

Bridging the Gap

The Economic Dimensions of the Digital Divide in Azerbaijan

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The contemporary digital age is reshaping societies worldwide, generating significant opportunities for economic growth and social development. Yet access to information and communication technologies (ICTs) remains deeply unequal. This disparity—commonly referred to as the *digital divide*—has far-reaching economic implications at the global level and within individual countries, including Azerbaijan. The digital divide affects productivity, innovation, and social equity, making it a central concern for policymakers.

In Azerbaijan, the digital gap reflects broader inequalities shaped by income differences, the urban-rural divide, and uneven access to technology. Although considerable progress has been made in expanding ICT infrastructure—particularly in cities—many rural regions still lag behind. This imbalance restricts opportunities for economic development and social inclusion and stands at odds with Azerbaijan’s long-term goal of becoming a diversified, technology-driven economy.

Millions of citizens are effectively cut off from the digital economy, limiting GDP growth and productivity. In Azerbaijan, a lack of universal ICT access hinders innovation and adoption of digital solutions in less connected areas. Overcoming the divide is therefore not only a technological or educational issue; it is also an economic imperative for sustainable development and global competitiveness. This IDD Analytical Policy Brief examines the economic dimensions of Azerbaijan’s digital divide, identifies key strategies to address it, and highlights the opportunities that could emerge if the gap is successfully bridged.

The authors are all alumni of ADA University’s School of Public and International Affairs (SPIA). This IDD Analytical Policy Brief is derived from a research project conducted for an e-governance course during the course of their undergraduate studies. The views and opinions expressed herein are solely those of the authors.

Economic Dimensions of the Digital Divide

Globally, disparities in internet access, digital literacy, and digital infrastructure are major obstacles to economic development. These inequalities restrict participation in digital markets, e-commerce, and online services, leaving a large share of the world's population disconnected and deepening poverty in vulnerable communities. [More than half](#) of the world still lacks high-speed broadband, creating cumulative disadvantages that reinforce inequality.

Economically advanced countries with strong digital penetration experience higher productivity, innovation, and global trade integration. Conversely, regions without adequate digital access struggle to participate in the digital economy, limiting their growth potential. The divide also [influences labor markets](#): the “digitally excluded” miss out on increasingly technology-dependent employment opportunities.

Azerbaijan's economy is heavily shaped by its oil and gas sector, which dominates GDP and exports. This produces challenges for diversification and equitable access to digital resources. Although the hydrocarbon industry [uses](#) advanced digital technologies—including automation, real-time monitoring, and data analytics—the benefits remain concentrated within the sector. Rural and low-income areas often lack the digital infrastructure necessary to participate in similar technology-driven opportunities.

This uneven distribution of digital capacity reinforces regional inequalities and limits the development of other sectors such as agriculture, tourism, and ICT. The digital divide also affects labor markets: high-value jobs in oil and gas increasingly require digital competencies, leaving people in rural areas or with limited technological access at a disadvantage. As a result, income and regional disparities persist, and Azerbaijan's overall economic diversification is slowed.

Despite progress in Baku's ICT ecosystem and the growth of tech startups, rural regions continue to lack reliable internet access. This not only limits economic integration but also weakens Azerbaijan's competitiveness in the global digital economy. [Addressing the divide](#)—particularly between urban and rural areas—is essential for reducing reliance on hydrocarbons to power economic activity and enabling inclusive growth.

Understanding the Divide

Limited access to the internet and digital tools prevents affected citizens from participating fully in the digital economy, restricting [engagement in e-commerce](#), online services, and global markets. This exclusion deepens poverty and hinders development for entire communities.

Digitization of job markets also means that individuals without digital skills face higher barriers to employment. Furthermore, lack of ICT access reduces political participation by limiting access to information, restricting civic discourse, and weakening their ability to hold their government accountable.

Within Azerbaijan, digital gaps are especially visible in rural areas, where limited digital infrastructure prevents entrepreneurs and small businesses from entering digital markets. SMEs without digital capabilities face operational constraints, reduced productivity, and limited innovation capacity. Many small business owners also hesitate to invest in digital tools due to fear of failure, lack of skills, or pressure to prioritize daily survival over long-term strategy. These individual barriers collectively impede national economic development.

The skills gap also creates inequality in the oil and gas sector, which increasingly demands technically trained, digitally skilled workers. Many citizens without digital literacy are excluded from these opportunities, resulting in a capital-intensive sector that generates limited employment. It is this cumulative effect that makes the individual SME's life difficult, but in reality, it also significantly threatens the overall effort of economic development.

Strategies for Bridging the Digital Divide

Although Azerbaijan has made remarkable progress in digital transformation, significant gaps remain—especially among underserved communities. [Digital transformation](#) is a key national priority under Azerbaijan's 2030 socio-economic development agenda. Effective strategies to bridge the divide should include:

One, *facilitating e-commerce*. Expanding e-commerce capabilities can help SMEs—particularly in rural areas—overcome geographic isolation and limited local markets. Online platforms enable businesses to reach customers nationwide and globally, increasing revenue opportunities. E-commerce also supports financial independence for individuals in remote regions by enabling them to sell goods and services online.

Two, *investing in alternative sectors*. Azerbaijan's historic reliance on oil and gas makes diversification essential. Investment in agriculture, tourism, manufacturing, and ICT can reduce vulnerability to oil price fluctuations and expand employment opportunities. Digital tools can strengthen these sectors by improving efficiency, market access, and innovation. In recent years, the [state](#) has increased its financial support in the form of grants, tax breaks, and subsidies for agricultural machinery, pesticides, and fertilizers, which led to the selection of this field as one of the four priority sectors diversifying Azerbaijan's economy.

Three, *strengthening human capital*. Digital transformation requires a skilled workforce. Investments in education, digital literacy, and vocational training are

essential for reducing skill gaps and unemployment. A [digitally capable population](#) will attract foreign investment, stimulate entrepreneurship, and enhance Azerbaijan’s global competitiveness. Scholarships, targeted training programs, and vocational initiatives can help build a flexible and skilled workforce suited to a digital economy.

Expected Outcomes

Expanding digital access and embracing renewable energy technologies could simultaneously reduce the digital divide and support sustainable growth. Smart grid investments, IoT-enabled energy management, and renewable energy adoption can open new economic opportunities while reducing costs and increasing efficiency.

Improved digital literacy will strengthen the connection between technology and economic participation. While basic ICT skills are [relatively common](#) in Azerbaijan, more advanced competencies—such as programming, data management, and digital design—are far less widespread. Enhancing these skills is critical, as modern jobs increasingly require advanced digital proficiency.

If the digital divide is narrowed, Azerbaijan can shift gradually from a hydrocarbon-dependent economy toward more diversified and globally competitive sectors. [Renewable energy industries](#), for example, generate significantly more jobs per dollar invested than fossil fuels and promote skill development in manufacturing, maintenance, and engineering. Such diversification will reduce exposure to volatile oil markets and enhance economic resilience. This trend has been applied by many countries successfully, for example, Singapore was able to shift its main economic focus from resource-based industries to the more technologically driven sectors and become one of the main global tech hubs.

Azerbaijan’s status as a “keystone state” of the Silk Road region, which gives it access to both European and Asian markets, also positions the country to become a regional hub for trade and digital innovation. A strong e-commerce ecosystem—similar to platforms like Amazon, Alibaba, or Türkiye’s Trendyol—would empower SMEs, expand market access, and increase economic visibility for local producers.

Digitalization can also transform agriculture. With tools such as IoT-enabled monitoring of weather, soil, crop conditions, and other [decisionmaking](#) tools, combined with AI-driven analytics, Azerbaijan could develop into a leading agri-tech innovator.

Fairer Growth

Closing the digital divide is essential to Azerbaijan’s future economic development. Despite progress in ICT infrastructure, many rural and low-income communities still lack meaningful digital access. By expanding e-commerce, increasing support for SMEs, and

investing in human capital, Azerbaijan can strengthen its non-oil sectors and promote more equitable economic growth.

A robust digital foundation will help reduce regional disparities, increase resilience to global economic shifts, and enable the country to transition toward a more diversified, sustainable economy. With well-designed policies and targeted investments—particularly in rural areas—Azerbaijan can position itself as a regional leader in digital innovation and sustainable development.