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MP-IDSA
Commentary

Armenia's Tech Aspirations

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Summary

Armenia hosted the 28th World Congress on Innovation and Technology (WCIT) from 4 to 7 October 2024, with issues relating to artificial intelligence being the key theme.

Armenia hosted the 28th World Congress on Innovation and Technology (WCIT) from 4 to 7 October 2024. The theme of this year's Congress was 'The Power of the Mind: AI Beyond Limits, Within Ethics'. The Congress focused on the role of Artificial Intelligence (AI), ethical innovation, Green AI, AI for crisis management and eco-friendly technologies among other topics.[1] Armenia had previously hosted the Congress in October 2019. The WCIT is one of the oldest technology conferences and some of the largest companies participate in this conference. India had hosted the WCIT in 2018 in Hyderabad, which was inaugurated by Prime Minister Narendra Modi through video conference.

Armenia's tech industry contributes around 5 per cent to the country's GDP and is one of the fastest growing sectors of its economy registering an annual growth of 20 per cent with a steady growth rate at 41.4 per cent annually. Armenia's Minister of High-Tech Industry, Mkhitar Hayrapetyan stated that the country "is focusing on high technologies and information technologies as the most important pillars of economic development."[2]

The Congress focused on the technological component of the innovation industry, particularly the production of semiconductors for high-speed information processing and energy efficiency.[3] The Congress also discussed the Global Network of Artificial Intelligence, which connects six continents and promotes innovation and development in artificial intelligence.[4] As per the organisers, the Congress was meant to showcase Armenia as a developed IT country and to ensure that Armenian companies are connected to the foreign markets.[5]

One of the major highlights of the Congress was the announcement of the launch of Starlink in Armenia. Starlink has been used by various nations, including Ukraine, during its conflict with Russia. The WCIT sessions held in 2019 and 2024 have been

[1] **"The Power of Mind: AI Beyond Limits, Within Ethics"**, World Congress on Innovation and Technology 2024.

[2] **"Armenia as a New Technological Hub: Yerevan to Host WCIT Congress Again"**, *ArmenPress*, 20 May 2024.

[3] Ahmed Raza, **"Yaroslav Bogdanov: World Congress on Innovation and Technology Shifts Focus to the East"**, *Tech Announcer*, 9 October 2024.

[4] **"Armenia is a Dynamically Developing Technological Hub -WITSA Chairman"**, *ArmenPress*, 5 October 2024.

[5] **"Armenia is Perfect for IT Companies and Specialists – UATE President"**, *ArmenPress*, 7 October 2024.

backed by the Armenian government, the Union of Advanced Technology Enterprises (UATE)[6], and the World Innovation Technology and Services Alliance (WITSA).[7]

It is pertinent to note that Soviet electronics and military hardware industries had a significant presence in the Armenian Soviet Socialist Republic (ASSR).[8] Many institutes such as the Yerevan Computer Research Institute were established. Armenian factories were involved in the making of various radio electronics, space communication devices and automated control units.[9] The Armenians were also involved in the making of military tech items such as rocket launchers and parts used in submarines and ships. During the Soviet period, Armenia was responsible for 30 to 40 per cent of electronic and computer components of the Soviet defence and aerospace industries.[10]

After the collapse of the Soviet Union, a large number of Armenians left the country and began immigrating to various parts of the globe. This exodus delayed the nation's aspirations in the field of technology. The 'ArmTech' Congress organised in 2007 in San Francisco to engage the global Armenian community was a key event to ensure the engagement of Armenian-born start-up companies seeking investments and partnerships. In 2008, a 10-year roadmap for technology was announced.[11] The main focus of the 10-year roadmap was on developing the telecommunications and business incubation infrastructure, improving the quality and quantity of tech graduates, increasing support and financing mechanisms for tech start-ups.[12]

By 2011, the first major investor in Armenian tech initiatives was Microsoft, leading to the launch of the Microsoft Innovation Centre. This joint project saw cooperation between the United States Agency for International Development (USAID), Microsoft Corporation and EIF.[13] The Centre has trained about 12,500 students and ensured an 84 per cent employment success rate, with some of the students working in companies like XCloud Networks, Volo and Bluenet.

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[6] UATE is a business association that represents the collective interests of the companies in the field of technology. The organisation works closely with the government to unite private sector, international companies and NGOs which focuses on Armenian tech. See **"Who We Are"**, The Union of Advanced Technology Enterprise, 2024.

[7] The WITSA is an alliance of 80 countries and is seen as the voice of the global tech industry. Armenia is a member of this organisation. See **"Who We Are"**, The World Innovation, Technology and Services Alliance (WITSA), 2023.

[8] Syuzan Tosunyan, **"Armenia: The Silicon Valley of the Soviet Union"**, *EVN Report*, 29 August 2021.

[9] Ibid.

[10] Mher Almasian, **"A Comprehensive Analysis of the Armenian Tech Industry and Its Strategic Implications"**, *The Armenite*, 13 July 2018.

[11] Bradley Jardine, **"Fresh from Revolution, Armenia's Tech Industry has High Expectations"**, *EurasiaNet*, 27 August 2018.

[12] **"Armenian Information Technology Sector: Software and Services"**, Industry Report, 2009, Enterprise Incubator Foundation, Ministry of Economy of the Republic of Armenia, 2009.

[13] **"About Us"**, Microsoft Innovation Centre, Armenia, 2024.

This was followed by the launching of the PicsArt company in 2011 by an Armenian-American entrepreneur Hovhannes Avoyan with headquarters in both Yerevan and San Francisco. This is seen as the first major investment of a tech company in Armenia. Following this, an agreement for a research centre of Intel was signed in 2012.[14]

The 2014 'Law on Technology Advancements' allowed tax exemptions for companies focused on the IT sector. It ensured exemptions for companies that employed more than 30 people and a preferential reduction in the income tax to 10 per cent, instead of the general tax bracket which ranged from 23 per cent to 36 per cent,[15] 2017 also saw the fastest growth of the Armenian IT sector when it expanded by 20 per cent over the previous year.

In 2018, the Velvet Revolution changed Armenia's political structure, with the new leadership under Nicol Pashinyan. During the protests, many youths (under 30), popularly known as the 'Independence Generation' from the tech sector, came out in support of Pashinyan, thus showing a deep connection of the tech sector to the domestic political context. Under Pashinyan, from 2018 until now, the nation has seen some significant policy changes, ranging from political and economic and particularly in foreign policy, amidst the regional turmoil (Nagorno-Karabakh and Russia–Ukraine conflicts).

The first significant tech initiative of the Pashinyan government was in 2019 when it hosted a delegation from Index Ventures, an international venture capital firm focusing on tech investments, including e-commerce, gaming, infrastructure and intelligence and security.[16] The meeting ensured that Index Ventures provided funding to start-ups like Embry, Retention Force and D'efekt. Nina Achadjian, a partner of Index Ventures who has invested in these companies, is also of Armenian origin and is the founder of Hive Ventures, the first seed venture fund focusing on Armenian entrepreneurs.

The government has faced many challenges on the regional front, especially the resumption of the Nagorno-Karabakh conflict in 2020. However, these developments have not deterred tech advancement and development. In 2021, the tech wave saw significant investments, accumulating US$ 200 million dollars from domestic companies.[17] The same year saw PicsArt become the first Armenian-based company

[14] **"Intel Corporation to Establish Scientific-Research Center in Armenia"**, *News.am*, 5 September 2012.

[15] Emil Danielyan, **"Tax Breaks Fuel IT Startup Growth in Armenia"**, RadioFree Europe/Radio Liberty Armenia, 3 April 2018.

[16] Ani Paitjan, **"Armenia Welcomes Global IT Leaders"**, *CivilNet*, 15 March 2019.

[17] Njdeh Satourian, **"Where We Are and Where Are We Going"**, *EVN Report*, 6 March 2022.

to become the first tech unicorn.[18] In 2022, the tech industry also saw more entries from early-stage venture capital funds groups including Zoomerang, Mythrill and BlueQubit.

The Russia–Ukraine conflict has also boosted the Armenian tech industry. The conflict ensured an influx of Russians, and to a lesser extent, Ukrainians and Belarussian tech experts, into Armenia. In 2023, about 60,000 Russians remained in Armenia out of the 100,000 Russians who entered in 2022, most of whom were IT experts.[19] Russian companies have also expanded or opened their offices in Armenia, such as Miro, thus ensuring more employment opportunities for the local Armenian population. The Russian influx into Armenia and the shift of the Russian companies has been seen as a positive for the Armenian tech industry and could contribute to the overall advancement and investments in the industry.

In January 2024, the newly appointed Minister of the tech industry Mkhitar Hayrapetyan highlighted that the tech and military industries would collaborate. The draft strategy for developing science and technology was presented on 4 March 2024. Focus areas include artificial intelligence and machine learning, microelectronics, advanced robotics, quantum technologies, biotechnology and sciences, which contain educational, scientific and industrial components.[20] The government will create working groups to promote and develop these areas and increase the efficiency of investments for tech in Armenia.

Hayrapetyan was a former minister of diaspora under Pashinyan. This may ensure a strong connection between the diaspora and the government on tech. There is also focus on improving the connections between the educational system and the tech industry. The University-Private Sector Cooperation for Training Specialists in 2020 by the Ministry of High-Tech Industry is one such effort. The initiative seeks to create educational programmes in collaboration with universities and technology companies.

The Armenian tech industry has withstood various challenges ranging from the economic slowdown in 2014–16, the political instability and revolution in 2018, the Second Nagorno-Karabakh war and its aftereffects since 2020, and the COVID-19 pandemic. The two WCIT conferences are a testament to Armenia's tech aspirations.

[18] A tech unicorn is one where a private company has gained 1 billion dollars within its first 10 years. See Syuzan Tosunyan, **"Unicorns Spotted in Armenia"**, *EVN Report*, 6 October 2021.

[19] Benyamin Poghosyan, **"How Russian Migration Fuels Armenia's IT Sector Growth"**, Italian Institute for International Political Studies, 6 November 2023.

[20] **"PM Pashinyan Chaires First Session of the Science and Technology Development Council"**, The Prime Minister of the Republic of Armenia, 4 March 2024.

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