



# Digital Poverty and The Role and the Role of Technology in Promoting Economic Inclusion

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## Abstract

Digital poverty continues to pose a major interference to economic inclusion in the developing nations, restricting access to vital services, information, and opportunities that could enhance livelihoods. This article investigates the complex characteristics of digital poverty and assesses how technological solutions can encourage increased economic participation among disadvantaged groups. Through the examination of case studies from diverse regions, the research underscores the transformative capabilities of mobile technologies, internet access, and digital financial services in narrowing socio-economic gaps. It considers the influence of governmental policies, innovations from the private sector, and global initiatives in addressing shortcomings in infrastructure and improving digital literacy. The article highlights that tackling digital poverty necessitates a holistic strategy that integrates infrastructure enhancement, affordable access, and training in digital skills. Additionally, it assesses the effects of inclusive digital strategies on income creation, job opportunities, and social advancement, showing that technology can serve as a significant instrument for economic empowerment when implemented fairly. In conclusion, the article calls for cohesive policies and investments focused on bridging the digital divide, supporting sustainable development, and advancing economic inclusion for everyone.

**Keywords:** Digital Poverty; Developing Countries; Digital Literacy; Economic Inclusion; Technology

## 1. Introduction

In a progressively digitalized society, access to technology and digital resources has emerged as a critical factor influencing economic and social inclusion. Digital poverty, characterized by insufficient access to digital technologies, services, and the requisite skills for their effective utilization, remains a considerable obstacle to economic advancement and social equity, especially in developing areas such as the Western Balkans (Kovac et al., 2024). As global societies experience accelerated digital transformation, individuals lacking sufficient digital access are in danger of being marginalized by the so-called "digital divide," a multifaceted disparity that includes not only physical access to technology but also the competencies necessary to utilize it effectively (Ali & Faroque, 2023).

The Western Balkans (WB) region, as a developing economy and neighborhood country, includes Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and

Serbia. The region offers a particularly significant case study for investigating digital poverty and its consequences (Kacani & Shaqiri,2024). Notwithstanding advancements in European integration processes and economic growth, the region still encounters considerable challenges in digital infrastructure, skills enhancement, and the fair allocation of digital resources (World Bank, 2025). These challenges carry significant implications for economic inclusion, educational access, and social mobility throughout the region. The current study examines the intricate attributes of digital poverty in the Western Balkans and evaluates the potential of technological interventions, specifically digital financial services, to foster enhanced economic engagement among marginalized populations. Particular emphasis is placed on the education sector, which functions as both an essential avenue for cultivating digital skills and a domain capable of undergoing transformation through digital technologies to improve learning outcomes and foster economic prospects. The significance of this study resides in its focus on a region that is at a pivotal stage in its digital advancement. As Western Balkan nations are on their way for European Union integration and economic advancement, therefore, tackling digital poverty is imperative to guarantee that these efforts result in inclusive growth instead of exacerbating existing socioeconomic inequalities. Moreover, the COVID-19 pandemic has expedited digitalization processes globally while concurrently revealing and amplifying digital inequalities, rendering this research especially timely and accurately (Ciccone et al., 2023). In the present paper, the qualitative approach focusing on evidence-based, analytical, literature review and desk research for the selected WB countries will be used. The paper is organized as follows: Initially, a theoretical framework is developed to define digital poverty and its connection to economic inclusion. Subsequently, a thorough review of existing literature assesses contemporary research on digital poverty, digital financial services, and educational technology within developing regions, emphasizing the Western Balkans. The paper subsequently offers a regional assessment of the digital landscape in the Western Balkans, followed by comprehensive investigations into digital financial services, policy strategies for digital inclusion, and the digital transformation of the education sector in the area. Case studies from several Western Balkan nations exemplify both successful initiatives and ongoing challenges. The paper culminates in an examination of results, policy suggestions, and avenues for subsequent research. Through the analysis of the interplay among digital poverty, financial services, and education in the Western Balkans, this paper seeks to enhance both academic comprehension and pragmatic policy strategies for utilizing technology to advance economic inclusion in the region and elsewhere.

## **2. Theoretical Framework**

### **2.1 Conceptualizing Digital Poverty**

Understanding digital poverty and its consequences for economic inclusion necessitates a comprehensive theoretical framework that situates the multifaceted nature of digital exclusion within its broader context. Digital poverty transcends a simple lack of access to technology; it involves an intricate interaction of accessibility, skills, motivation, and usage behaviors (Jin & Deng,2024;Aissaoui, 2022). The notion has developed from initial dichotomous perceptions of "haves" and "have-nots" to a more complex comprehension of digital exclusion as manifesting across various dimensions and levels. Van Dijk's (2020) resources and appropriation theory offers a significant framework for comprehending digital poverty, delineating four sequential categories of access: motivational, physical, skills, and usage. This model is especially pertinent to the context of the Western Balkans, where disparities exist not only in physical infrastructure but also in digital literacy and significant usage patterns. The capability approach, initially introduced by Sen (1999) and subsequently elaborated by Nussbaum (2011) and Alkire (2022), presents an additional significant theoretical perspective for analyzing digital poverty. This approach underscores that access to

resources, including digital technologies, is significant primarily to the extent that it improves individuals' capabilities to attain valued functionings. In the context of digital inclusion, this framework indicates that the mere provision of technological infrastructure is inadequate; policies must additionally tackle the conversion factors that allow individuals to translate digital access into improved capabilities and freedoms. In the Western Balkans, where historical, cultural, and institutional elements markedly shape the adoption and utilization of technologies, the capability approach offers a sophisticated framework for comprehending the interplay between digital access and economic inclusion.

## **2.2 Network Society Theory and Digital Transformation**

Castells' (2010) network society theory offers a macro-level framework for comprehending the ways in which digital technologies transform social and economic configurations. According to this theory, modern societies are progressively structured around networks rather than hierarchical frameworks, with information flows emerging as pivotal to economic and social influence. This transformation carries significant implications for regions such as the Western Balkans, where integration into global digital networks offers opportunities for economic advancement while simultaneously posing risks of new types of exclusion. The perspective of the network society is especially pertinent when analyzing the role of the Western Balkans within the digital landscape of Europe. As these nations advance towards European integration, their capacity to engage in transnational digital networks assumes growing significance for economic competitiveness and social cohesion. Nevertheless, as Bellanova et al. (2022) observe, issues of digital sovereignty and autonomy also emerge, resulting in tensions between the adoption of European digital frameworks and the advancement of locally tailored digital ecosystems.

## **2.3 Socio-Economic Theories of Digital Divide**

The digital literature has increasingly recognized the relationship between digital exclusion and broader socio-economic inequalities. Theories of social stratification and cumulative advantage help explain how existing inequalities in education, income, and social capital translate into digital inequalities, which in turn reinforce socio-economic disparities (Cilan et al., 2009). This "*Matthew effect*" in digital inclusion is evident in the Western Balkans region, where urban-rural divides, educational disparities, and income inequalities strongly correlate with patterns of digital access and usage (Antonijević et al., 2023). The concept of digital capital, building on Bourdieu's forms of capital, provides a framework for understanding how digital skills, access, and usage patterns function as resources that individuals can leverage for social and economic advancement. In the Western Balkans context, where economic transition has created new patterns of social stratification, the uneven distribution of digital capital risks exacerbating existing inequalities while potentially offering new pathways for social mobility.

## **2.4 Theoretical Perspectives on Digital Financial Services**

The conceptual framework for digital financial services is informed by the literature on financial inclusion, which underscores the critical role of access to suitable financial services for economic advancement and poverty alleviation. The "*finance-growth nexus*" theory suggests that financial development enhances economic growth through improved resource allocation, enhanced risk management, and decreased transaction costs (Bouwman et al., 2019). Digital financial services improve this relationship by utilizing technology to mitigate conventional obstacles to financial inclusion, including geographic isolation and elevated transaction costs. In the Western Balkans, where remittances are vital to numerous economies, digital financial services present a notable opportunity for improving financial

inclusion and fostering economic resilience. Theoretical frameworks that explore the interrelation among remittances, financial development, and economic growth are thus particularly significant for comprehending the prospective influence of digital financial services in the region (World Bank, 2024).

## **2.4 Educational Technology and Human Capital Development**

Theories of human capital development provide a framework for understanding the role of education in economic inclusion. In the digital economy, human capital increasingly encompasses digital skills and competencies, making educational technology a critical component of economic development strategies. The technology acceptance model (TAM) and its extensions help explain factors influencing the adoption of educational technologies by teachers and students, while theories of technology-enhanced learning provide frameworks for understanding how digital tools can transform educational processes and outcomes.

In the Western Balkans context, where education systems face challenges of quality, equity, and relevance to labor market needs, these theoretical perspectives help illuminate both the potential and limitations of digital transformation in education. The World Bank's (2025) Education Digital Readiness Assessment for Kosovo, for example, applies these frameworks to identify barriers and opportunities for digital transformation in the country's education system.

## **2.5 Current State of Digital Poverty in Developing Regions**

Research on digital poverty has transitioned from initial investigations centered mainly on physical access to technology to more complex analyses of the various dimensions of digital exclusion. Aissaoui (2022) provides an extensive examination of the literature on the digital divide, emphasizing the transition from binary conceptualizations to multidimensional frameworks that encompass access, skills, usage patterns, and outcomes. This evolution is especially significant to developing regions, where advancements in infrastructure have not consistently resulted in more digital inclusion. Within the European framework, comparative research has underscored the ongoing digital disparities between Western European nations and developing areas, such as the Western Balkans. Kovac et al. (2024) performed a bibliometric analysis of digitalization research across Europe, revealing considerable variations in research priorities between EU member states and Western Balkan countries. While research pertaining to the EU emphasizes digital technologies, economic development, and sustainability, studies focusing on the Western Balkans more often highlight the impacts of COVID-19 and digitalization within the educational and business sectors, thereby illustrating varying stages of digital advancement and divergent regional priorities. The OECD's Western Balkans Competitiveness Outlook 2024 offers an extensive evaluation of digital advancement throughout the region, highlighting that despite considerable advancements in broadening internet access and improving electronic services, significant challenges persist in areas such as digital infrastructure, skills enhancement, and regulatory frameworks (OECD, 2024). These observations are consistent with wider research on digital disparities in transitioning economies, which underscores the critical role of institutional factors in conjunction with technological progress (Cilan et al., 2009).

### **3. Qualitative Results**

#### **a. Comparative Analysis of Digital Readiness Across the Region**

Digital readiness, which includes infrastructure, regulatory frameworks, institutional capacity, and human capital, differs considerably among the Western Balkan nations. The European Commission's Digital Economy and Society Index (DESI) methodology, modified for Western Balkan nations, indicates that while all countries in the region have advanced, they typically trail behind EU averages in essential indicators of digital development. Serbia and Montenegro consistently attain the highest scores on digital readiness assessments within the Western Balkan region, attributed to their comparatively robust institutional frameworks and prior investments in digital infrastructure. Albania and North Macedonia occupy intermediate positions, whereas Bosnia and Herzegovina frequently encounters more significant challenges as a result of its intricate governance framework and more constrained resources allocated to digital investment. Kosovo, notwithstanding considerable advancements in recent years, still faces essential infrastructure and regulatory issues. The World Bank's Digital Economy for the Western Balkans (DE4WB) program has emphasized that digital preparedness in the region is impeded not solely by infrastructure deficits but also by regulatory obstacles, insufficient digital skills, and difficulties in the implementation of digital governance. These results emphasize the complex and multifaceted characteristics of digital readiness, highlighting the necessity for integrated strategies in the domain of digital development.

#### ***Demographic and Geographic Factors Affecting Digital Access***

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#### ***Economic Indicators and Digital Economy Development***

The evolution of digital economies in the Western Balkans shows significant potential for growth; however, it is still in its nascent phase relative to more developed European economies. Digital sectors represent a growing proportion of GDP throughout the region; however, this contribution has considerable variation by country. Serbia has established itself as a regional leader in digital exports, especially in the domains of software development and IT services, whereas other nations are at more nascent stages of digital economy development. The adoption of e-commerce has intensified throughout the region, especially

in the aftermath of the COVID-19 pandemic; however, substantial obstacles persist regarding digital payment infrastructure, logistics, and consumer confidence. Digital entrepreneurial ecosystems are advancing in prominent urban centers, with Belgrade, Tirana, and Prishtina emerging as significant hubs for technology startups and digital innovation. The relation between digitalization and economic growth in the Western Balkans is consistent with extensive research indicating the beneficial economic effects of digital transformation. Brodny and Tutak (2022) discovered a significant association between the digitalization of small and medium-sized enterprises and economic growth across European nations, implying a similar potential in the Western Balkans. Nevertheless, the fulfillment of this potential necessitates the resolution of particular challenges encountered by digital SMEs in the region, such as access to funding, regulatory impediments, and skill deficiencies. The transformations of the labor market influenced by digitalization offer both opportunities and challenges for economic inclusion in the Western Balkans. Digital competencies are becoming increasingly esteemed in regional labor markets, thereby generating new employment prospects for individuals proficient in digital skills. Concurrently, the advent of automation and digital disruption presents challenges for employees in conventional sectors, especially those lacking adequate digital skills. This dynamic highlights the significance of educational and training systems that provide workers with pertinent digital competencies for the transforming labor market.

### ***Mobile Banking and Fintech Developments***

Mobile banking has experienced notably robust growth in the Western Balkans, mirroring global trends toward prioritizing mobile-first financial services. The extensive adoption of mobile phones in the region, even in areas with restricted fixed broadband access, renders mobile platforms particularly advantageous for enhancing financial inclusion. Prominent banks throughout the region have made substantial investments in the development of mobile banking applications, progressively broadening their functionality from fundamental account information to inclusive financial management tools.

Advancements in financial technology, although currently in a nascent phase compared to more developed markets, indicate significant growth potential in the Western Balkans. Payment solutions, such as mobile wallets and digital payment platforms, constitute the most advanced segment of fintech in the region. These solutions tackle critical challenges within regional financial systems, such as the elevated cost and intricacy associated with conventional payment methods, especially for cross-border transactions that are prevalent in the region owing to its substantial emigration rates and remittance flows.

The World Bank's (2024) analysis of Albania's remittance ecosystem underscores the significant potential of digital financial services in a region where remittances are crucial for numerous economies. In Albania, where 23% of households rely on remittances that comprise approximately 18% of their aggregate income, the utilization of digital channels for remittance transfers provides notable advantages regarding cost efficiency, convenience, and security. Analogous trends are evident across other Western Balkan nations characterized by significant diaspora populations, thereby highlighting the critical importance of remittance digitalization within the advancement of digital financial services in the region.

### ***Regulatory Frameworks and Challenges***

Regulatory frameworks governing digital financial services in the Western Balkans are undergoing evolution, as policymakers endeavor to reconcile innovation with the objectives of consumer protection and financial stability. The accession processes to the European Union in the region have significantly impacted regulatory developments, as countries are

progressively aligning their financial regulations with EU frameworks, such as the Payment Services Directive (PSD2) and the General Data Protection Regulation (GDPR). Kosovo's proposed legislation on payment services, formulated with assistance from the International Finance Corporation (IFC) and the Swiss Secretariat for Economic Affairs (SECO), illustrates this regulatory development. As highlighted by Kosovo's Central Bank Governor Ahmet Ismaili, this regulatory evolution represents "a considerable advancement in our strategic plan and goals aimed at augmenting digitalization, enhancing market infrastructure, broadening access to finance, and fostering financial literacy" (IFC, 2024). The initiative seeks to establish a more conducive regulatory framework, facilitating financial market participants in Kosovo to develop innovative products and services to address the requirements of individuals and enterprises.

Regulatory challenges continue to exist, especially in terms of harmonizing strategies across the region and tackling emerging risks linked to digital financial services. These challenges encompass the provision of sufficient consumer protection in digital environments, the mitigation of cybersecurity risks, the avoidance of digital financial exclusion for marginalized groups, and the resolution of possible financial stability effects arising from emerging financial technologies.

### **b. Case Studies of Successful Digital Financial Initiatives**

Various innovative digital financial initiatives in the Western Balkans illustrate the capacity of technology to improve financial inclusion. The collaboration between the Kosovo Banking Association and the International Finance Corporation (IFC), announced in November 2024, seeks to promote digital transformation and financial inclusion by modernizing Kosovo's financial sector, broadening access to credit, and delivering secure, efficient financial services designed to meet the requirements of the populace (Kosovo Banking Association, 2024). Albania's initiatives to reform its remittance environment offer another valuable case study. The World Bank's (2024) assessment underscores the evolution of digital platforms for remittance transfers aimed at minimizing expenses, improving transparency, and maximizing the developmental effects of remittance flows. These initiatives acknowledge the essential function of remittances in Albania's economy and endeavor to utilize digital technologies to enhance their beneficial influence on economic development and social inclusion.

Mobile money initiatives aimed at serving underserved populations have also arisen throughout the region, frequently via collaborations between telecommunications companies and financial institutions. These initiatives generally provide essential financial services, such as payments, transfers, and occasionally savings products, via mobile platforms that are accessible even on feature phones. Such strategies are especially beneficial for engaging rural communities and individuals lacking access to conventional banking infrastructure.

#### ***Impact on Financial Inclusion Metrics***

The influence of digital financial services on financial inclusion in the Western Balkans indicates favorable trends; however, considerable challenges persist. Account ownership, a critical measure of financial inclusion, has risen throughout the region, influenced in part by the growth of digital financial services that diminish obstacles to account establishment and utilization. Nevertheless, inequalities in account ownership continue to exist across geographic, demographic, and socio-economic dimensions, illustrating wider trends of digital exclusion. The utilization of digital payment services has increased significantly, especially in urban environments and among younger demographics. This expansion intensified during the COVID-19 pandemic, which required remote financial transactions and promoted the utilization of digital payment techniques. Nevertheless, cash continues to prevail as the

primary means of exchange for numerous transactions, especially in rural regions and informal economic endeavors, which hold considerable importance in several Western Balkan economies. The accessibility of credit via digital channels demonstrates more constrained advancement; however, initiatives such as the partnership between the Kosovo Banking Association and the IFC seek to enhance digital credit access. Digital lending models that utilize alternative data for creditworthiness evaluation hold significant promise in a region characterized by a prevalence of individuals and small enterprises that lack conventional credit histories yet produce substantial digital footprints via mobile and internet engagement. Financial literacy serves as a crucial prerequisite for the effective utilization of digital financial services; however, it continues to pose a significant challenge throughout the region. As highlighted in a recent investigation into financial literacy in the Western Balkans, "Although the Western Balkans region has traditionally encountered challenges in financial literacy, there is an increasing recognition among policymakers of the significance of financial literacy for economic development" (MDPI, 2024). Specifically, digital financial literacy—the requisite knowledge and skills for the effective and secure utilization of digital financial services—constitutes a notable gap that requires attention to ensure that digital financial inclusion results in tangible economic advantages. The advancement of digital financial services in the Western Balkans illustrates considerable progress alongside ongoing challenges. Although innovative efforts are broadening access to digital financial services throughout the region, guaranteeing that these services extend to the most marginalized populations and foster significant economic inclusion necessitates ongoing focus on infrastructure enhancement, regulatory structures, consumer safeguards, and digital literacy. The experiences of nations such as Kosovo and Albania provide significant insights for the wider region, underscoring the necessity of integrated strategies that tackle both the technological and human aspects of digital financial inclusion. Policy Approaches to Digital Inclusion Policy strategies for digital inclusion in the Western Balkans illustrate the intricate interaction of national objectives, regional collaboration, and processes of European integration. This section investigates the development and efficacy of digital inclusion policies throughout the region, emphasizing both shared trends and nation-specific strategies.

### ***National Digital Strategies Analysis***

Each country in the Western Balkans has formulated national digital strategies that delineate priorities and methodologies for advancing digital development. These strategies generally include infrastructure advancement, enhancement of digital competencies, provision of e-government services, strengthening cybersecurity, and fostering support for digital innovation. Although exhibiting shared components, these strategies additionally demonstrate unique national contexts and priorities. Kosovo's digital strategy, for instance, underscores the importance of digital financial services and e-government as drivers for enhanced digital inclusion. This integrated approach acknowledges the interrelationships among financial inclusion, digital literacy, and comprehensive economic development. Albania's digital agenda also highlights financial inclusion in conjunction with education and the provision of public services, focusing specifically on utilizing digital technologies to maximize the developmental effects of remittances. The World Bank's 2024 assessment of Albania's remittance environment emphasizes the growing acknowledgment of remittances beyond simple income augmentation, perceiving them instead as potential drivers of enhanced financial inclusion and economic advancement when facilitated by suitable digital infrastructure and regulatory structures. Throughout the region, national digital strategies have developed from predominantly infrastructure-centric approaches to more holistic frameworks that encompass the various dimensions of digital inclusion. This evolution signifies an increasing acknowledgment that tackling digital poverty necessitates

consideration not only of physical access but also of skills development, content relevance, affordability, and conducive regulatory frameworks.

### ***EU Integration Influence on Digital Policies***

The digital policies and integration mechanisms of the European Union have had a substantial impact on strategies for digital inclusion in the Western Balkans. As countries aspiring to EU membership, Western Balkan countries are progressively harmonizing their digital policies with EU frameworks, such as the Digital Single Market strategy, the European Electronic Communications Code, and the General Data Protection Regulation. The European Union's Economic and Investment Plan for the Western Balkans (EIP) encompasses significant digital elements, facilitating infrastructure development, regulatory alignment, and skills enhancement throughout the region. As outlined in the Western Balkans Investment Framework's (2024) summary of key investments, these EU-backed initiatives seek to promote sustained economic recovery and encourage sustainable development through digital transformation. The Digital Agenda for the Western Balkans, initiated by the European Commission in 2018, offers a structural framework for aiding the region's transformation towards a digital economy and enhancing alignment with European Union digital standards. This agenda includes investments in broadband connectivity, the cultivation of digital skills, the improvement of cybersecurity measures, the digitalization of industries, and the fortification of digital public services.

Although the processes of EU integration have generally exerted a favorable impact on digital inclusion policies in the Western Balkans, difficulties persist in the adaptation of European frameworks to local circumstances. As highlighted by Bellanova et al. (2022), the issues of digital sovereignty and autonomy generate tensions between the incorporation of European digital frameworks and the advancement of locally tailored digital ecosystems. Effective policy strategies necessitate a reconciliation between alignment with EU standards and the demand for context-specific solutions that tackle the unique challenges encountered by Western Balkan nations.

### ***Public-Private Partnerships for Digital Infrastructure***

Public-private partnerships (PPPs) have become significant instruments for the advancement of digital infrastructure throughout the Western Balkans. These collaborations utilize the expertise and investments of the private sector in conjunction with public resources and regulatory oversight to expedite the deployment of digital infrastructure, especially in regions where purely market-driven strategies may fail to provide sufficient coverage. The collaboration between the IFC and the Central Bank of Kosovo illustrates this methodology, integrating public sector regulatory functions with private sector investment and knowledge. As articulated by Nicolas Marquier, IFC Regional Manager for the Western Balkans, "Through the utilization of our international expertise, IFC is dedicated to assisting the Central Bank of Kosovo in the development of a vibrant and competitive financial sector capable of fostering inclusive growth" (IFC, 2024). This initiative is anticipated to mobilize \$45 million in funding from IFC and various private investors for banking institutions, microfinance organizations, and financial technology companies throughout the region. Comparable collaborations have facilitated the advancement of broadband infrastructure throughout the region, frequently aided by contributions from international financial institutions and the European Union. These initiatives generally emphasize the expansion of connectivity to underserved regions, such as rural communities and economically disadvantaged areas, where incentives for commercial investment are constrained.

Public-Private Partnerships (PPPs) provide essential mechanisms for enhancing the development of digital infrastructure; however, their efficacy relies on proper risk distribution, transparent governance, and congruence with wider digital inclusion goals. The policy frameworks governing digital PPPs in the Western Balkans are in a state of continuous evolution, with an increasing focus on ensuring that infrastructure investments foster genuine digital inclusion rather than simply broadening nominal coverage.

### ***Digital Readiness in Western Balkans Education Systems***

Digital readiness especially in educational systems throughout the Western Balkans exhibits significant variation, mirroring wider trends of digital development in the region. The World Bank's (2025) Education Digital Readiness Assessment for Kosovo offers significant insights into the challenges and opportunities encountered by education systems in the area. This report seeks to delineate challenges, requirements, and prospective opportunities for Kosovo to undergo a digital transformation of its basic education system to enhance efficiency and elevate student performance in fundamental competencies, including digital skills. The evaluation indicates that although substantial advancements have been achieved in establishing digital infrastructure for educational institutions, challenges persist in guaranteeing reliable connectivity, especially in rural regions. The report organizes its analysis by initially presenting a concise introduction, followed by an in-depth examination of the critical educational context, encompassing recent reforms and student learning outcomes. This holistic perspective acknowledges that the digital transformation of education should be interpreted within wider educational frameworks and reform initiatives. Comparative evaluations throughout the region suggest prevalent challenges in digital preparedness, encompassing infrastructure deficits, device accessibility, educator digital skills, and the incorporation of digital competencies into curricula. Urban educational institutions generally exhibit greater digital preparedness compared to rural establishments, highlighting the more extensive geographic digital disparities. This disparity carries substantial implications for educational equity and economic inclusion, as students attending schools with lower digital readiness may face disadvantages in acquiring the digital skills that are increasingly prized in labor markets.

### ***Digital Literacy Programs and Curriculum Integration***

Initiatives in digital literacy programs and curriculum integration throughout the Western Balkans signify an increasing acknowledgment of the significance of digital skills for economic engagement and continuous education. National curricula are increasingly integrating digital competencies; however, the methodologies range from independent ICT subjects to holistic cross-curricular strategies. The International Association for the Evaluation of Educational Achievement's (IEA, 2025) global perspective on digital literacy offers a framework for comprehending the utilization of computer technologies in diverse facets of everyday life, including educational institutions. This study underscores that successful digital literacy education should include not only technical competencies but also critical thinking, information literacy, and ethical digital citizenship. In the Western Balkans, initiatives for curriculum reform are increasingly acknowledging this expanded notion of digital literacy. Kosovo's curriculum framework, for instance, identifies digital competence as one of seven essential competencies to be cultivated across various subject domains. Similar strategies are apparent in various Western Balkan nations; however, challenges in implementation persist, especially regarding assessment techniques and teacher readiness. Digital literacy initiatives designed for out-of-school populations, such as adults with minimal previous digital experience, constitute an additional significant aspect of educational digital transformation in the area. These initiatives, frequently executed through

collaborations among governmental agencies, civil society groups, and private sector organizations, seek to mitigate digital skills deficits that might otherwise restrict economic opportunities for marginalized populations.

### ***Teacher Training and Capacity Building***

The training and development of educators are essential components in the digital transformation of education throughout the Western Balkans. Scholarly research consistently emphasizes the significance of teacher digital competencies and pedagogical methods as critical factors influencing the successful implementation of educational technology, underscoring the necessity for extensive professional development strategies for educators.

Ciccone et al. (2023) provide valuable perspectives on educators' experiences with online education during the COVID-19 pandemic at a university in Kosovo, emphasizing both swift adaptation and ongoing difficulties. Their research emphasizes the significance of not only technical education but also pedagogical assistance for the facilitation of effective digital instruction and learning. Comparable results arise from investigations conducted throughout the region, underscoring the notion that technology, in isolation, is inadequate without adequate preparation and support for educators.

Teacher training programs in the Western Balkans are progressively embracing blended methodologies that integrate in-person workshops with online learning communities and continuous mentorship. These methods acknowledge that the cultivation of teachers' digital competencies necessitates continuous involvement rather than isolated training sessions. Nevertheless, the implementation of such extensive approaches exhibits variability across the region, with resource limitations and conflicting priorities frequently impeding the breadth and sustainability of professional development programs for teachers.

The collaboration between the IFC and the Central Bank of Kosovo employs capacity-building elements that, although predominantly aimed at financial sector personnel, present viable models for educational professional development. As stated in the partnership announcement, "IFC will offer training to CBK personnel on global best practices in digital finance, thereby facilitating the evolution of the nation's regulatory framework in accordance with international standards" (IFC, 2024). Likewise, approaches that prioritize global best practices while acknowledging local contexts may improve teacher professional development for educational digital transformation.

### ***Social Inclusion Dimensions of Digital Access***

Digital access affects not only economic opportunities but also various dimensions of social inclusion, such as access to education, healthcare, governmental services, and social networks. The COVID-19 pandemic underscored the social aspects of digital inclusion, as lockdowns and social distancing measures rendered digital channels indispensable for preserving access to essential services and sustaining social connections.

The study conducted by Buffel et al. (2023) regarding older adults during the COVID-19 pandemic illustrates the extent to which digital exclusion can intensify social isolation and hinder access to services, especially for vulnerable groups. The results of their study, although primarily oriented toward urban settings, possess significant implications for the Western Balkans, where aging populations in rural regions encounter specific vulnerabilities related to the dual challenge of digital and social exclusion.

Electronic government services have proliferated throughout the Western Balkans, potentially improving access to public services while mitigating administrative burdens and the risks of corruption. Nonetheless, the practical utilization of these services frequently continues to be

constrained, especially within populations exhibiting lower levels of digital literacy. This underscores the significance of user-centered design and digital literacy assistance in ensuring that digital public services improve rather than reduce service accessibility for marginalized groups.

Digital technologies also affect the formation and maintenance of social capital, with ramifications for economic opportunities and overall well-being. Digital platforms can promote community development, information dissemination, and supportive networks, which may enhance resilience in communities grappling with economic difficulties. Nevertheless, digital divides can engender new manifestations of social exclusion if specific populations are unable to engage in these digitally mediated social networks.

#### **4. Discussion**

The examination of various sectors, including digital infrastructure, financial services, education, and policy frameworks, uncovers several recurrent patterns in the digital development landscape of the Western Balkans. Firstly, considerable advancements have been achieved in enhancing fundamental digital access, as broadband and mobile connectivity now encompass progressively substantial segments of the population. Nevertheless, this expansion has exhibited unevenness, with enduring disparities delineated by geographic, demographic, and socio-economic factors. Urban regions, younger demographics, and economically privileged groups generally experience enhanced digital access and exhibit superior levels of digital literacy compared to their rural, older, and economically disadvantaged counterparts. Secondly, the multifaceted characteristics of digital poverty are apparent across all sectors analyzed. While physical access to technology is essential, it alone does not ensure meaningful digital inclusion. Digital skills, pertinent content and services, affordability, and conducive regulatory frameworks are equally vital elements of successful digital inclusion strategies. This multifaceted comprehension has progressively influenced policy and program strategies throughout the region; however, challenges persist in converting this theoretical insight into extensive interventions.

Third, the integration of the Western Balkans into wider European digital development processes presents both opportunities and challenges. European integration processes have exerted a beneficial impact on digital policy frameworks and investment agendas, while simultaneously generating tensions between alignment with European standards and the formulation of locally tailored digital solutions. This dynamic is especially pronounced in the regulatory frameworks for digital financial services and the standards for educational technology, where reconciling international best practices with local contexts continues to pose a persistent challenge.

#### **Interconnections Between Education, Financial Services, and Economic Inclusion**

The analysis emphasizes significant interrelationships among education, financial services, and wider economic inclusion outcomes within the Western Balkans framework. Digital skills acquired through educational systems significantly impact individuals' capacity to access and utilize digital financial services effectively, consequently affecting economic opportunities and outcomes. This relationship fosters the possibility of virtuous cycles, wherein advancements in one domain have a beneficial impact on others; however, it also carries the risk of vicious cycles, where disadvantages accumulate across multiple domains.

Educational institutions fulfill a pivotal function in not only cultivating technical digital competencies but also in enhancing financial literacy and critical thinking skills essential for the efficacious utilization of digital financial services. The World Bank's (2025) Education Digital Readiness Assessment for Kosovo acknowledges these interconnections, highlighting

the significance of cultivating not only technical skills but also wider cognitive and socio-emotional competencies that facilitate meaningful engagement in progressively digitalized economies and societies.

Digital financial services, moreover, have the potential to improve educational opportunities by diminishing financial obstacles to education, enabling more effective payment of school fees and expenses, and establishing innovative financing models for educational institutions. The collaboration between the IFC and the Central Bank of Kosovo, which seeks to "advance financial inclusion by stimulating investments in digital banking, financial technology, embedded finance, and venture capital and private equity" (IFC, 2024), carries significant implications not only for the financial sector but also for educational accessibility and quality through improved financial inclusion.

Education and financial services significantly impact broader economic inclusion outcomes, encompassing employment opportunities, entrepreneurial ventures, and social mobility. The acquisition of digital skills through educational systems significantly improves employability in progressively digitalized labor markets, whereas access to suitable financial services facilitates investments in human capital development, entrepreneurial ventures, and the efficient management of economic resources. These interconnections underscore the necessity of integrated strategies that concurrently tackle various aspects of digital inclusion.

### **Evaluation of Policy Effectiveness**

Assessing the efficacy of digital inclusion policies in the Western Balkans demonstrates varied outcomes and significant insights for subsequent policy formulation. Infrastructure-oriented policies have predominantly demonstrated beneficial results in enhancing basic connectivity; however, challenges persist in achieving quality, affordability, and geographic equity. Regulatory reforms, especially within the financial sector, have fostered more conducive environments for digital innovation while upholding consumer protections; however, challenges in implementation and enforcement continue to exist in certain contexts.

Digital skills development policies have yielded more inconsistent outcomes, demonstrating considerable advancements within formal education systems yet encountering notable limitations in engaging adult populations, especially those not in formal employment. The World Bank's (2025) evaluation of Kosovo's digital readiness in education underscores both accomplishments and persistent challenges in incorporating digital skills development into educational frameworks, emphasizing the necessity of harmonizing teacher training, curriculum enhancement, and infrastructure advancements.

Policies aimed at promoting digital financial inclusion have demonstrated favorable outcomes in nations such as Kosovo and Albania, where integrated strategies encompassing regulatory reform, infrastructural advancement, and financial literacy programs have broadened access to digital financial services. The International Finance Corporation's collaboration with the Kosovo Banking Association seeks to "modernize Kosovo's financial sector by enhancing access to credit and delivering secure, efficient financial services customized to the needs" of the populace (Kosovo Banking Association, 2024), illustrating the efficacy of integrated policy strategies.

Cross-cutting evaluations emphasize various factors that affect policy efficacy. Coordination among government agencies and among public, private, and civil society stakeholders is identified as an essential success factor, facilitating more integrated and sustainable interventions. Long-term dedication and reliable funding mechanisms are equally vital, as digital inclusion necessitates ongoing effort rather than isolated initiatives. In conclusion, the prioritization of local contexts and needs over the uncritical implementation of external

models is imperative for formulating effective digital inclusion policies in the developing areas as the Western Balkans.

## 5. Conclusion

The analysis reveals that while significant progress has been made in expanding digital infrastructure and services across the Western Balkans, substantial digital divides persist along geographic, demographic, and socio-economic lines. Urban areas, younger populations, and more economically advantaged groups typically enjoy better digital access and demonstrate higher digital literacy levels than their rural, older, and economically disadvantaged counterparts. These disparities have significant implications for economic inclusion, as digital access increasingly functions as a gateway to employment opportunities, financial services, educational resources, and social participation.

The multidimensional nature of digital poverty is evident across all sectors examined. Physical access to technology, while necessary, is insufficient for meaningful digital inclusion. Digital skills, relevant content and services, affordability, and supportive regulatory environments are equally critical components of effective digital inclusion strategies. This multidimensional understanding has increasingly informed policy and program approaches across the region, though implementation challenges remain in translating this conceptual understanding into comprehensive interventions.

The examination of case studies from diverse countries within the Western Balkans underscores the transformative capabilities of mobile technologies, internet access, and digital financial services in narrowing socio-economic gaps. Kosovo's digital financial services development, Albania's remittance digitalization initiatives, North Macedonia's educational technology programs, Montenegro's digital inclusion policies, and Serbia's digital literacy initiatives demonstrate both innovative approaches and persistent challenges in leveraging technology for economic inclusion.

The research highlights strong interconnections between education, financial services, and broader economic inclusion outcomes in the Western Balkans context. Digital skills developed through education systems directly influence individuals' ability to access and effectively use digital financial services, which in turn affect economic opportunities and outcomes. This relationship creates potential for virtuous cycles, where improvements in one domain positively influence others, but also risks vicious cycles where disadvantages compound across domains.

The influence of governmental policies, innovations from the private sector, and regional initiatives in addressing shortcomings in infrastructure and improving digital literacy emerges as a critical factor in digital inclusion outcomes. Effective approaches typically involve coordination across government agencies and between public, private, and civil society actors; long-term commitment and stable funding mechanisms; and attention to local contexts and needs, rather than uncritical adoption of external models.

### *Theoretical Implications*

The analysis yields significant theoretical implications for comprehending digital poverty and its correlation with economic inclusion. *Firstly*, it promotes multidimensional perspectives on digital poverty that transcend simplistic binary categorizations of "haves" and "have-nots" to encompass a variety of dimensions and levels of digital inclusion and exclusion. Van Dijk's (2020) resources and appropriation theory, which delineates various types of access—motivational, physical, skills, and usage—offers a significant framework for comprehending the intricate patterns of digital inclusion and exclusion noted in the Western Balkans.

*Secondly*, the results are congruent with the tenets of the capability approach, which underscore the significance of conversion factors in transforming digital access into improved capabilities and freedoms. The analysis illustrates that the provision of technological infrastructure alone is inadequate; individuals must additionally possess the requisite knowledge, skills, and supportive environments necessary to convert digital access into significant economic and social opportunities. This theoretical framework elucidates the phenomenon whereby comparable levels of digital access may result in divergent outcomes across various population groups and contexts. *Third*, the study corroborates theories of network society that highlight the growing significance of information flows and digital networks to economic and social frameworks. The role of the Western Balkans in European and global digital networks significantly impacts economic opportunities and developmental trajectories, emphasizing the necessity of network integration in conjunction with local digital advancements. This theoretical framework elucidates both the opportunities and challenges linked to the region's digital transformation within the context of wider European integration processes.

In conclusion, this analysis enhances theoretical comprehension of the interplay between digital inclusion and wider socio-economic disparities. The results indicate a reciprocal relationship, wherein pre-existing inequalities mold patterns of digital access and usage, which subsequently affect economic opportunities and outcomes. This dynamic engenders risks of "digital divide traps" in which disadvantages accumulate across various domains; however, it also presents opportunities for focused interventions that utilize digital technologies to facilitate more inclusive development.

### ***Practical Implications***

The analysis carries significant practical implications for policymakers, educators, financial institutions, and other stakeholders engaged in mitigating digital poverty and enhancing economic inclusion in the Western Balkans. *Firstly*, it emphasizes the significance of holistic strategies that tackle various dimensions of digital inclusion concurrently. Isolated interventions that emphasize singular dimensions of digital inclusion—such as infrastructure devoid of skills enhancement, or services neglecting affordability considerations—generally exhibit restricted efficacy in fostering significant digital inclusion and economic empowerment. *Secondly*, the results underscore the significance of focused strategies that tackle the unique obstacles encountered by various demographic groups. Universal digital inclusion strategies are unlikely to adequately tackle the intricate patterns of digital exclusion in the Western Balkans, considering the substantial disparities across geographic, demographic, and socio-economic dimensions. The collection and analysis of disaggregated data are crucial for the development of informed, targeted strategies. *Third*, the analysis underscores the significance of multi-stakeholder collaborations that utilize varied expertise and resources. Successful digital inclusion initiatives generally necessitate collaboration among governmental agencies, private sector organizations, educational institutions, civil society groups, and international stakeholders. These collaborative methodologies facilitate more extensive and sustainable interventions compared to those that any individual actor could execute independently.

In conclusion, the research emphasizes the necessity of sustained dedication and viable financial structures for programs aimed at promoting digital inclusion. Digital transformation constitutes an iterative process rather than a singular transition, necessitating continuous investment in infrastructure, skill enhancement, and supportive environments. This enduring perspective is especially vital within the context of the Western Balkans, where resource

limitations and conflicting priorities may impede the sustainability of initiatives aimed at digital inclusion.

This examination of findings across sectors, linkages between domains, policy efficacy, and theoretical and practical implications furnishes a groundwork for the ensuing recommendations and conclusions. By integrating perspectives from various viewpoints and contexts, it delivers an exhaustive comprehension of digital poverty and economic inclusion in the Western Balkans, thereby enriching both academic discourse and pragmatic interventions in this essential field.

### ***Recommendations***

Based on the comprehensive analysis of digital poverty and the role of technology in promoting economic inclusion in the Western Balkans, this section offers specific recommendations for various stakeholders. These recommendations aim to address the challenges identified while building on existing strengths and opportunities in this specific region.

#### ***Policy Recommendations for Western Balkans Governments***

Western Balkan governments should create comprehensive digital inclusion strategies that address infrastructure, affordability, skills, content, and regulations, recognizing their link to economic development. These strategies should include specific targets, timelines, and accountability measures. Improving rural and underserved areas should be a priority by investing in infrastructure to provide affordable connectivity, possibly through public-private partnerships and targeted subsidies. As these countries aim for European integration, they must align their digital policies with EU frameworks while tailoring them to local needs to benefit from EU integration and effectively address regional challenges. Enhanced coordination among government ministries dealing with telecommunications, education, finance, and economic development is necessary for successful digital development. Regular and thorough data collection on digital access, skills, and usage is crucial for designing effective policies, and should be disaggregated by different geographical, demographic, and socio-economic factors. This data should follow international standards while catering to specific regional needs.

#### ***Educational Institution Strategies***

Educational institutions should integrate digital skills into all subject areas since these skills are essential across various domains, enabling students to apply them in different contexts. Teacher professional development is crucial, with programs focusing on both technical skills and teaching methods for effectively using technology in education. These should offer initial training and ongoing updates as technologies advance. Blended learning models, which mix in-person teaching with digital learning, should be developed to improve education quality and access, preparing students for digitalized environments. Schools should partner with industries to align digital skills education with job market needs, offering curriculum input, internships, and mentoring. Equity in digital education must be addressed, providing resources and support for disadvantaged students, such as devices, internet access, tutoring, and customized learning materials.

#### ***Financial Sector Development Approaches***

Financial institutions should create digital products and services for underserved populations such as rural residents, low-income households, and those with little financial experience. These products must be simple, affordable, and adequately supported to meet their needs. To ensure effective and safe use of digital financial services, there should be a focus on digital

financial literacy programs developed by financial institutions, educational bodies, and civil society organizations. These programs should target various groups, especially those at risk of digital exclusion. Regulatory authorities should advance open banking frameworks for secure data sharing with customer consent, allowing for innovative services that promote inclusion while safeguarding consumers. Financial institutions should also develop digital remittance services to lower costs and foster financial inclusion via account ownership, savings, and credit history. Strong consumer protection frameworks are necessary to ensure trust in digital finance, addressing pricing transparency, data privacy, fraud prevention, and complaint mechanisms.

### ***Civil Society and International Organization Roles***

Civil society organizations should support community-based digital inclusion initiatives to help populations that formal institutions do not effectively serve, using local knowledge while tying into wider digital development plans. International organizations are encouraged to facilitate knowledge sharing and capacity building in the Western Balkans, promoting learning from each other and global best practices. These efforts should honor local contexts and encourage regional collaboration on common issues. Advocacy for inclusive digital development is essential, focusing on policies and programs that meet the needs of marginalized groups to ensure digital transformation enhances equity. International organizations should offer technical assistance for developing digital policies, prioritizing sustainable local capacity over dependence on external aid. Monitoring and evaluating digital inclusion efforts by civil society and international organizations can offer insights for policy improvement, looking at technical achievements and broader social and economic effects.

### ***Areas for Future Research***

Future research should focus on longitudinal studies to understand how digital inclusion affects economic outcomes over time, providing evidence of how digital access and skills development relate to economic inclusion. Comparative analyses among Western Balkan countries could clarify shared challenges and unique factors affecting digital inclusion, offering lessons that respect local differences. Evaluations of digital inclusion policies and programs are necessary to determine their effectiveness and guide policy and funding decisions. Research on how digital inclusion specifically impacts economic development in the Western Balkans would support better policy designs. Additionally, studying the impact of emerging technologies like AI and blockchain on inclusion can help address future digital divides in the region.

These recommendations provide a framework for action by various stakeholders committed to addressing digital poverty and promoting economic inclusion through technology in the Western Balkans. While specific implementation approaches will necessarily vary across countries and contexts, the fundamental principles of integration, equity, collaboration, and sustainability should inform all digital inclusion efforts in the region.

## **References**

- Aissaoui, N. (2022). The digital divide: A literature review and some directions for future research in light of COVID-19. *Global Knowledge, Memory and Communication*, 71(8-9), 686–708. <https://doi.org/10.1108/GKMC-06-2020-0075>
- Ali, K. S., & Faroque, A. R. (2023). Addressing the complexity of the digital divide and the role of government in addressing it: Role of government in bridging the digital divide. In Q. T. Islam, R. Goel & T. Singh (Eds.), *Fostering sustainable businesses in emerging*

- economies* (pp. 127–145). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80455-640-520231009>
- Alkire, S. (2002). *Valuing Freedoms: Sen's capability approach and poverty reduction*. <http://ci.nii.ac.jp/ncid/BA72496448> <https://doi.org/10.1093/0199245797.001.0001>
- Antonijević, M., Bradić-Martinović, A., Banović, J., & Ivanović, Đ. (2023). Is there a relationship between country development and citizens' level of digital skills? *Economic Analysis*, 56(1), 57–68. <https://doi.org/10.28934/ea.23.56.1.pp57-68>
- Bellanova, R., Carrapico, H., & Duez, D. (2022). Digital sovereignty and European security integration: An introduction. *European Security*, 31(3), 337–355. <https://doi.org/10.1080/09662839.2022.2101887>
- Bouwman, H., Nikou, S., & de Reuver, M. (2019). Digitalization, business models, and SMEs: How do business model innovation practices improve the performance of digitalizing SMEs? *Telecommunication Policy*, 43(9), 101828. <https://doi.org/10.1016/j.telpol.2019.101828>
- Brodny, J., & Tutak, M. (2022). Digitalization of small and medium-sized enterprises and economic growth: Evidence for the EU-27 countries. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(2), 67. <https://doi.org/10.3390/joitmc8020067>
- Buffel, T., Yarker, S., Phillipson, C., Lang, L., Lewis, C., Doran, P., & Goff, M. (2023). Locked down by inequality: Older people and the COVID-19 pandemic. *Urban Studies*, 60(8), 1465–1482. <https://doi.org/10.1177/00420980211041018>
- Castells, M. (2010). *The rise of the network society* (2nd ed.). Wiley-Blackwell. <https://doi.org/10.1002/9781444319514>
- Chiesa, C. D., & Rykkja, A. (2024). Bridging the urban-digital divide: Crowdfunding as an online middle ground space. *City, Culture and Society*, 37, 100580. <https://doi.org/10.1016/j.ccs.2024.100580>
- Ciccone, G., Qorraj, G., Trunk, N., & Bajraliu, A. (2023). Online education during COVID-19 in the Western Balkans: A case study of a university in Kosovo. *International Journal of Management in Education*, 17(6), 541–565. <https://doi.org/10.1504/IJMIE.2023.134229>
- Cilan, A., Bolat, B. A., & Coskun, E. (2009). Analyzing digital divide within and between member and candidate countries of European Union. *Government Information Quarterly*, 26, 98–105. <https://doi.org/10.1016/j.giq.2007.11.002>
- International Association for the Evaluation of Educational Achievement. (2025). *An international perspective on digital literacy*. [https://www.iea.nl/sites/default/files/2025-03/ICILS\\_2023\\_International\\_Report.pdf](https://www.iea.nl/sites/default/files/2025-03/ICILS_2023_International_Report.pdf)
- International Finance Corporation. (2024, August 20). *IFC and SECO partner with the Central Bank of Kosovo to advance digital financial services*. <https://www.ifc.org/en/pressroom/2024/ifc-and-seco-partner-with-the-central-bank-of-kosovo-to-advance-digital-financial-services>
- Jin, S., & Deng, F. (2024). Research on Sustainable Economic Dynamics: digital technology development and relative poverty of urban households. *Sustainability*, 16(8), 3407. <https://doi.org/10.3390/su16083407>

- Kacani, J., & Shaqiri, G. (2023). Emerging ICT clusters in the Western Balkans: A convergence model based on financial statement analysis. *Regional Science Policy & Practice*, 16(4), 12687. <https://doi.org/10.1111/rsp3.12687>
- Kosovo Banking Association. (2024, November 18). *Kosovo Banking Association and IFC sign agreement to advance digital transformation and financial inclusion*. <https://www.bankassoc-kos.com/En/komunikatat/844/kosovo-banking-association-and-ifc-sign-agreement-to-advance-digital-transformation-and-financial-inclusion/>
- Kovac, N., Žmija, K., Roy, J. K., Kusa, R., & Duda, J. (2024). Digital divide and digitalization in Europe: A bibliometric analysis. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 19(2), 389-421. <https://doi.org/10.24136/eq.2899>
- MDPI. (2024). Understanding the role of financial literacy in enhancing financial inclusion in the Western Balkans. *Sustainability*, 16(24), 11065. <https://www.mdpi.com/2071-1050/16/24/11065>
- Nussbaum, M. C. (2011). *Creating capabilities: The human development approach*. Harvard University Press. <https://doi.org/10.4159/harvard.9780674061200>
- Organisation for Economic Co-operation and Development. (2024). *Western Balkans Competitiveness Outlook 2024*. OECD Publishing. [https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/06/western-balkans-competitiveness-outlook-2024-regional-profile\\_359dd5b9/170b0e53-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/06/western-balkans-competitiveness-outlook-2024-regional-profile_359dd5b9/170b0e53-en.pdf)
- SDGs Review. (2025). Adapting social protection and legal frameworks to non-standard employment in the Western Balkans. *Sustainable Development Goals Review*. <https://www.sdgreview.org/LifestyleJournal/article/view/6272>
- Sen, A. (1999). *Development as freedom*. Oxford University Press.
- Van Dijk, J. A. G. M. (2020). *The digital divide*. Polity Press.
- Vienna Institute for International Economic Studies. (2024). *Fiscal governance in the Western Balkans*. <https://wiiw.ac.at/fiscal-governance-in-the-western-balkans-an-analysis-of-fiscal-rules-fiscal-councils-and-medium-term-budgetary-frameworks-dlp-7092.pdf>
- Western Balkans Investment Framework. (2024, July). *Flagship investments*. [https://wbif.eu/storage/app/media/Library/12.%20Economic%20and%20Investment%20Plan/WBIF%20Endorsed%20Flagship%20Investments\\_July%202024.pdf](https://wbif.eu/storage/app/media/Library/12.%20Economic%20and%20Investment%20Plan/WBIF%20Endorsed%20Flagship%20Investments_July%202024.pdf)
- World Bank. (2024, July 15). *From reliance to leverage: Transforming Albania's remittance landscape for economic empowerment*. <https://www.worldbank.org/en/topic/financialinclusion/brief/from-reliance-to-leverage-transforming-albania-s-remittance-landscape-for-economic-empowerment>
- World Bank. (2025, January 23). *Kosovo - Education digital readiness assessment 2024*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099012225212528125/p50212617c5f0a0811b8a813a7002e01ff6>