effective motivation of long-term donation) and methodological concerns (such as addressing selection biases and managing data quality), as well as regulatory conditions (such as requirements for broad consent and data access).

Recent IS research has already begun to shed light on some of these areas. Empirical studies on prosocial motivations in data donation suggest that societal benefits, altruism, and beliefs about reciprocity increase individuals' willingness to disclose data (Alashoor et al. 2025; Skatova and Goulding 2019; Zieglmeier et al. 2024). In addition, Ghaffar and Widjaja (2023) explore how individuals weigh self-focused and other-focused benefits and costs in prosocial data-sharing contexts, while Fast and Schnurr (2025) examine the short- and long-term effects of monetary incentives. Together, these studies also represent first steps toward extending the privacy calculus to the domain of prosocial data disclosure. While this work lays a foundation for future research on data donations, important research gaps remain across all three key challenges outlined in Sect. 3. For example, Alashoor et al. (2025) call for further investigation into additional factors unique to the prosocial nature of data donations, such as empathetic concern. Moreover, further research is needed to assess the generalizability of these initial findings (e.g., to repeated and long-term data donations), to identify the boundary conditions under which they hold.

To address these research gaps, Table 2 summarizes future IS research directions rooted in the identified key challenges of data donations. Specifically, it presents example research questions for each overarching objective within the three challenges, along with suggestions for suitable methodological approaches that may guide future work.[4] The table also highlights selected IS research streams on which future work can build, demonstrating how the established body of IS research, spanning theoretical, empirical and methodological work, provides a rich foundation for addressing the novel phenomena and challenges of data donations.

While data donations share parallels with related concepts, it is the combination of their key characteristics and the unique properties of data (e.g., non-rivalry, privacy risks) that gives rise to novel challenges, as highlighted in the preceding sections. Consequently, data donations represent more than a mere contextual shift, and findings from other forms of prosocial behavior cannot be directly transferred, necessitating research tailored to the distinctive combination of their key characteristics. Further research gaps emerge at the intersections of key characteristics, highlighting the interdependencies among the identified challenges. Thus, in addition to the example research questions presented for individual challenges in Table 2, cross-cutting questions arise. For example: How do interventions that promote awareness and motivation to donate influence the quality of donated data and the value that can be derived from it? How do different consent mechanisms and feedback on broad data use affect the long-term attrition of donors? How do app designs that enable continued donations and the monitoring of compliant behavior affect privacy concerns and prosocial motives to contribute data?

Overall, the identified research directions highlight that a combination of different methodological approaches as well as disciplinary perspectives is necessary to build a comprehensive body of knowledge on data donations in order to promote public awareness, willingness to donate, and effective uses of data for the common good. IS scholars are well-positioned to drive such interdisciplinary research efforts, as they already operate at key intersections with other scientific disciplines (such as psychology, behavioral economics or communication research) and can draw from a rich methodological toolbox, ranging from design research to theoretical approaches and behavioral analyses. The proposed definition in Sect. 2 is intended to facilitate these interdisciplinary research endeavors by clarifying the key characteristics that distinguish data donations from other forms of data sharing or disclosure, while also acknowledging the varying interpretations found in existing studies. However, to achieve the desired scale and quality of data donations, there is also the need for collaboration between researchers and private organizations. As providers of digital services or operators of IoT networks that collect large volumes of data, private organizations are in a prime position to facilitate data access and mobilize their users to donate data. Therefore, significant opportunities exist for researchers and private organizations to join forces to facilitate data donations and data disclosure for the common good. Here again, the IS community is well-positioned to take on a leading role, given its extensive experience in partnering with private stakeholders to generate research contributions of high practical relevance.

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[4] The proposed research methods are not intended to be exhaustive. Rather, they illustrate how different approaches can be combined to pursue the proposed research directions.

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