"Global support at the click of a button: How digital remittances help Ukraine during crises"

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GLOBAL SUPPORT AT THE CLICK OF A BUTTON: HOW DIGITAL REMITTANCES HELP UKRAINE DURING CRISES

Abstract

In recent years, Ukraine has faced two major crises: the COVID-19 pandemic and Russia's military invasion of Ukraine. Digitalization allowed the extension of financial inclusiveness for the recipients and building financial resilience through remittances. They became one of the most important sources of survival for vulnerable populations. The aim of the paper is to examine how remittances can help Ukraine during the crises. The main research methods are descriptive statistical analyses to examine remittance trends and patterns. The data were taken from the open sources of the National Bank of Ukraine, Statista, the European Commission, Migration Data Portal, World Bank, and CoinLaw. The results showed that the share of informal remittance channels, although present, tends to decrease compared with the official ones. Poland is the main supplier of money to Ukraine. The average transaction value has also decreased from USD 3,540 in 2017 to USD 1,750 by 2024, which is due to the increase in the number of platforms that allow small transfers. It also pushed the increasing numbers of users of digital remittance platforms from 1,500 in 2019 to 2,700 in 2024. It confirmed that remittances for Ukrainians during crises are one of the sources for survival and potentially for recovery. The study can be useful during the development of different programs of livelihood support and recovery of Ukraine by engaging the Ukrainian diaspora.

Keywords

remittances, fintech, migration, migrants, war refugees, russian war in Ukraine, COVID-19

JEL Classification F24, F35, H84

INTRODUCTION

Over the past five years, Ukraine has faced two significant crises: the COVID-19 pandemic and Russia's invasion of Ukraine. Both events have led to severe disruptions, requiring substantial financial injections to stabilize and support the economy during and after these crises. Remittances from abroad have emerged as a vital financial resource, offering potential support for internal Ukrainian households and the economy in general.

According to the United Nations High Commissioner for Refugees (UNHCR, 2023), there were currently over six million Ukrainian war migrants in 2023, while the number of labor migrants before 2021 was estimated at approximately three million. This migration has created new opportunities and challenges within the remittance market, making it a key area for investigation. Digital remittances have become a crucial financial tool for Ukrainian citizens, particularly during times of COVID-19 and the full-scale invasion of Russia in Ukraine. The poverty rate in Ukraine in 2023 reached 67%, which is a significant increase compared to 39% before the war (Ukrinform, 2023).

Despite the growing significance of remittances, there remains a research gap in understanding their reliability as a financial resource for supporting Ukrainian households during the crises and post-crisis recovery. Additionally, it is unclear how recent crises have influenced the remittance market, particularly in terms of transaction volumes, market players, and changes in the value and frequency of transactions.

As the country navigates its recovery from the impacts of the Russian war, this sector remains a vital financial lifeline, shaping the future of cross-border financial transactions and contributing to Ukraine's broader economic stability. The continued development and integration of digital platforms will ensure that remittances remain a reliable and accessible resource for millions of Ukrainian households.

1. LITERATURE REVIEW

The literature has emphasized the importance of remittances for economic development in different countries. More recent attention has focused on providing households with remittances from their relatives who live abroad. This literature review is focused on remittances as a source of aid for countries in crisis, particularly Ukraine.

The issue of mobile financial services attracts attention of many scholars and policymakers, as they not only reduce household vulnerability in crises but also open opportunities for further economic development through access to international financial flows. Investments in digital infrastructure and increasing access to mobile financial services will contribute to economic revival and growth of social stability (Ahmed, 2000; Chamboko, 2023; Dunayev et al., 2023; Parkhomenko, 2022).

The war has led to a significant decrease in living standards, especially among internally displaced persons and residents of frontline territories (Ahmed, 2000).

At the same time, through mobile technologies, Ukrainians can receive funds even in the most remote areas, which is of great importance for ensuring their basic welfare. On the positive side, scholars note that as of December 2024, four main social payments are already available through the Diia portal, including adoption assistance, aid for children with serious illnesses, persons with disabilities since childhood, and assistance for children of single mothers. According to the Ministry of Social Policy of Ukraine, over 600,000 Ukrainians have used this opportunity. An important feature is the speed of application processing – within 10 days from the submission, and the result is communicated through the personal account on the portal or via email (Burlay, 2024; Dinarte-Diaz et al., 2022; Ministry of Social Policy, 2023; Rodima-Taylor, 2022).

Recently, publications on remittances have placed special emphasis on their significance for economies during the Russian war in Ukraine, as they not only support domestic demand but are also important for economic stability. Digital money transfers allow transactions to be made with minimal expenditure of time and money, which is an important factor in maintaining economic activity (Chunytska & Bohrinovtseva, 2023; Maidanik, 2023). Under conditions of Russia's full-scale invasion of Ukraine, the speed and efficiency of financial transfers are critical for ensuring the functioning of government and humanitarian organizations, as well as for supporting military and civilian personnel (Burton, 2020; Cifuentes-Faura, 2024; Dinarte-Diaz et al., 2022; Nguyen, 2025; Trunina et al., 2023).

The significance of remittances is growing due to their contribution to attracting investments in local community development. Accordingly, most migrants send money that helps support families and cover necessary living expenses. This is a vital aspect of economic support, as such transfers help many families survive in difficult wartime conditions and are often invested in the development of local businesses and education, which contributes to the country's economic recovery (Panchenko et al., 2024; Shkurat et al., 2024; Strielkowski & Sperkova, 2016; Zhuk, 2023).

However, the impact of digital money transfers on real people has not yet been properly studied, which raises certain doubts about the effectiveness of these innovations during wartime. This, in turn, raises questions about transparency and fairness in the use of technology in humanitarian initiatives (Cheesman, 2024; Inoue, 2024; Jusaj et al., 2024).

While sharing arguments about the relevance of this issue, there are still several aspects that specialists draw attention to.

First, this is insufficient coverage of social services for all vulnerable population groups. In Ukraine, despite the implementation of e-services, not all categories of citizens have access to digital platforms, especially in rural areas or among older adults who are not accustomed to using modern technologies. Additionally, some authors point out the need to constantly improve and update systems to prevent abuse and fraud (Burlay, 2024; Chamboko, 2023; Dinarte-Diaz et al., 2022).

Second, researchers emphasize a need for state support regarding migrant adaptation and integration with international platforms (Dunayev et al., 2023; Gerlach & Ukraynets, 2021; Naumenkova et al., 2019). There are certain difficulties related to labor market instability and the need to adapt to changing conditions in national economies. During the pandemic and global economic crises, labor migrants often faced employment problems, which can reduce the volume of transfers. In particular, this happened due to changes in policies regarding migrant workers in their countries of employment. Important issues include adapting migrants to new conditions, developing infrastructure and social services for labor migrants, and creating opportunities for their return to Ukraine after completing work abroad.

Third, Cheesman (2024), Dinarte-Diaz et al. (2022), and Maidanik (2023) demonstrate that the threat of cyberattacks is a major challenge for money transfer systems. Security problems and disruptions in the banking system in occupied territories seriously affect the efficiency of digital money transfers. The problem of access to digital payment systems due to limited Internet access or technological barriers is also described. This reduced transfer volumes and increased dependence on traditional forms of assistance. Therefore, there is a need to improve policies regarding transaction protection and ensuring the security of digital services. Fourth, there is the introduction and development of new transaction tools, such as cryptocurrency remittances. It became an important tool at a time when, due to restrictions imposed by the National Bank of Ukraine on electronic transfers and foreign currency withdrawals, conventional financial channels cannot provide the necessary speed of transfers. It is also interesting how it became an effective mechanism for raising funds and increasing international support (Burlay, 2024; Tucha, 2023; Burton, 2020; Trunina et al., 2023; Sparkes, 2022; Strielkowski & Sperkova, 2016).

For the further development of this area, some publications note the importance of improving the legislative framework that would support the use of cryptocurrencies in such critical conditions, as well as ensuring cooperation between government agencies and financial institutions to prevent abuse. Ukraine, during the war, should develop strategies to combat the use of cryptocurrencies to circumvent sanctions by other states, which may have an impact on global financial stability (Dunayev et al., 2023; Parkhomenko, 2022; Mulska et al., 2023).

Analysis of different research literature shows that remittance transfers play a vital role in economic development in general and in Ukraine in particular during the war. During the war in Ukraine, they are maintaining the financial stability of the population. In the post-war period, their role may become even more significant for economic recovery and household support. Therefore, the purpose of this study is to explore how remittances can support Ukraine in times of crisis.

2. METHODS

The study is based on descriptive statistical analysis as the primary method to examine remittance trends and patterns. Descriptive statistics provided a clear and systematic summary of the data, enabling the identification of key insights regarding remittances to Ukraine. Comparative analysis evaluates remittance volumes across different periods, and trend analysis identifies patterns and projects future developments. The research utilized open-source data from the National Bank of Ukraine (2023), Statista (2024), the European Commission (Directorate-General for Financial Stability, Financial Services and Capital Markets Union, 2022), Migration Data Portal (2024), World Bank (2022), and CoinLaw (Elad, 2024). The data include the indicators of

- online cross-border payments and remittance sending;
- 2. money transfers processed by online-pure players,
- 3. transaction value equals money transfers out of the selected region.

Out of this study are the following indicators:

- 1. payments via social networks;
- 2. domestic payments and bill-splitting services;
- 3. cross-border payments via traditional service providers (banks, post offices, Western Union, and MoneyGram).

The analysis focused on various dimensions of remittance inflows to Ukraine, such as transaction volumes of remittance inflows, geographical origin of remittances, average transaction value and frequency, and dominant market holders within the remittance sector. This approach facilitated a comprehensive understanding of remittance flows, their structure, and their underlying trends.

3. RESULTS AND DISCUSSION

3.1. Transaction volumes

Between 2018 and 2021, Ukraine experienced a steady increase in remittance inflows. In 2018, total remittances amounted to USD 11.11 billion, representing 8.5% of GDP (National Bank of Ukraine, 2023) (Figure 1). By 2021, this figure rose to approximately USD 13 billion. The majority of these funds were transferred through official channels, including banks, international money transfer systems like Western Union and MoneyGram, as well as digital platforms such as Wise and TransferGo (Banki.ua, 2023). These channels ensure higher transparency and security, adhering to regulations and offering the capability to track transactions. On the other hand, a smaller portion of remittances was facilitated through informal channels, such as personal cash deliveries, trusted intermediaries, or unregulated systems like hawala. While these methods often bypass fees and formalities, they present higher risks, including fraud and loss of funds (Minfin, 2024).

The onset of conflict in 2022 led to a decline in remittance volumes. In 2022, total remittances decreased to USD 11 billion, a 15% drop from the previous year. This reduction can be attributed to economic instability and disruptions in traditional remittance channels. However, in 2023, there was a slight recovery, with remittances increasing to USD 11.29 billion, accounting for 6.3% of GDP (Tarasovskyi, 2024). Notably, the volume of domestic transfers doubled compared to pre-war

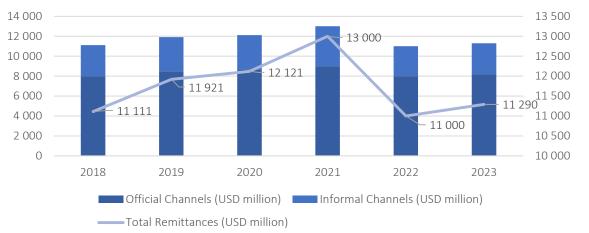




Figure 1. Dynamics of total remittance volumes and distribution by channels (2018–2023)

levels, reaching 728 billion UAH (USD 19.9 billion), indicating a shift toward internal financial support mechanisms (Skilky-Skilky, 2023).

The digital remittances market in Ukraine is expected to grow. In 2024, the transaction value was projected to reach USD 35.38 million, with an anticipated annual growth rate of 7.09%, leading to a total of USD 46.53 million by 2028 (Statista, 2024). The number of users is expected to reach 26,680 by 2028, with an average transaction value per user of USD 1,750 in 2024. This growth is driven by the increased adoption of digital payment solutions and a rising number of migrants utilizing these platforms (World Bank, 2022).

3.2. Geographic trends in remittance flows

Remittance inflows to Ukraine have shown significant growth over the past two decades. In 2021, Ukraine received approximately USD 18.2 billion in remittances, driven largely by transfers from Poland, the primary destination for Ukrainian migrant workers (Directorate-General for Financial Stability, Financial Services and Capital Markets Union, 2022) (Figure 2). This trend underscores the importance of remittances as a stable source of external financing, especially during economic downturns (Migration Data Portal, 2024).

The geographical distribution of remittance inflows to Ukraine has evolved notably over the years. Until 2014, Russia was the primary source of remittances. However, following geopolitical tensions and economic shifts, there has been a significant reorientation toward European Union countries, particularly Poland. By 2023, Poland accounted for 37% of remittances, followed by other EU countries at 34.5% and the USA at 10.7%.

The onset of conflict in Ukraine in 2022 had a profound impact on remittance patterns. Despite the challenges, remittance flows remained resilient, with projections indicating an increase of over 20% in 2022. This resilience can be attributed to the strong ties between migrants and their families, prompting increased support during times of crisis.

Remittance inflows to Ukraine are expected to continue playing a crucial role in the country's economy. Factors such as the ongoing integration with the European Union, the adaptability of the Ukrainian diaspora, and the increasing adoption of digital remittance channels are likely to sustain and potentially enhance these flows. However, future trends will also depend on geopolitical developments and economic conditions both domestically and in host countries.

3.3. Average transaction value and user dynamics

The average transaction value in Ukraine's digital remittances market has shown considerable fluctuations, reflecting shifts in user behavior and economic conditions. Before the war, average transaction values were relatively stable, indicating consistent remittance behavior among users (National Bank of Ukraine, 2023).

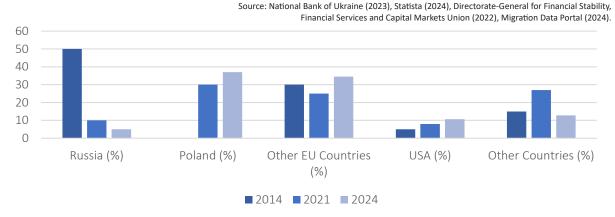


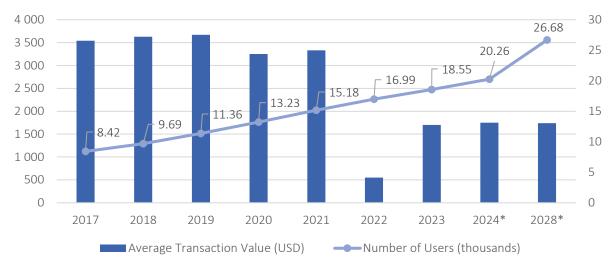
Figure 2. Changing percentage contributions of the top remittance source regions to Ukraine over the years (2014–2024)

- **2017–2021:** The average transaction value gradually decreased from USD 3,540 in 2017 to USD 3,330 in 2021, likely due to the increasing adoption of digital platforms that facilitate smaller and more frequent transfers (Statista, 2024).
- **2022:** The war caused a sharp drop in the average transaction value to USD 550. This can be attributed to reduced disposable incomes among migrants and the prioritization of smaller, urgent transfers to address immediate needs (Statista, 2024).
- 2024–2028 (Projection): Statista projects a recovery, with average transaction values stabilizing around USD 1,750 by 2024 and remaining steady through 2028.

The number of users engaging with digital remittance platforms in Ukraine has been steadily increasing, driven by technological advancements, rising Internet penetration, and the adoption of mobile solutions. User numbers grew from 8,420 in 2017 to 15,180 in 2021, reflecting an annual growth rate of approximately 16% (Figure 3). Despite the conflict, user numbers increased to 16,990 as many turned to digital solutions amidst disruptions in traditional remittance channels. The user base is expected to expand further, reaching 26,680 by 2028 (CAGR: 7.8%) (Statista, 2024). The conflict in Ukraine has had a profound impact on the dynamics of digital remittances, reshaping both transaction values and user behavior. Prior to the war, the market exhibited steady growth, driven by consistent migration patterns, increasing adoption of digital platforms, and stable economic conditions. However, the outbreak of war in 2022 disrupted these trends, introducing unprecedented challenges and shifts.

The average transaction value experienced a dramatic decline in 2022, falling from USD 3,330 in 2021 to just USD 550. This sharp reduction reflected the immediate economic pressures faced by migrants, many of whom prioritized smaller, urgent transfers to support their families in Ukraine. Economic instability and uncertainties surrounding income streams further limited the capacity for larger remittance flows. As digital platforms became more accessible and cost-effective than traditional channels, users increasingly turned to these solutions for convenience and lower fees. This shift was further fueled by the closure or disruption of conventional banking infrastructure in conflict zones, which made traditional remittance methods less reliable.

Despite these challenges, the number of digital remittance users continued to grow, even amidst the crisis. By 2022, the user base expanded to 16,990, compared to 15,180 in 2021. This growth was driven by the need for quick and secure ways to



Source: Statista (2024).

Figure 3. Trends in average transaction value and user numbers (2017–2028)

Note: * Projected values.

transfer money during a period of heightened uncertainty. Digital platforms such as Wise, Remitly, and Xoom played a crucial role in accommodating this demand, offering innovative and accessible services to a growing user base.

The market for digital remittances in Ukraine is poised for recovery. Projections indicate a gradual stabilization of transaction values, with an expected average of USD 1,750 per user by 2024 and a consistent user growth trajectory reaching 26,680 by 2028. This recovery will likely be supported by improving economic conditions, a resurgence in employment opportunities for migrants, and the continued penetration of smartphones and Internet connectivity. The war has undeniably altered the structure of the digital remittance market, emphasizing the resilience and adaptability of both users and providers in the face of adversity.

3.4. Market share of key players

The digital remittance market in Ukraine has undergone significant shifts over the past few years, reflecting broader changes in global financial trends and the specific impacts of the ongoing war. The market is shaped by a handful of key players, each competing for dominance in an evolving landscape characterized by increased digitization and a growing migrant population. Understanding the distribution of market share among these players is crucial for assessing how digital remittance platforms are responding to the changing needs of Ukrainian users.

Before the war, the market for digital remittances in Ukraine was steadily growing, with a clear trend toward greater reliance on innovative financial solutions. Major players like Wise, TransferGo, and Revolut steadily expanded their services, offering lower fees, faster transaction times, and greater accessibility compared to traditional remittance methods such as banks or cash-based systems like Western Union (Figure 4). By 2021, Wise held a substantial 28% of the market share in Ukraine, followed by TransferGo at 34% and Revolut at 16%. Smaller providers accounted for the remaining 22%, reflecting a fragmented but competitive market (Statista, 2024).

The war has dramatically reshaped this competitive landscape. In 2022, as millions of Ukrainians fled to neighboring countries, the demand for crossborder remittance services surged. TransferGo and Wise experienced significant increases in their transaction volumes, as these platforms allowed for quick, secure, and affordable transfers when traditional banking systems struggled with operational disruptions. TransferGo solidified its leadership position, maintaining its 34% market share, while Wise expanded its presence by enhancing its mobile app and reducing fees for Ukraine-related transactions (Directorate-General

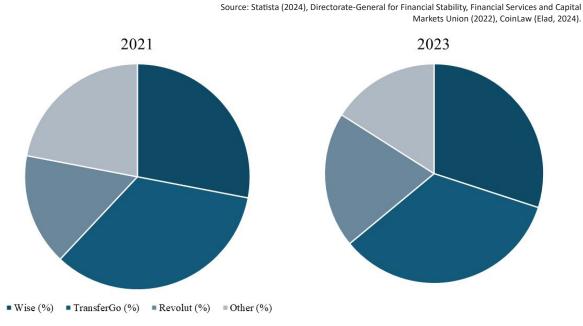


Figure 4. Market share distribution of key players (2021 vs. 2023)

for Financial Stability, Financial Services and Capital Markets Union, 2022).

The war also accelerated the adoption of smaller but innovative players, particularly those leveraging blockchain technology for transparent and low-cost remittances. However, these platforms remain niche compared to established providers. Revolut, for instance, capitalized on its existing user base in Europe, increasing its market share from 16% in 2021 to approximately 20% in 2023. This growth was fueled by the platform's ability to integrate multi-currency accounts and offer fee-free transfers for users sending funds to Ukraine during the height of the conflict (Elad, 2024).

Projections suggest that the competitive landscape will continue to evolve over the next five years. By 2028, Wise and TransferGo are expected to retain their strong positions, driven by continuous technological innovation and a growing focus on user experience. However, emerging players in the blockchain space may disrupt the market by offering even lower fees and enhanced security. It is anticipated that the Herfindahl-Hirschman Index (HHI), a measure of market concentration, will rise slightly, indicating further consolidation among top players.

The shifting market shares reflect broader trends in user preferences and technological advancements. Ukrainian migrants have clearly preferred platforms that combine convenience, speed, and affordability. As the market matures, these factors will likely drive further innovation and competition among the key players, ensuring that digital remittance platforms remain a vital financial lifeline for millions of Ukrainian families.

This detailed examination of market dynamics highlights the resilience and adaptability of the digital remittance sector during times of profound disruption. Major providers are poised to shape the future of remittance services in Ukraine and beyond by focusing on data-driven strategies and customer-centric innovations.

3.5. Projections and future trends

Projections for digital remittances in Ukraine indicate a period of recovery and growth after the significant disruptions caused by the war. According to Statista (2024), the transaction value in the digital remittances market is projected to reach USD 35.38 million in 2024, marking a notable rebound from the sharp decline to USD 9.43 million in 2022. The expected compound annual growth rate (CAGR) of 7.09% between 2024 and 2028 suggests sustained expansion, with the market projected to reach USD 46.53 million by 2028. This growth trajectory highlights the increasing adoption of digital channels as a primary medium for cross-border money transfers (Statista, 2024).

The number of users in the digital remittances market is anticipated to grow steadily, aligning with broader trends in financial digitalization. In 2023, there were approximately 18,550 users, a figure expected to rise to 20,260 by 2024 and reach 26,680 thousand by 2028. This expansion is supported by the increasing penetration of smartphones and Internet access in Ukraine, which provide the technological infrastructure necessary for digital financial transactions. Additionally, mobile wallets and online platforms have gained significant traction, particularly during the war, as they offer secure, fast, and cost-effective alternatives to traditional methods (Migration Data Portal, 2024).

The average transaction value per user, a critical indicator of financial behavior, is also forecasted to recover after a sharp decline during the conflict. In 2021, the average transaction value stood at USD 3,330, but this figure dropped to USD 550 in 2022 due to economic instability and the prioritization of smaller, essential transfers. By 2024, this metric is expected to stabilize at around USD 1,750 per user, indicating a gradual return to pre-war financial norms as the economy recovers and user confidence in digital platforms grows (Elad, 2024).

From a technological perspective, advancements such as blockchain integration and AI-driven solutions are expected to play a pivotal role in shaping the market. These innovations promise to enhance transaction efficiency and security, reduce operational costs, and enable real-time transaction tracking. Such developments are likely to attract new users and increase the volume of digital remittances in the coming years. Geopolitical factors also influence the projections for digital remittances. The Ukrainian diaspora, particularly in Europe, remains a vital source of inflows. As more migrants adopt digital platforms for their convenience and reliability, these channels are poised to capture a larger share of the remittance market. Additionally, ongoing regulatory efforts to promote digital payments and financial inclusion in Ukraine are expected to support the sustained growth of this sector, ensuring that digital remittances remain a crucial component of the country's economic framework.

In summary, the digital remittances market in Ukraine is set to recover and expand, driven by technological advancements, user adoption, and a supportive regulatory environment. The projected growth in transaction values, user numbers, and average transaction sizes underscores the sector's resilience and increasing importance in facilitating financial flows during and after economic instability.

CONCLUSION

Remittances can be an effective external monetary source for migrants' home countries. The goal of this study is to assess how remittances can assist Ukraine in navigating crises.

The analysis of digital remittances in Ukraine reveals a dynamic and evolving market significantly influenced by pandemic and war factors. The data highlight a consistent growth trajectory in the years preceding the war, with remittances playing a crucial role in supporting household incomes and contributing to the country's foreign currency reserves. The outbreak of war in 2022 disrupted traditional remittance patterns, leading to a sharp decline in transaction volumes and a shift toward smaller, more frequent transfers. Despite these challenges, the digital remittance market demonstrated remarkable resilience, driven by the adaptability of the Ukrainian diaspora and the increasing adoption of digital platforms.

The war catalyzed the accelerated adoption of digital solutions, with platforms such as Wise, TransferGo, and Revolut capitalizing on their ability to provide secure and cost-effective alternatives to traditional methods. As a result, digital remittance channels have grown in importance, enabling rapid transfers during times of crisis. The market's recovery trajectory is evident in the projections for 2024 and beyond, with transaction values expected to rebound and grow steadily, supported by technological advancements, regulatory support, and a rising user base.

The digital remittance sector is poised to play an even greater role in Ukraine's economic recovery and development. The ongoing integration with European financial systems, coupled with innovations in blockchain and artificial intelligence, is likely to further enhance the efficiency and security of digital remittance services. Additionally, the strong ties between Ukrainian migrants and their families at home will continue to drive remittance flows, ensuring financial support during economic uncertainty.

AUTHOR CONTRIBUTIONS

Conceptualization: Yevheniia Polishchuk. Data curation: Yana Valko. Formal analysis: Yana Valko, Olena Shuplat, Yurii Vasylyshen. Investigation: Yevheniia Polishchuk, Yana Valko, Olena Shuplat. Methodology: Yevheniia Polishchuk, Yurii Vasylyshen. Project administration: Yevheniia Polishchuk. Resources: Olena Shuplat, Yurii Vasylyshen. Supervision: Yevheniia Polishchuk. Validation: Yana Valko. Visualization: Yana Valko. Writing – original draft: Yana Valko, Olena Shuplat, Yurii Vasylyshen. Writing – review & editing: Yevheniia Polishchuk.

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