

SPECIAL REPORT

# Impact of the Russia-Ukraine crisis on the Technology sector

The evolving geopolitical scenario is affecting the Technology industry due to repercussions of stringent sanctions being implemented by international governments, a high threat of cyber-attacks and talent migration.

Russia’s invasion of Ukraine is having a significant disruptive impact on European and American companies with operations in the region.

#### TECHNOLOGY SECTOR IN NEARBY COUNTRIES

Ukraine, Poland, Russia, Belarus, Lithuania, Latvia, and Estonia had been emerging as global back offices and technology delivery centers in recent years. Dun & Bradstreet data shows that there are 44,317 IT service providers in these countries, serving 221,102 clients across 142 countries.

Of these 44,317 firms, around 41,861 firms are domestic and the other 2,456 firms are subsidiaries of foreign entities.

Country	Suppliers	Customers
Poland	28,397	106,522
Russian Federation	11,049	49,445
Ukraine	2,543	25,236
Lithuania	932	6,952
Estonia	545	3,303
Latvia	521	27,721
Belarus	330	1,923
<b>Total</b>	<b>44,317</b>	<b>221,102</b>

Source: Dun & Bradstreet data

- There were 11,049 Russian IT service provider firms, serving 49,445 customers across 112 countries by the end of 2021. These firms now face an existential crisis, as many global customers have either turned away from them or are in the process of moving their business contracts away from Russian IT firms. Clients of these firms also face significant business disruption which could put severe pressure on their business operations, depending upon the extent of dependence on Russian IT firms and associated infrastructure.
- **Along with European economies like Poland & Latvia, Ukraine had in recent years been developing itself as an emerging player in the global IT industry.** The Russia- Ukraine war is likely to have significant consequences, including a trickle-down effect on global IT firms that have their delivery centers in and around Ukraine and nearby European nations. Ukraine houses many small and large IT companies as well as start-ups.

## UKRAINE'S TECHNOLOGY SECTOR BEFORE THE CONFLICT

The Technology sector in Ukraine accounted for over 4% of Ukraine's pre-war GDP and was one of the fastest growing markets globally. The Ukrainian IT development sector exported \$6.8 billion in IT services in 2021 with 36% growth over the previous year. Around one-fifth of Fortune 500 companies use Ukrainian IT services drawn in by the country's lenient and supportive governance model, favourable tax policies, and the growing technology sector.

- **Ukraine has been emerging as one of the most important centers for the global tech industry**, as firms from Western Europe, North America, and Asia have moved there to tap into a large pool of technical talent on the eastern border of the European Union. According to [IT Ukraine Association](#) data, by early 2022, there were 285,000 IT professionals and over 4,000 tech companies in Ukraine.
- **Ukraine's IT sector excels in multiple industries. These include Fintech, Banking, E-commerce, Healthcare, Transportation, Logistics, Retail, Education, and Entertainment.** While some of these companies have had to close or temporarily halt their operations, there are others who are still managing to operate.
- **Ukraine is one of the top locations for offshore and near-shore third-party services**, especially for engineering and IT skills. Ukraine has an estimated 30,000+ people working for third-party service providers (mostly in digital engineering) with clients in the banking, retail, automobile, and healthcare industries.



## IMPACT OF THE CONFLICT ON THE TECHNOLOGY SECTOR

Around 41,861 domestic firms, catering to 153,331 customers in 141 countries and 83 sectors<sup>1</sup>, run the risk of severe business disruption, potentially impacting service delivery.



Many of these firms are in war-ravaged and high-threat areas.



Their workforces hail from places with significant disruption due to war, cyber-threats and other geopolitical tensions, the going-concern status of many firms could be compromised.



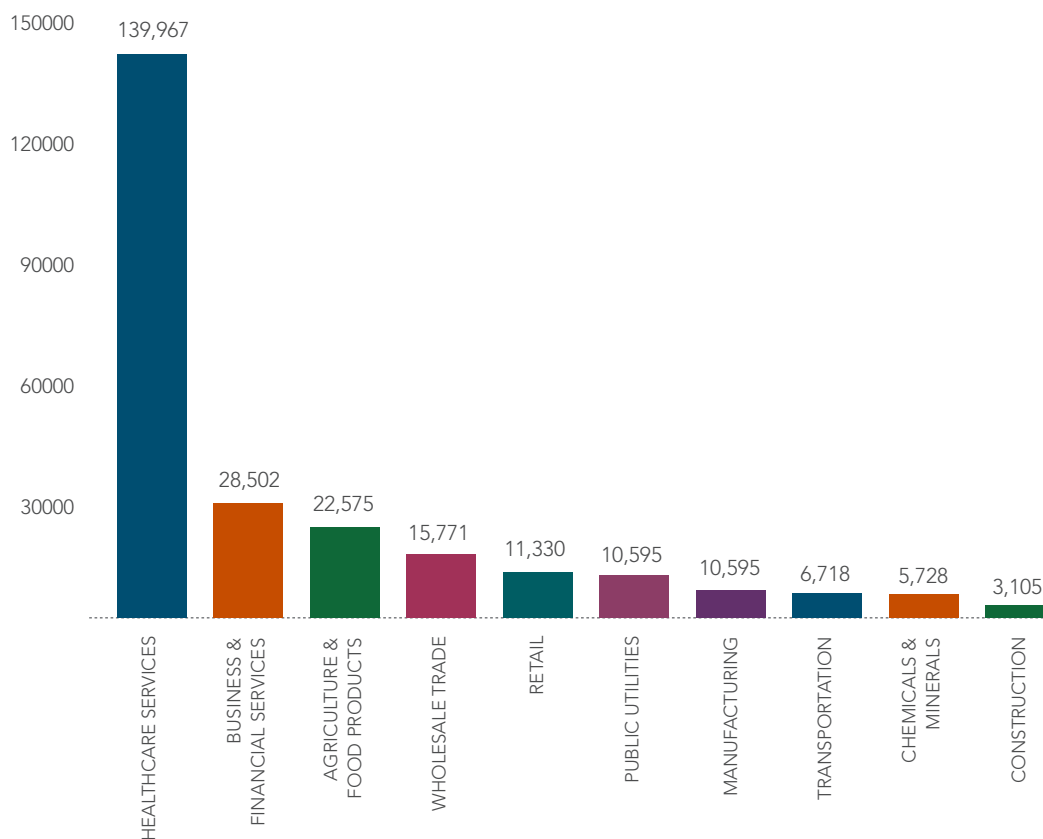
Many of these firms would have to either move their business centers to other areas or could get acquired by global players that continue to serve their existing client-base from their locations in relatively safer places like India, Algeria, Turkey, or the Philippines.

2,456 foreign-owned technology firms cater to 67,771 customers in 83 sectors.

The business risk for these companies could be relatively moderate as the operations could be moved to the organisation's parent location, for example India.

However, the exodus of tech-companies from Ukraine would be mired by a painful transition process and affect service delivery in the short-to-medium term.

### NUMBER OF CUSTOMERS



Source: Dun & Bradstreet data

Initially starting as a low-cost offshoring option, the Ukrainian IT sector has moved up to higher-end value-added work such as systems architecture, business analysis and experience design.

As Ukraine's tech clusters — in Kyiv, Lviv, Kharkiv and Dnipro — are all compromised, several companies are trying to move their employees and contractors out of Ukraine.

Ukraine's workforce largely comprises senior engineering talent, and such a move would have sizable disruption to global IT service providers working in Europe.

The disruption in Global Business Service (GBS) due to the war in Ukraine will affect the following services:

1. Global firms with workflows outsourced to service providers in Ukraine, Russia, or Belarus in digital engineering and IT.
2. Firms with work outsourced to service providers in India or other countries with subsidiaries and centers in Ukraine, often acquiring Ukrainian firms.
3. Firms with business centers using work forces in war-torn regions. Around 20,000 people are estimated to work in GBS centers in Ukraine, 10,000 people in Belarus and Russia. Similarly, around 20,000 people are estimated to be working for third-party service providers in Belarus and Russia.

India as a leader in Offshoring, Business Services and Technology sector is likely to emerge as a strong support to the technology sector in Europe.

- There are visible signs of UK and EU firms moving out-sourcing and near-shoring capabilities to alternative hubs like India and Argentina.
  - o There are significant concerns about business continuity and data security in the Eastern European region impacting IT service providers in these areas. Their investments and benefits could in turn shift to global IT hubs such as India.
  - o Eastern Europe has been growing as an essential strategic delivery center for Indian IT firms, mainly for proximity to European client offices to serve them more effectively. These service providers could move their service/delivery locations from Eastern Europe to India.
  - o Many Indian engineering firms had started acquiring Eastern European firms in the banking, utilities, and energy sectors to enhance their delivery capabilities. With ongoing conflicts, many of these acquisition deals could be constrained and/or delayed.
- Due to adverse impacts of war on skilled IT resources, along with inflationary pressure, the cost of hiring IT talent coupled with global talent shortages would keep service delivery costs elevated during 2022.

The Russia-Ukraine war has severely impacted technology companies in more than one way:

- 1. Threats of increased cyber-attacks:** As the military confrontation has also entered cyber space, companies are increasingly at risk of frequent cyber-attacks, further exacerbated due to highly integrated global IT systems and infrastructure.
- 2. Higher due-diligence and audit requirements:** Due to heightened scrutiny and due-diligence requirements for implementing sanctions, firms are requiring much more comprehensive AML/KYC and supplier onboarding platforms along with lengthy audit trail processes. This level of due diligence is expected to extend to business continuity and operations, insurance, supply chain risk, solvency risk, risk perpetrating to material contracts, and alterations applicable to national and international laws.
- 3. Large scale talent migration amid IT skilled talent shortage:** The crisis will likely fuel a tech-talent migration as Ukraine, pre-invasion, was one of the favored destinations for global tech companies. The key behind success of Ukrainian IT and offshore sectors are skilled talent-pool along with relatively low cost of operations. These led to setting up of subsidiaries and offshore service centers by leading technology firms.

- 4. Semiconductor market bottlenecks:** Around 90% of U.S. semiconductor-grade neon supplies come from Ukraine, and 45% of the world's palladium comes from Russia. This makes the semiconductor market extremely vulnerable to critical raw material shortages.

The global semiconductor industry is also facing supply issues of neon gas, palladium, and C4F6 used in chip manufacturing which was compounded by the coronavirus pandemic. The conflict is also greatly disrupting the global supply chains as cargo is rerouted around the two countries and costs increase.

Furthermore, the Biden administration has recently announced a chip blockade for Russia, which could further add to the existing uncertainties in the semiconductor market.

- 5. Demand for technology services to increase in Europe with likely increase in funding allocations:** We expect tech spending among Western European countries to increase due to expanded sanction reviews, defense and cyber-security spending.
- 6. More funds would need to be spent to manage skill shortages and relocation, along with a quest to build alternate IT Infrastructure:** Ukraine is considered as a country of IT developers and to scope for replacement talents elsewhere would be challenging for firms. Ukraine along with Russia housed more than 100 large global firms.
- 7. It can take decades to create a technology hub as strong as Eastern Europe's** and it has become an essential digital link in the business needs of start-ups and Fortune 500 companies.

## SPOTLIGHT: IMPACT ORGANISATIONS SERVED BY THE TECHNOLOGY SECTOR

Dun & Bradstreet data shows that Healthcare is the largest sector served by Technology firms in the region, comprising more than half of the customer base (139,967 healthcare organisations) being served by 4,899 tech firms operating out of these countries.

Country	Domestic ownership	Foreign ownership	Customer countries served
Poland	4,083	113	13
Russian	512	13	11
Ukraine	64	1	4
Latvia	40	2	6
Lithuania	31	4	2
Estonia	25	2	3
Belarus	9	0	1

Source: Dun & Bradstreet data

Apart from catering to the domestic healthcare services market (Poland, Russia, Ukraine, Latvia, Lithuania, Estonia, and Belarus), the tech firms in these countries serve healthcare services firms in another 15 countries. These include the US and Canada, Western European countries (UK, Germany, France, Spain, Netherlands, Belgium, Norway), Australia and others like Guam, Jamaica, Iraq, Algeria, and the Ivory Coast. Along with usual business disruptions due to the Russia-Ukraine war, Technology firms in these countries are also facing increased cyber-attacks that may lead to business disruption.

### CALL TO ACTION:



Firms should identify weak links in their supply chain, vendor management, and procurement processes and devise prudent and cautious supply chain strategies.



Firms should regularly review their supplier and client bases against sanctions and other regulations brought in since the war began.



Firms could also look for alternative IT providers or look to shift operations in the interim to safer location within Ukraine or neighboring countries.

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