



# 1. The Impact of the Russia-Ukraine War on the Global ICT Market

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## **ABSTRACT**

*The invasion of Ukraine by Russia, as well as the diplomatic and economic response that followed, has resulted in a major turning point for Europe and the rest of the globe. The conflict has had an impact on the information and communications technology (ICT) economy. The United States, the European Union (EU), and other nations have imposed economic sanctions and other measures on Russia, which have had an influence on the ICT. A new IDC analysis offers an early assessment of how the global financial crisis will affect ICT spending and technology industries. While the Ukrainian and Russian ICT markets will be the most affected by the war in the immediate term, few countries will be spared, with significant short-term declines projected and a likely slow future recovery. IDC predicts that other European countries will be struck first, with spillover effects on economies and digital marketplaces around the globe, especially given the war's expected impact on trade, supply chains, money flows, and energy prices.*

## **KEYWORDS:**

*Telecommunications, Information Technology, Europe, Russia, Russia-Ukraine Crisis.*

## **Introduction:**

The invasion of Ukraine by Russia, as well as the diplomatic and economic response that followed, has resulted in a major turning point for Europe and the rest of the globe. The conflict, as well as the economic sanctions and other measures imposed on Russia by the United States, the European Union (EU), and other nations, have had an impact on the information and communications technology (ICT) business. [1] A new analysis from the International Data Corporation (IDC) examines how the global financial crisis may effect ICT spending\* and technology marketplaces.

"In the following months and years, the shifting geopolitical landscape will surely effect global ICT demand," said Andrea Siviero, associate research director, European Customer Insights & Analysis. "According to a new IDC Global CIO Quick Pulse Survey, more than half of respondents are rethinking their technology spending plans for 2022, with 10% predicting significant changes to their ICT investment plans." [2]

Ukraine is one of the most popular destinations for offshore and near-shore third-party services, particularly in the fields of engineering and information technology. As a result, Russia's invasion of Ukraine this week has had a major impact on American and European businesses. The impact of the war in Ukraine on worldwide service delivery will be felt in three different ways:[3]

- American businesses with workflows outsourced to service providers in Ukraine, Russia, or Belarus
- American businesses with work outsourced to service providers in India or other countries, many of which supplement their capabilities by utilising Ukrainian resources or acquiring Ukrainian provider firms
- American corporations with Global Business Service (GBS) centres in the battle zone that employ personnel

Before the war, some service providers began transferring their workforce from eastern Ukraine to safer parts of the nation or even to neighbouring countries such as Poland, Turkey, and Israel in order to maintain uninterrupted service delivery and protect employees. [4]

The conflict in Ukraine began on multiple levels, including on the ground and in cyberspace. Cyber weapons were a prelude to all-out conflict on February 23, the day before Russia invaded Ukraine. Distributed denial of service (DDoS) assaults were launched against computer systems in several Ukrainian ministries, government agencies, and banks. [5]

Simultaneously, the crisis's expected impact on commerce, supply chains, financial flows, and energy prices will have a bigger influence on the global economy, with severe implications for both the regional and global ICT markets. The following are some of the consequences:

- **Technology Demand Fluctuation:** The conflict in Ukraine has disrupted corporate operations, and the Russian economy is already experiencing the effects of Western sanctions. This will have a significant impact on both countries' tech investment, with a double-digit reduction in local market demand projected in 2022. Meanwhile, Western European countries' technology spending may rise as a result of increased defence and security budgets.
- **Cash and Credit Availability:** The current financial restrictions are posing major obstacles to foreign credit availability in Russia, as well as the risk of losses on EU-to-Russia loans. Most businesses will be obliged to halt new technology expenditures in the near future if they do not have access to credit. In addition, the country is experiencing a severe cash shortage, which is having a substantial influence on consumer spending. [6]
- **Supply Chain Dynamics:** The sanctions will have a substantial impact on Russian exports of completed goods and technological components, but given the scale of the market, the impact on Western enterprises will be minimal. Imports of technology materials from Russia and Ukraine will be impacted as well, particularly in the semiconductor industry, where supplies of neon gas, palladium, and C4F6 needed in chip fabrication would be drastically decreased. As freight is redirected around the two

countries and expenses rise, the conflict is projected to dramatically disrupt global supply networks.

- **Exchange Rate Fluctuations:** As a result of the initial sanctions, Russia's currency plummeted in value, making IT equipment and services imports substantially more expensive. As a result, even if payment is possible, many companies are refusing to fulfil orders to Russia. This also means that Russia's own PC, server, and communications equipment manufacturers will be shut down. Other currencies in the region, particularly the Euro, are being impacted by geopolitical concerns. [7]

We believe that in order to establish resilience, Chinese tech businesses would aggressively localise technologies. As a result of the war, there has been a significant shift. The process began with the recent tense US-China relations, but the Russia-Ukraine conflict has heightened the urgency in China. China will strengthen ties with Asian and Pacific countries, particularly in Southeast Asia. Southeast Asia is also a target for Chinese tech firms aiming to establish a foothold in the global market. [8] We believe that in Russia, we will increasingly see Chinese-made semiconductors powering Chinese-made IT infrastructure, as well as devices running "national" Linux-based operating systems and applications.

### **Review of Literature:**

The conflict between Russia and Ukraine has impacted supply systems in both nations. Russian exports are constrained as a result of sanctions, and Ukraine's ports are closed as a result of the conflict. The war has already pushed wheat prices to 14-year highs on the Chicago futures exchange (Josephs, 2022)[9.]

"The situation in eastern Ukraine is likely to remain stalemated and characterised by variable degrees of violence," writes Daniel R. Coats[10].

7 Russia's war in the Donbas threatens not only Ukraine, but also those countries that aren't fortunate enough to have Russia as a neighbour. Russia is attempting to split the West and force it to sit down at the bargaining table with Moscow by using falsehoods, denial, propaganda, hacking, and intervention in other nations' internal affairs. The key factors in this situation are democratic countries' unity within the North Atlantic Treaty Organization (NATO) and the European Union (EU), which will not allow Russia to divide the West, and the development and maintenance of a robust system of civil-military relations within Western states.

The economic impact of previous Ukraine-Russia conflicts before the most recent crisis in 2022 (Korovkin, Vasily, and Makarin, Alexey, 2021) examines the economic impact of the 2014 Russia-Ukraine conflict, as trade exchange continued between the two countries despite the conflict's start. Given that the 2022 Russia-Ukraine conflict is a continuous crisis with constantly updated information streaming in across several news outlets, very little academic study has been compiled. More specifically, the impact of the present Russia-Ukraine issue on Russia and Ukraine is receiving a lot of attention. As a result, the goal of this research is to compile and analyse the most up-to-date information on the crisis' present worldwide economic impact.

**Objectives:**

- To study impact of the Russia-Ukraine War on the type of services
- To study crisis's of the Russia-Ukraine War on trade, supply chains, capital flows, and energy prices
- To study impact of war on global ICT market
- To study spending growth rates of ICT

**Research Methodology:**

A research technique is a standardised approach to addressing a research topic through data collecting, data analysis, and results based on the study's findings. A research technique is a strategy for conducting a study. Research can be informally described as the systematic gathering and analysis of facts and information for the progress of knowledge in any field. The data utilised to write this paper is secondary in nature and was gathered from a variety of public sources. The information for this paper was gathered from a variety of sources.

**Result and Discussion:**

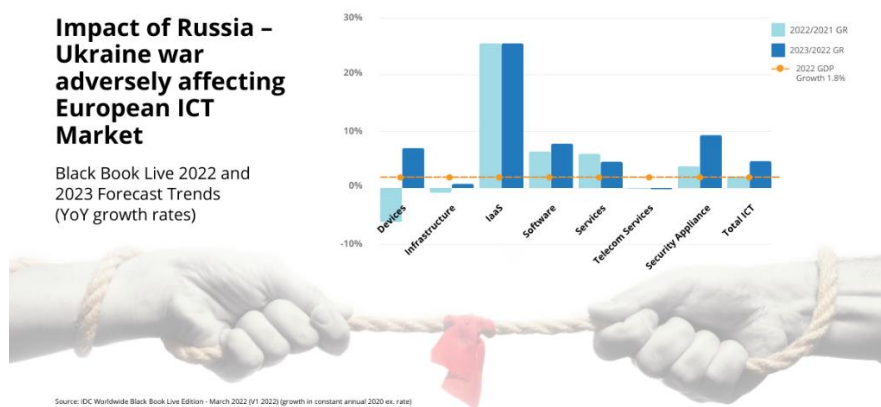
Russia's use of ICT in the Ukraine conflict was prompted by the country's previous experience in a battle with Georgia. Russia is well aware that its military equipment lags behind that of Western nations, particularly the United States. As a result, Russia has adopted a war strategy that not only relies on military hardware but also makes extensive use of information and communication technology. We have highlighted the following main effects for the global ICT market based on the features of the conflict and the present sanctions: [11]



**Figure 1: The impact of the Russian-Ukraine conflict on the global ICT business**

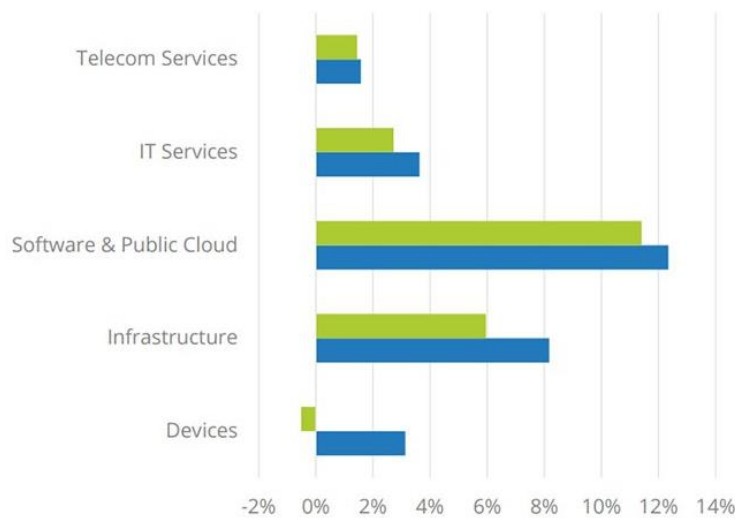
*The Impact of the Russia-Ukraine War on the Global ICT Market*

According to a new update to IDC's Worldwide Black Book Live Edition, European ICT spending would expand by 2.0 percent in constant currency terms, to \$1,052.01 billion. This compares to a pre-war prediction of 3.7 percent growth. The exception is most gadget markets, which are predicted to drop by 6.1 percent year over year, including PCs and mobile phones. [12-15] During periods of economic and corporate uncertainty, many businesses elect to cut capital spending.



**Figure 2: The Impact of the Russia-Ukraine Conflict on the ICT Market**

A quick diplomatic solution would nevertheless lower ICT spending growth from 4.5 percent to slightly under 3 percent in 2022, while a short or long war would reduce it to 2% or less than 1%, respectively. According to IDC, a brief conflict would wipe away \$143 billion in ICT spending in Europe over the next three years, making it the most likely scenario. [16]



**Figure 3: Worldwide tech view, 2022/2021 spending growth rates**

Figure 3: Global tech outlook, spending growth rates in 2022 and 2021.

An study of how ICT dominates various areas of the Ukrainian and Russian information societies can be done from the perspective of Hegemony theory. Humans are affected by ICT predominance both knowingly and unintentionally. It can be observed how ICT becomes a tool or media to express particular goals from Ukraine and Russia with the goal of influencing public opinion from the standpoint of Agenda Setting theory. Finally, Ukraine employs ICT not just to protect its sovereignty, but also to elicit sympathy from the international community. Russia employs ICT in information warfare because it recognises that conventional weapons are ineffective in preserving its sovereignty. Because it is relatively cheaper, has a wider range of utilities, and has a higher impact, Russia employs ICT as a new weapon. Russia uses ICT to obtain international recognition for its existence in terms of political goals. According to securitization theory, ICT control over humans, which is subsequently used for political objectives, constitutes a threat to a country's security, in this case Ukraine and Russia.

### **Conclusion:**

Ukraine's historical significance for the Russian Federation cannot be overstated. Ukraine has provided Russia with not only billions of tonnes of natural riches, but also exceptional human resources; many brilliant professors, inventors, athletes, engineers, writers, and culture and arts workers have lived and worked in Russia. Russia owes its prosperity to Ukraine in many ways. Inflation, supply chain interruptions, and cybersecurity threats are all important concerns for ICT vendors and purchasers in Asia/Pacific as a result of the Ukraine crisis. This IDC Market Note compiles the perspectives of regional analysts to provide a preliminary assessment of the war's effects on ICT markets and industries, as well as advice for regionally based ICT vendors and purchasers.

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