

THE ROLE OF STARTUPS IN THE MODERN ECONOMY

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Abstract: *In the digital economy, startups have become key engines of innovation, job creation, and economic growth across the world. This article examines the multifaceted roles of startups (particularly in the IT sector) and their capacity to reshape markets, attract foreign investment, and promote inclusive development. The topic is especially relevant for emerging economies like Armenia, where understanding the broader impact of startups is essential for designing effective, long-term growth policies.*

The primary aim of this study is to assess the significance of startups in Armenia's economic transformation by analyzing global trends alongside national practices that facilitate their creation and success. Specifically, the article pursues three objectives: evaluating the impact of startups on different economic sectors, examining their role in employment and human capital development, and investigating their macroeconomic contributions, particularly in attracting foreign investment.

Descriptive, comparative, and qualitative research methods were applied. The findings highlight the vital role startups play in economic diversification, the expansion of skilled employment, and the internationalization of local talent and innovation.

The study concludes that startups are indispensable for advancing technological development and strengthening Armenia's competitiveness, supported by appropriate government policies, financial instruments, and educational programs. While challenges remain, such as high levels of uncertainty and limited early-stage funding, high-growth startups generate substantial positive effects on the economy. Therefore, fostering a supportive and resilient ecosystem is crucial to enabling these enterprises to flourish and sustaining Armenia's progress toward becoming a regional innovation hub.

Keywords: *startup, innovation, economic development, foreign investments, job creation, education*

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Introduction

In the digital economy, startups have emerged as key drivers of innovation, job creation, and economic development worldwide. This article explores the multiple roles of startups (particularly in the IT sector) and their capacity to transform markets, attract foreign investment, and foster inclusive growth. Unlike traditional businesses, startups bring fresh ideas, disrupt existing markets, and adapt quickly to evolving global trends. Armenia, like many emerging economies, has embraced the startup movement as a pathway to strengthen its IT sector, create high-quality jobs, and attract foreign investment. This article explores the evolving role of startups in Armenia's economy, highlights key players and success stories, and discusses how

supportive ecosystems, including accelerators, venture capital funds, and government initiatives, are driving the country's transformation into a regional hub of innovation.

The main purpose of the study is to highlight the significance of startups in shaping Armenia's economy.

The relevance of the topic. Examining the role of startups in the digital economy is essential for understanding their diverse economic impacts and for shaping effective policies that promote sustainable growth, particularly in emerging markets.

The main purpose of this article is to explore the role of startups in the economy, highlight their significance in shaping Armenia's economic development, and examine both global trends and national practices that support their emergence and success. **The following problems** are set to achieve the purpose:

- To analyze the impact of startups on various sectors of the economy,
- To explore how startups influence employment and the development of human capital.
- To investigate their macroeconomic effects, particularly in attracting foreign investments.

Literature review

The role of startups in the modern economy has attracted significant attention in both academic and industry research. Scholars and practitioners emphasize their contribution to innovation, job creation, and market transformation, noting that startups serve as catalysts for technological progress and economic growth. There isn't a single clear definition of a startup—different authors describe it differently depending on factors such as the company's stage in its lifecycle, age, business model, growth trajectory, and sector of activity. Start-ups are small, emerging firms—often founded by engineers or technologists—that experience rapid growth and innovation, typically in high-tech industries like IT. These firms begin with limited resources and informal structures, but may evolve into medium or large enterprises through strategic human resources development practices, strong leadership, and organizational culture [1]. Some authors argue that a company can be considered a startup based on four key factors: when it was founded, its level of innovation, its potential for growth, and the degree of risk or uncertainty it faces [2]. The term "startup" can be understood in two different ways. The first, broader definition focuses on business dynamics and the role of young innovative firms, where "startups" refer to all new companies, including many small businesses with limited growth ambitions. The second, narrower definition typically applies to venture-capital backed companies that have high growth potential, often in a specific sector, and are focused on rapid expansion [3]. E. Ries defines startup as an institution which is created by people and its main purpose is to develop new products and services under highly unstable conditions [4].

According to L. Steigertahl and Dr. René Mauer [5] the term "startup" does not have a formal definition, but it is generally understood to refer to a company that meets the following three key criteria:

- it is relatively young (usually less than 5 to 10 years old),
- it focuses on innovation,
- it has the intention to scale, meaning it aims to grow its workforce and expand into new markets.

Startup can be defined as an entrepreneurial initiative with high growth and innovation potential that drives smart, inclusive economic growth by attracting foreign investment, boosting high value-added sectors, enhancing competitiveness, and creating skilled

employment [6]. The five stages of development of an innovative enterprise, as distinguished by S. Dutta [7], are: pre-seed, seed, startup, growth, and expansion/market leadership.

Among Armenian authors, R. Babayan has addressed the main problems Armenian startups face, including lack of strategic planning, insufficient market research, inadequate financial planning, talent acquisition and retention challenges, ineffective risk management, inadequate development of the business model, limited access to mentorship and support, and limited access to funding [8]. Another group of Armenian economists [9] conducted research on the startup ecosystem and concluded that it is still in its early stages of development. To foster its growth, initiatives are needed to support startups in the pre-seed and seed stages, helping them mature and become future leaders and promoters of Armenia's startup ecosystem. A startup is a company focused on developing innovative technologies and business models to meet the needs of global consumers. It differs from service-oriented firms by requiring distinct practices and skills, and relies on local and global innovation networks for talent, knowledge, funding, and partnerships [10].

Methodology

In the scope of this research, descriptive, comparative, and qualitative methods were used and implemented. The **results** can be valuable to policymakers, researchers, and individuals interested in entering the IT sector with innovative ideas, as they offer meaningful insights into international practices and the role of startups in economic development.

Analysis

Although definitions of startups vary among authors worldwide, one thing is certain: startups play a vital role in economic development, particularly in the IT sector. Consequently, national policies should prioritize creating supportive conditions for their emergence, growth, and long-term success.

Startups play a significant role in modern economies by driving innovation, creating jobs, increasing competitiveness, and boosting productivity. Compared to traditional companies, they are more flexible, allowing them to respond quickly to market demands and technological changes. Even failed startups can play an important role in improving supply and increasing competitiveness [11]. In Armenia, the development of startups has become a new and promising direction for the economy over the past decade. They play a key role in promoting innovation, creating high-quality jobs, and enhancing competitiveness in international markets. Their innovations are often transferred to other sectors as well, contributing to industrial modernization and the transition to digital technologies. A good example is the Romanian startup UiPath, founded in 2005 by a small team of 10 people to automate back-office tasks. Over time, it grew into a global company, and its technology is now used in sectors like healthcare (to automate patient records), banking (for compliance checks), and insurance (to process claims), helping reduce costs and errors.

Their role in boosting employment is also considerable. While each startup may employ a relatively small number of people, their cumulative impact on job creation is substantial, and they contribute to the development of professional skills. OECD's report shows that even though only about 3% of startups grow significantly, the number of new jobs created by them is remarkably big: ranging from 21% in the Netherlands to 52% in Sweden. This is very important for policy makers to understand. It is emphasized that despite the fact that most startups stay

small or grow slowly, the policy makers should not underestimate how important are the few fast-growing start-ups for creating jobs. These young, growing companies are key drivers of employment and economic growth [12]. Studies have shown that just 1% of the fastest-growing startups are responsible for creating about 40% of all new jobs in a year [13]. Startups play a key role in breaking market stagnation and creating new jobs, especially during times of uncertainty. Their success depends on entrepreneurs' skills, innovation, and experience, often gained through education and business incubation [14].

In Armenia, the IT sector has become one of the key drivers of employment, offering high-paying, competitive, and quality job opportunities, especially for the younger generation. In recent years, the number of professionals working in the IT industry has steadily increased, encompassing not only programmers but also data analysts, cybersecurity specialists, project managers, and other technical and business roles. This sector has also contributed to the growing participation of women in technology-related jobs, while remote work enables many highly qualified professionals to work for leading international companies without leaving the country.

Armenia has become the birthplace of several successful startups that have gained international recognition. For example, Picsart, founded in 2011, is a globally known platform for online photo and video editing. In Armenia, the company has also established Picsart Academy, an educational institution aimed at training specialists in various tech fields, where students learn through real-world projects and become competitive professionals.

Another success story is Krisp, a startup that uses AI technologies to significantly improve digital voice communication. Its advanced features include noise cancellation, voice enhancement, accent transformation, call recording, summarization, and more. Today, Krisp processes around 75 billion minutes of audio per month and has logged over 50 million recorded calls. One of its latest innovations allows transforming Indian-accented English into American-accented English. Although the company is headquartered in California, it maintains offices in Yerevan, with employees free to work remotely. The Armenian startup Docus was also included in Ahrefs' list of the top 50 trending SaaS startups. Docus provides a platform that connects leading doctors from the U.S. and Europe with hospitals in developing countries, enabling access to expert medical consultations worldwide.

From a macroeconomic perspective, startups often serve as a source of foreign direct investment by attracting international venture capital which brings not only financial resources but also global expertise and networks. This inflow of capital enhances domestic innovation capacity, stimulates job creation, and supports long-term economic growth. Innovative potential plays a crucial role in attracting foreign investment, as investors prioritize countries with strong R&D spending and stable economic and political conditions. In the digital era, innovation enhances a country's global competitiveness and resilience to economic crises, making it more appealing to international investors [15]. One of the notable examples of attracting foreign investment through a strong innovative environment is the strategic cooperation between the European Union and Vietnam. Established in 1998, the European Chamber of Commerce in Vietnam (EuroCham) represents over 1,400 European companies, making it one of the largest foreign business chambers in the country. According to EuroCham Chairman Bruno Jaspaert, confidence in Vietnam's investment climate remains strong, with 72% of surveyed European business leaders consistently recommending Vietnam as an investment destination. Although global trade tensions are growing, most European businesses in Vietnam have not yet felt major financial effects. The political situation is changing, but its impact on companies in Vietnam has

been limited so far. This stability, along with Vietnam's strong focus on innovation, continues to make the country a top choice for European investors [16].

Estonia has emerged as the undisputed startup capital of Europe, boasting the highest number of startups and unicorns per capita on the continent. With just 1.3 million people, Estonia has produced 10 unicorns, including Skype, Wise, Bolt, and Pipedrive and it has the most unicorns per capita in Europe. This success is largely driven by its digital-first governance, with 99% of public services available online and the ability to register a startup in just 15 minutes. Estonia's simple and transparent tax system, with 0% corporate tax on reinvested profits, its e-Residency and Startup Visa programs, and strong legal protections create an environment that attracts investors from all over the world. The country's startup ecosystem supports over 10,000 employees. With 1,314 startups and 150+ support organizations, Estonia fosters a collaborative, mentoring-driven culture [17]. This innovation-focused environment has made Estonia not just a hub of European entrepreneurship, but a global model for startup success.

Startups that secure foreign capital in their early stages are significantly more likely to relocate their headquarters, often as a condition of funding. For instance, the study shows that one out of ten U.S. venture capital deals leads to the startup relocating its headquarters to the U.S., indicating that investors often prefer startups to relocate closer to established innovation hubs, where they can more effectively support their growth, facilitate access to networks, and enhance opportunities for scaling and successful exits [18].

Startups significantly boost export volumes, as many of them provide digital services to international clients. By creating value primarily through intellectual property, they attract foreign investment without requiring substantial material resources. Some operate in global markets, showcasing Armenia's technological potential. Startups have the capacity to become a key driver of Armenia's future economic growth and innovation potential. Within the framework of the state strategy for the development of IT and high technologies, a favorable environment has been created for startups. Existing tax incentives, along with the presence of venture funds, incubators, and accelerators, promote the establishment and growth of startups.

Armenia StartUp Academy has played a vital role in fostering Armenia's startup culture. It has provided early-stage startups with valuable opportunities to acquire practical skills essential for company development and for entering international markets. After completing a 12-week training program, successful graduates have the opportunity to present their ideas, products, and services to both local and international investors during a Demo Day event. StartDoon is an important accelerator that helps Armenian startups grow and expand into new markets. As a French-Armenian initiative, it connects local startups with experienced French experts who offer guidance in business development, strategy, and international growth. By building strong partnerships and providing practical support, StartDoon equips Armenian startups with the tools and knowledge they need to succeed both at home and abroad.

Granatus Ventures, SmartGateVC and Formula VC are venture capital funds that invest in early-stage startups across various sectors. The FAST Foundation's Budding Entrepreneurs and Startup Studio programs, in turn, provide support to early-stage entrepreneurs and more mature startups, respectively. The BANA business angel network is also an important initiative, which consists of experienced entrepreneurs, investors, and executives from Armenia and abroad. It serves as a bridge between investors and startups, facilitating the rapid development and growth of startup ventures. At the same time government initiatives such as "Digital Armenia" support infrastructure development.

The development of the IT sector and startups has a significant impact on education and the growth of human capital. Demand for IT professionals stimulates both the expansion of IT-related university programs and the spread of non-formal education such as online courses, coding schools, and training programs. Beyond Yerevan, the startup culture is gradually expanding to the regions, helping to extend economic activity beyond the capital and promoting regional development. The IT sector not only creates jobs but also fosters a new culture of skills-based education, emphasizing hands-on learning, project-based thinking, and continuous self-improvement.

As we can see, the development of startups not only boosts the IT sector but also plays a key role in job creation, the growth of a learning culture, and the advancement of education. These companies attract foreign investment and contribute to increasing exports, helping the country gain international recognition through the innovative solutions and services they offer worldwide.

Conclusion

Startups have become a key force in shaping the modern digital economy. They not only drive innovation and technological advancement but also play a vital role in job creation, skill development, and enhancing national competitiveness. This is particularly evident in developing countries like Armenia, where the growing startup ecosystem (supported by favorable government policies, venture capital, and educational initiatives) has led to the emergence of globally successful companies.

The analysis demonstrates that startups contribute significantly to economic diversification, attract foreign investment, and facilitate the internationalization of local talent and ideas. Despite challenges such as high uncertainty and limited early resources, high-growth startups have a significant positive economic impact; therefore, creating a supportive environment for their development is critical.

Conflict of Interest

The author declares no conflicts of interest.

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