

XAYRIYA: A TRUST-BASED DIGITAL PLATFORM FOR SOCIAL DONATION AND SUSTAINABLE REDISTRIBUTION

Eshmurodova Dildorakhon

ms.dildoraeshmurodova@gmail.com

Tolibova Nafisa

tolibovan624@gmail.com

<https://doi.org/10.5281/zenodo.23270138>

Abstract. The increasing availability of digital platforms has created new opportunities for connecting individuals, communities, and organizations to address social and environmental challenges. Nevertheless, many potentially useful physical goods, such as clothing, books, toys, and household or children's items, remain unused or are discarded, while individuals and families may experience difficulties accessing these resources. Existing digital donation systems have primarily focused on monetary contributions, fundraising, or institutional charity, with comparatively less attention given to transparent peer-to-peer redistribution of reusable physical goods. This paper introduces **XAYRIYA**, a trust-based digital platform designed to connect donors with individuals and families in need through verified listings, digital matching, donation tracking, and community-based delivery. The platform integrates four major components: donation management, beneficiary verification, intelligent matching, and transparent transaction tracking.

A design-oriented research approach is adopted to develop and conceptualize the platform, examining how digital transparency, verification, and traceability can enhance user trust and effective resource redistribution. The proposed framework also incorporates volunteers and partner organizations supporting actors within the donation ecosystem. The paper contends that **XAYRIYA** can simultaneously advance social inclusion, community participation, and circular-economy objectives by extending the useful life of products and directing them toward unmet social needs. The paper concludes with an evaluation framework and identifies future opportunities for empirical testing, including usability assessment, trust measurement, matching efficiency, and social and environmental impact evaluation.

Keywords: digital philanthropy, social donation, digital platform, trust, transparency, resource redistribution, circular economy, social innovation, community participation, donation tracking.

XAYRIYA: ЦИФРОВАЯ ПЛАТФОРМА НА ОСНОВЕ ДОВЕРИЯ ДЛЯ СОЦИАЛЬНЫХ ПОЖЕРТВОВАНИЙ И УСТОЙЧИВОГО ПЕРЕРАСПРЕДЕЛЕНИЯ РЕСУРСОВ

Аннотация. Распространение цифровых платформ создало новые возможности для объединения отдельных лиц, сообществ и организаций с целью решения социальных и экологических проблем. Несмотря на это, многие физические товары, которые потенциально могут быть полезны, такие как одежда, книги, игрушки, предметы домашнего обихода и детские товары, остаются неиспользованными или выбрасываются, в то время как отдельные люди и семьи могут испытывать трудности с доступом к этим ресурсам.

Существующие цифровые системы благотворительности в основном ориентированы на денежные пожертвования, сбор средств и деятельность институциональных благотворительных организаций, тогда как прозрачному одноранговому (peer-to-peer) перераспределению пригодных для повторного использования физических товаров уделяется сравнительно меньше внимания.

В данной статье представлена **XAYRIYA** — цифровая платформа на основе доверия, предназначенная для установления связи между донорами и нуждающимися людьми и семьями посредством проверенных объявлений, цифрового сопоставления, отслеживания пожертвований и доставки на основе участия сообщества. Платформа включает четыре основных компонента: управление пожертвованиями, верификацию получателей помощи, интеллектуальное сопоставление и прозрачное отслеживание транзакций. Для разработки и концептуализации платформы применяется ориентированный на проектирование исследовательский подход, в рамках которого изучается, каким образом цифровая прозрачность, верификация и прослеживаемость могут способствовать повышению доверия пользователей и эффективности перераспределения ресурсов. Предлагаемая модель также предусматривает участие волонтеров и партнёрских организаций в качестве вспомогательных участников экосистемы благотворительности.

В статье утверждается, что **XAYRIYA** может одновременно способствовать социальной инклюзии, участию сообщества и достижению целей циркулярной экономики за счёт продления срока полезного использования товаров и их направления на удовлетворение существующих социальных потребностей. В заключении представлена система оценки платформы и определены направления для будущих эмпирических исследований, включая оценку удобства использования, измерение уровня доверия, эффективности сопоставления, а также социального и экологического воздействия.

Ключевые слова: цифровая филантропия, социальные пожертвования, цифровая платформа, доверие, прозрачность, перераспределение ресурсов, циркулярная экономика, социальные инновации, участие сообщества, отслеживание пожертвований.

XAYRIYA: FOYDALANILMAYOTGAN BUYUMLARNI IJTIMOY QAYTA TAQSIMLASH UCHUN ISHONCHLI VA SHAFFOF RAQAMLI PLATFORMA MODELI

Annotatsiya. Raqamli platformalarning ommalashib borayotgani ijtimoiy va ekologik muammolarni hal qilish uchun shaxslar, jamoalar va tashkilotlarni bog'lash uchun yangi imkoniyatlar yaratdi. Shunga qaramay, kiyim-kechak, kitoblar, o'yinchoqlar, uy-ro'zg'or buyumlari yoki bolalar buyumlari kabi ko'plab foydali bo'lishi mumkin bo'lgan jismoniy tovarlar foydalanilmay qolmoqda yoki tashlab yuborilmoqda, ayni paytda ayrim shaxslar va oilalar ushbu resurslardan foydalanishda qiyinchiliklarga duch kelishi mumkin. Mavjud raqamli xayriya tizimlari asosan pul hissalari, mablag' yig'ish yoki institutsional xayriya faoliyatiga qaratilgan bo'lib, qayta ishlatiladigan jismoniy tovarlarni shaffof "peer-to-peer" (odamdan odamga) qayta taqsimlashga nisbatan kamroq e'tibor qaratilgan.

Ushbu maqola **XAYRIYA** – donorlarni muhtoj shaxslar va oilalar bilan tasdiqlangan e'lonlar, raqamli moslashtirish, xayriyalarni kuzatish va jamoatchilikka asoslangan yetkazib berish orqali bog'lash uchun mo'ljallangan ishonchga asoslangan raqamli platformani taqdim etadi. Platforma to'rtta asosiy komponentni o'z ichiga oladi: xayriyalarni boshqarish, benefitsiarlarni (yordam oluvchilarni) verifikatsiya qilish, aqlli moslashtirish va shaffof tranzaksiyalarni kuzatish. Platformani ishlab chiqish va konseptuallashtirish uchun dizaynga yo'naltirilgan tadqiqot yondashuvi qo'llaniladigan bo'lib, unda raqamli shaffoflik, verifikatsiya va kuzatuvchanlik foydalanuvchi ishonchini va resurslarni samarali qayta taqsimlashni qanday kuchaytirishi o'rganiladi. Taklif etilayotgan tizim, shuningdek, xayriya ekotizimidagi yordamchi ishtirokchilar sifatida ko'ngillilar va hamkor tashkilotlarni ham o'z ichiga oladi. Maqolada ta'kidlanishicha, XAYRIYA mahsulotlarning foydalanish muddatini uzaytirish va ularni qondirilmagan ijtimoiy ehtiyojlarga yo'naltirish orqali bir vaqtning o'zida ijtimoiy inklyuzivlik, jamoatchilik ishtiroki va aylanma iqtisodiyot maqsadlarini ilgari surishi mumkin. Maqola baholash tizimi bilan yakunlanadi va kelajakdagi empirik sinovlar uchun imkoniyatlarni, jumladan, foydalanishga yaroqlilikni baholash, ishonchni o'lchash, moslashtirish samaradorligi hamda ijtimoiy va ekologik ta'sirni baholashni belgilab beradi.

Kalit so'zlar: raqamli filantropiya, ijtimoiy xayriya, raqamli platforma, ishonch, shaffoflik, resurslarni qayta taqsimlash, aylanma iqtisodiyot, ijtimoiy innovatsiya, jamoatchilik ishtiroki, xayriyalarni kuzatish.

Introduction

Digital technologies have fundamentally transformed communication, resource exchange, and participation in social activities. Digital platforms now serve as intermediaries between individuals and organizations, enabling transactions and interactions that previously depended on physical institutions or geographically limited networks. In the social sector, this transformation has facilitated the emergence of online fundraising, digital philanthropy, crowdfunding, peer-to-peer assistance, and other forms of technology-enabled social participation.

Despite these developments, a significant gap persists between **available resources and unmet social needs**. Many households possess physical goods that are no longer required but remain usable. Clothing, books, children's toys, school materials, household items, and other products may remain unused in homes or eventually become waste. Simultaneously, other individuals and families may have limited access to these resources. The core issue is often not a lack of resources, but rather the absence of effective mechanisms for **identifying, connecting, verifying, and redistributing available goods to those in need**.

This issue is particularly relevant to the development of sustainable consumption models.

Digital sharing and redistribution platforms have been identified as potential enablers of circular-economy practices, as they facilitate reuse, sharing, gifting, and other mechanisms that extend product lifetimes (Schwan Holz & Leipold, 2020). Reuse reduces the demand for new products and increases the functional lifetime of existing goods. Digital platforms can make these processes more accessible by lowering information and coordination barriers.

However, technological infrastructure alone does not ensure successful participation. **Trust and transparency are essential in digital philanthropy.** Donors require confidence that their contributions are used appropriately and that platform information is reliable. Recent research has demonstrated positive relationships between perceived nonprofit transparency, donor trust, and perceived organizational performance (Ghoorah et al., 2025). Similarly, Dethier et al. (2024) conceptualized perceived nonprofit transparency through dimensions such as information accessibility, completeness, and accuracy. These findings indicate that users require more than an appealing digital interface; they need credible mechanisms for information verification and action traceability.

Research on digital donation systems further supports this argument. Sung et al. (2023) found that transparency, immutability, and efficiency in blockchain-based donation systems can positively influence perceptions of nonprofit trustworthiness. Earlier studies have also identified relationships between online disclosure and charitable contributions (Blouin et al., 2018; Saxton et al., 2014). Collectively, these findings reinforce the importance of information visibility and accountability within digital charitable ecosystems.

Nevertheless, many existing donation systems focus primarily on **financial contributions**. **This situation presents** an opportunity to investigate a complementary model in which individuals donate physical goods they no longer need. Such a model could simultaneously address unmet social needs and reduce unnecessary disposal of usable products. To address this opportunity, this paper proposes **XAYRIYA**, a digital platform for community-based redistribution of unused physical goods. The platform is designed to connect four primary stakeholder groups: donors, beneficiaries, volunteers, and partner organizations. Donors list available items, beneficiaries identify relevant resources, volunteers support delivery, and partner organizations contribute verification and coordination.

How can a digital platform improve the trust, transparency, accessibility, and efficiency of community-based redistribution of unused physical goods?

- The paper has four objectives:
1. To identify key requirements for a trustworthy digital redistribution platform.
 2. To propose a conceptual and technological framework for XAYRIYA.
 3. To examine how verification, transparency, matching, and tracking can support trust and effective redistribution.
 4. To establish an evaluation framework for future empirical testing of the platform.

The remainder of the paper reviews relevant literature, outlines the proposed research methodology and XAYRIYA architecture, discusses expected outcomes and implications, and identifies limitations and directions for future research.

Literature Review
1. Digital Philanthropy and Online Donation

The growth of internet-based communication has transformed traditional philanthropic practices. Individuals can now discover charitable causes, evaluate organizations, and contribute through digital channels without direct physical interaction with nonprofit institutions.

Sisco and Weber (2019), for example, examined more than \$44 million in real-world online donations made through GoFundMe and demonstrated the value of large-scale digital data for understanding online prosocial behavior. Their study illustrates the increasing importance of digital platforms as environments in which charitable behavior can be observed and facilitated.

However, digitalization also creates challenges. Online environments introduce information asymmetry because donors may not personally know the recipient or organization involved. Consequently, donors must rely on information supplied by the platform or other users.

This creates a fundamental question:

Why should a user trust the information provided by a digital donation platform?

The answer is closely connected to transparency, verification, accountability, and traceability.

2. Trust and Transparency in Digital Charity

Trust has long been recognized as an important factor in charitable behavior. When donors cannot directly observe how their contribution is used, they depend on signals that indicate the reliability and legitimacy of the organization or platform.

Dethier et al. (2024) argue that donor-perceived nonprofit transparency can be conceptualized through information accessibility, completeness, and accuracy. This perspective is particularly relevant to XAYRIYA because the platform needs to provide users with sufficient information without unnecessarily exposing sensitive personal data. Recent empirical evidence further supports the importance of transparency. Ghoorah et al. (2025) found positive associations between perceived financial transparency, donor trust, and perceptions of nonprofit performance.

Similarly, Wu and Dai (2024) reported experimental evidence that financial and performance transparency can increase willingness to donate. Earlier work by Blouin et al. (2018) also found that voluntary online financial disclosure was positively associated with donations among nonprofit organizations. These studies suggest that transparency is not simply an administrative characteristic. It can function as a **trust-building mechanism**.

For XAYRIYA, transparency therefore needs to extend beyond financial reporting. Since the platform primarily facilitates physical goods rather than monetary donations, relevant transparency information may include:

- what item was donated;
- when it was listed;
- whether the item was verified;
- whether a beneficiary requested it;
- whether the donation was accepted;
- whether delivery occurred;
- whether the transaction was completed.

Thus, XAYRIYA conceptualizes transparency as **process visibility** rather than only financial disclosure.

3. Verification and Accountability

Transparency alone may not be sufficient if users cannot determine whether the information presented is accurate. Verification mechanisms can reduce uncertainty by confirming relevant information about users, organizations, or donation activities. Verification is particularly important in digital philanthropy because fraudulent or misleading information can undermine confidence in the entire platform ecosystem. Research on blockchain-based donation systems has examined whether technological characteristics such as transparency and immutability can increase perceptions of nonprofit trustworthiness (Sung et al., 2023).

XAYRIYA does not necessarily require blockchain technology. Instead, the platform can initially employ simpler and more accessible verification mechanisms, such as:

- account verification;
- partner-organization verification;
- item verification;
- transaction status updates;
- community reporting;
- administrator review.

This approach allows the system to maintain transparency without introducing unnecessary technological complexity.

4. Digital Sharing and the Circular Economy

The concept of a circular economy emphasizes maintaining the value and usefulness of products for as long as possible. Digital platforms can facilitate this process by enabling sharing, reuse, gifting, lending, and redistribution.

Schwan Holz and Leipold (2020) examined 73 German-speaking digital sharing platforms and found that digital sharing practices can be connected to circular-economy principles and sustainability objectives. Their findings demonstrate that digital platforms can serve as mechanisms for organizing alternative forms of consumption and resource use.

XAYRIYA extends this concept by linking **resource reuse with social redistribution**.

Traditional circular-economy platforms may focus primarily on:

Product → Consumer → Reuse

XAYRIYA introduces an additional social dimension:

Unused Product → Digital Platform → Person in Need → Extended Product Life + Social Benefit

This combination creates an opportunity to simultaneously generate environmental and social value.

Conclusion

This study introduced XAYRIYA, a trust-oriented digital platform aimed at promoting clear and community-driven redistribution of surplus physical items. The platform addresses two main issues: the availability of usable resources that often go unused or may lead to waste, and the unfulfilled material needs faced by individuals and families. The proposed model brings together donors, recipients, volunteers, and partner organizations in a digital framework enhanced by

verification processes, standardized donation listings, digital matching, transaction tracking, and measurement of impact.

Existing research highlights that transparency and trust are vital components of digital philanthropy and nonprofit involvement, while digital sharing platforms can aid in achieving circular-economy goals. XAYRIYA leverages these findings by integrating them into a model for the redistribution of physical goods.

The main contribution of the proposed framework is not merely the digitization of charitable efforts. Instead, XAYRIYA aims to establish a clear coordination mechanism that transforms unused resources into social assets. This can be distilled into the following principle: A resource that one individual no longer needs might be essential for another individual. By linking these two parties through technology, trust, and community engagement, XAYRIYA has the capacity to act as both a platform for social innovation and a meaningful contributor to more sustainable resource utilization. Future empirical studies should confirm the proposed framework through the testing of prototypes, user examinations, matching experiments, and long-term measurement of social and environmental impacts.

References

1. Blouin, M. C., Lee, R. L., & Erickson, G. S. (2018). The impact of online financial disclosure and donations in nonprofits. *Journal of Nonprofit & Public Sector Marketing*, 30(3), 251–266. <https://doi.org/10.1080/10495142.2018.1452819>
2. Brooke, J. (1996). SUS: A “quick and dirty” usability scale. In P. W. Jordan, B. Thomas, B. A. Weerdmeester, & I. L. McClelland (Eds.), *Usability evaluation in industry* (pp. 189–194). Taylor & Francis.
3. Dethier, F., Delcourt, C., & Dessart, L. (2024). Donor perceptions of nonprofit organizations’ transparency: Conceptualization and operationalization. *Nonprofit and Voluntary Sector Quarterly*, 53(5), 1230–1260. <https://doi.org/10.1177/08997640231211212>
4. Ghoorah, U., Mariyani-Squire, E., & Amin, S. Z. (2025). Relationships between financial transparency, trust, and performance: An examination of donors’ perceptions. *Humanities and Social Sciences Communications*, 12, 315. <https://doi.org/10.1057/s41599-025-04640-2>
5. Peffers, K., Tuunanen, T., Rothenberger, M. A., & Chatterjee, S. (2007). A design science research methodology for information systems research. *Journal of Management Information Systems*, 24(3), 45–77. <https://doi.org/10.2753/MIS0742-1222240302>
6. Saxton, G. D., Neely, D. G., & Guo, C. (2014). Web disclosure and the market for charitable contributions. *Journal of Accounting and Public Policy*, 33(2), 127–144. <https://doi.org/10.1016/j.jaccpubpol.2013.12.003>
7. Schwanholz, J., & Leipold, S. (2020). Sharing for a circular economy? An analysis of digital sharing platforms’ principles and business models. *Journal of Cleaner Production*, 269, 122327. <https://doi.org/10.1016/j.jclepro.2020.122327>

8. Sisco, M. R., & Weber, E. U. (2019). Examining charitable giving in real-world online donations. *Nature Communications*, 10, 3968. <https://doi.org/10.1038/s41467-019-11852-z>
9. Sung, J., Bock, G.-W., & Kim, H.-M. (2023). Effect of blockchain-based donation system on trustworthiness of NPOs. *Information & Management*, 60(5), 103812. <https://doi.org/10.1016/j.im.2023.103812>
10. Wu, Z., & Dai, Y. (2024). A survey experiment on the impact and mechanisms of nonprofit transparency on donations to charities. *Academy of Management Proceedings*. <https://doi.org/10.5465/AMPROC.2024.12277>