#### NOW IT SECTOR CONDITION IN BOOMB OR RECESSION

##### The Information Technology (IT) sector, a dynamic and ever-evolving industry, experiences distinctive shifts in its landscape during economic recessions and booms. These cycles bring about nuanced challenges and opportunities that profoundly influence the sector's trajectory. In times of recession, the IT sector often grapples with belt-tightening measures, reduced budgets, and heightened focus on efficiency. Conversely, during economic booms, the IT landscape witnesses a surge in innovation, increased investments, and a thriving job market. Let's delve into the intricacies of how the IT sector navigates these contrasting economic phases and the consequential impact on businesses, employment, and technological advancements.

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#### MARKET AND WORK TRENDS

#### 1.    Artificial Intelligence (AI)

#### Artificial Intelligence continues to rank at the top of emerging tech. Chat bots and Apple’s Siri are common examples of AI in action, but we will see more complex versions being used in the near future.

#### Trend: Generative AI and increased focus on explainable AI and ethical considerations

#### Generative AI is taking us one step closer to what we’ve always seen from cinematic tech of the future. [ChatGPT](https://www.comptia.org/blog/how-to-think-about-chatgpt-and-the-new-wave-of-ai), a generative AI technology that utilizes natural language processing and can generate text based on a prompt, leaders evaluated the impact of the technology on business applications, but also tried to anticipate the ethical implications of a technology that can mimic human output.

#### Explainable AI is a subset of artificial intelligence and is the next step in our technology journey, where the technology provides logic and reasoning for why it came to a conclusion. Previously, even the developers of AI often couldn’t explain how achieved a particular outcome. Explainable AI provides an outcome and how it got there.

#### 2.    Internet of Things (IoT)

#### [Internet of Things (IoT)](https://connect.comptia.org/blog/internet-of-things-stats-facts) uses connected devices, such as wearable and sensors, to provide more optimal results for businesses.

#### Trend: Expansion of IoT devices in various industries and increased focus on cyber security

#### IoT devices are becoming increasingly used across various industries. A large part of this expansion derives from the increasing bandwidths we are seeing with 5G. Running parallel to that expansion is the need for increased cyber security, particularly with respect to IoT. The open interconnectivity capabilities of IoT have made it a prime candidate for cyber attacks in the past. Providers will refocus their efforts to help ensure IoT is becoming more secure.

#### 3. 5G Networks

#### 5G networks have been key for increasing speeds, increasing capacity and reducing latency. The next wave of networks will involve 5G networks that stand alone.

#### Trend: Development of standalone 5G networks for broader coverage and lower latency

#### When 5G networks originally rolled out, they were dependent on the 4G core network to provide data transfer and coverage. This allowed for the initial functionality without implementing a whole new infrastructure. Now, with the development of 5G standalone (5G SA) networks, users will have access to greater coverage and will experience lower latency. Utilizing a cloud-based architecture, 5G SA will provide a better user experience and pave the way for technologies such as autonomous vehicle automation and precision robotics.

#### 4. Block chain

#### [Block chain](https://www.comptia.org/blog/what-is-blockchain) is helping to keep data more secure and creating a reliable history of transactions. The applications extend far beyond that of crypto currency.

#### Trend: Increased adoption in supply chain management and financial services

#### The rise in supply chain issues and the increased digitization of currency is creating new use cases for block chain. With its indelible transaction history, block chain is helping to give real-time insight into the tracking of goods from creation to distribution, relieving some of the bottlenecks that are created in the supply chain. In financial services, block chain is now being applied to streamline banking and lending in the face of digitization and reducing operational risks with verified history.

#### A recession can have a significant impact on the IT sector. During a recession, companies that rely heavily on technology may cut back on their IT budgets and investments. This can lead to decreased demand for IT services, products, and software, and can also lead to job losses within the sector.

#### Global IT Market in 2023

#### In the technology industry, the year 2023 was marked by major losses for the largest tech companies, as they saw trillions of dollars in market value disappear. This downturn was attributed to a variety of factors, including the disruption caused by the Covid-19 pandemic, Russia's invasion of Ukraine, and rising inflation leading to increased interest rates, which all caused investor concerns.

*Companies in various sectors, such as semiconductors, social media, and cloud computing, lowered their future projections, reported poor growth, and experienced a decrease in stock prices. By October, seven major tech companies, including Facebook, Apple, Amazon, Netflix, Google, and Tesla, had lost over $3 trillion in combined market value*.

#### Google and Microsoft each lost around $700 billion, and Facebook, now Meta, lost $600 billion. The situation worsened further, with Amazon becoming the first public company, not just a tech business, to lose a trillion dollars in market value. Bloomberg reported on November 12 that Amazon's market value had dropped from $1.88 trillion to $879 billion, while Microsoft's market value also decreased to $889 billion.

#### IMPACT OF GLOBAL EVENTS

#### LAYOFFS

#### Technology companies across various industries have been laying off employees at a rapid rate, similar to the level seen during the Covid-19 pandemic's initial impact on the global economy in 2020. According to estimates, the struggling tech sector has cut over 150,000 jobs in 2022. This includes large companies such as Facebook parent company Meta Platforms (which announced over 11,000 layoffs in November) and Amazon (which may cut around 18,000 jobs), as well as smaller businesses in the US and other countries. The Indian IT services companies are major employers in the organized sector, and any global economic trends are likely to affect their growth projections. Indian start-up layoffs were also on the rise, with Inc42 reporting that over 15,700 employees were laid off in 2022 due to tightening funding conditions.

#### CONDITION OF COMPANIES

#### The impact of the recession in western countries is now being seen in India as well. The IT sector is one of the largest providers of jobs in India. Companies like TCS, Infosys, and Wipro provide employment to millions of people every year, including a significant number of freshers. However, many of these companies have a substantial customer base in western countries, which could lead to a reduction in hiring for their Indian operations. This means that there could be a decrease in job opportunities in the IT sector.

#### In the current fiscal year 2023-24, hiring from leading IT companies in India could decline by up to 40% compared to the previous year. According to staffing firm Geffen's estimates, top IT companies from the past year had provided over 250,000 new jobs, and here they could hire anywhere between 50,000 to 100,000 employees.

#### The condition of international companies is dire as well. This situation is not only true for Indian companies but also for international ones. According to reports, even prominent international companies operating in India like Accenture, Capgemini, and Cognizant have witnessed a decrease in the number of employees. In India, among all these major companies with a significant presence, the number of employees has decreased by 5,000 each. This year seems to be a year of job cleaning in IT companies. In the current financial year, there is a possibility of a 40% reduction.

#### SHIFT IN TECHNOLOGY PRIORITIES

#### Shifts in technology priorities occur in response to evolving global events and industry dynamics. For instance, the COVID-19 pandemic triggered a profound transformation in technology priorities. As businesses swiftly adapted to remote work, there was an accelerated demand for collaborative tools video conferencing platforms, and cloud-based solutions. Companies redirected their investments

#### towards technologies supporting virtual collaboration, ensuring business continuity, and enhancing cyber security measures to protect sensitive information accessed from various locations.

#### Additionally, the increased reliance on e-commerce and contactless transactions prompted a surge in demand for digital payment systems and secure online platforms. Artificial intelligence and automation gained prominence as organizations sought to optimize processes, reduce manual interventions, and enhance efficiency in response to disruptions caused by the pandemic.

#### The emphasis on healthcare technologies also intensified, with a focus on telemedicine, health informatics, and digital solutions to manage public health crises effectively. The shift in technology priorities reflects a dynamic landscape where adaptability and innovation become paramount. Such shifts not only address immediate challenges but also pave the way for long-term transformations, shaping the trajectory of the IT sector in alignment with the evolving needs of businesses and society.

#### THE RESILIENCE OF IT INDUSTRY

#### The Indian IT industry is known for its ability to bounce back and adapt to changing circumstances. Many companies have adapted their business strategies and focused on cost-efficient solutions in order to remain competitive. The Indian IT sector is resilient for several reasons, including the large pool of highly skilled and English-speaking professionals in India, making it an attractive location for outsourcing IT services. The Indian government has also made efforts to support the IT industry through initiatives such as the establishment of software technology parks. The cost-effectiveness of doing business in India also contributes to the sector's resilience. Additionally, Indian IT companies have diversified their services and expanded into new markets, which helps to mitigate the impact of downturns in specific areas.