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Investments of International Companies in the Field of Information Technology: Analysis and Effectiveness

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Abstract: ***This article analyzes investments of international companies in the field of information technologies. It highlights the investment strategies, main directions and results of projects of leading companies (Google, Microsoft, Amazon, etc.). It reveals the economic and social effectiveness of investments in advanced areas such as artificial intelligence, cloud technologies, and cybersecurity. Also, recommendations are developed for the IT sector of Uzbekistan based on foreign experience.***

Keywords: Information Technology, Investment, International Companies, Artificial Intelligence, Cloud Technologies, Cybersecurity, Digital Economy, Microsoft, Google, Amazon, Uzbekistan IT Market, Innovative Development.

Abbreviations:
BI: Business Intelligence
LLM: Large Language Model

I. INTRODUCTION

The role of the information technology sector in today's global economy is growing. Digital transformation and the widespread use of innovative technologies are dramatically increasing international investment in this sector.

In the digital age, information technology has become the heart and core infrastructure of companies. Modern technological solutions, including artificial intelligence, cloud computing, cybersecurity, and automation, encompass all stages of a company, from production to customer relations. At the same time, the development of the digital economy increases the efficiency of companies in the market and prepares them for global competition.

The digital economy is an economic system built on information technology infrastructure, digital products and services, and data. Through the digital economy, companies can:

- They introduce online shopping and electronic payments.
- Reduce IT costs through cloud technologies
- They engage with customers in real time using mobile apps
- Artificial Intelligence and Automation. They increase workforce efficiency through

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At the modern stage of companies' activities, the implementation of information technologies has become a prerequisite for participation in the digital economy. Through IT solutions, each company not only enhances its internal processes but also adapts to the evolving requirements of the global digital market. Therefore, companies that are prepared for digital transformation will have a competitive advantage in the future.

Businesses and organizations process millions of streams of information every day. Effectively managing this data and drawing valid conclusions from it is done through data analysis. In particular, the integration of artificial intelligence and information technology enables a high level of automation in this process, allowing for fast and accurate analytical results.

Data analytics is the process of collecting, cleaning, studying, modeling, and drawing valid conclusions from data. It includes the following steps:

- Descriptive analysis – answers the question "what happened?" based on available data.
- Diagnostic analysis - determines what the causes of events are.
- Predictive analytics – predicts future events.
- Prescriptive analysis – provides recommendations for decision-making.

Artificial intelligence automates each of these steps, providing fast and reliable results that minimise the human factor.

Data analytics is not just a technical tool for modern companies, but also a source of strategic competitive advantage. Artificial intelligence is a key tool that enhances this process. Automated analysis using artificial intelligence presents significant opportunities for companies to make informed decisions, mitigate risks, and develop services that effectively meet user needs. In the future, there is no doubt that analytical systems based on artificial intelligence will become an integral part of every enterprise [1].

A. The Main Functions of Information Technology in a Company

- In companies, large amounts of data about customers, financial activities, and internal processes are organized, analyzed, and protected through IT tools. Production, sales, marketing, and personnel processes are automated using information systems, such as ERP, CRM, and HRM.
- Through Business Intelligence (BI) systems, management makes decisions based

on real-time analytical data.

- Innovative technologies allow a company to develop new products, improve the quality of services, and satisfy customer needs faster.

Investments in the information technology sector by leading transnational companies, such as giants like Google, Microsoft, Amazon, Apple, and Meta, not only affect the companies' profits but also impact the development of the entire global economy.

This article analyses the investments made by international companies in the field of information technology, their primary directions, and the effectiveness of these investments. In recent years, artificial intelligence technologies have become an integral part of the information technology sector for companies.

Large and medium-sized companies across various industries are leveraging the capabilities of artificial intelligence to enhance competitiveness, automate processes, and lower costs [2].

II. INVESTMENT EFFICIENCY

Investments in information technology are yielding high levels of financial and relative efficiency. This is evident in the following:

- Reduced operating costs - using artificial intelligence and automation tools, the workload on human resources is reduced, and work processes are accelerated.
- Market competitiveness increases - **through** innovative services, companies can offer customized products that meet customer needs.
- Revenue indicators increase - through effective marketing, predictive sales, and customer analytics using artificial intelligence, revenues are growing by 15–30% annually (according to McKinsey, Statista sources).
- Flexibility - Thanks to digital services, companies can respond quickly and appropriately to market changes.

Investments in information technology are not only a means of modernization for companies, but also an opportunity to move to a new level of digital business models. In the current global economic environment, proper planning of information technology investments, combined with artificial intelligence, cloud systems, and security, is essential for any company's growth and development [3].

III. ARTIFICIAL INTELLIGENCE IN THE PRACTICE OF COMPANIES: EXAMPLES OF USING

- Microsoft has integrated artificial intelligence into Office platforms through its Copilot program, which has increased the speed, accuracy, and automation of workflows.
- Google Corporation has implemented artificial intelligence into Gmail, Google Translate, and Google Cloud platforms. With the help of artificial intelligence, personalized services are being provided to users.
- Amazon is optimizing logistics and improving user recommendations through artificial intelligence. It also offers artificial intelligence tools to other companies through the Amazon platform.
- Apple has launched a local use of artificial intelligence on devices through "Apple Intelligence." This allows you to use artificial intelligence features while maintaining the security of user data.

Table-I: The Benefits of Artificial Intelligence for Companies [4]

Direction	Benefits of Artificial Intelligence
Data analysis	Make quick, informed decisions
Automation	Reduce labor load, speed
Cost reduction	Efficient use of resources
Customer relations	24/7 service, increasing satisfaction levels
Cybersecurity	Detect and block threats early

Artificial intelligence is becoming an integral part of companies' IT infrastructure. It is actively used as a necessary tool for digital transformation, competitiveness and innovative approaches. Every modern company can become more efficient by fully utilizing the capabilities of artificial intelligence [5].

IV. LARGE INTERNATIONAL COMPANIES ARE CONSTANTLY INVESTING LARGE AMOUNTS OF MONEY IN THE DEVELOPMENT OF DIGITAL TECHNOLOGIES

Google (Alphabet Inc.) is investing billions of dollars in artificial intelligence, machine learning and data analytics. It is leading the field of artificial intelligence through its DeepMind lab. Alphabet reported revenue of -$96.4 billion to $96.5 billion for the second quarter of 2025, up 14% and beating analysts' estimates. YouTube ad revenue reached $9.8 billion, and Google Cloud generated $13.6 billion, both of which exceeded expectations.

Alphabet has increased its capital spending for 2025 from $75 billion to $85 billion, driven by demand for artificial intelligence and cloud infrastructure.

CFO Anat Ashkenazi believes this spending is targeted, considering ROI and market need. Current spending is primarily on servers, data centres, and network infrastructure, totalling $22.4 billion this quarter.

Google Cloud revenue grew 32% to $13.6 billion in Q2. Operating income was $2.83 billion, driving a margin of 20.7% (a significant increase from the previous year).

The cloud platform is now worth over $ 50 billion annually and is competing with Microsoft Azure and AWS. Alphabet is under intense scrutiny by the US and European antitrust authorities. The US Department of Justice is pursuing a criminal antitrust case against Google, including a demand for radical changes to the Chrome and Android marketplaces. The rulings are expected to be announced by August 2025.

Alphabet is investing heavily in its AI infrastructure catalyst strategy for 2025. While margin and revenue growth have been achieved in the cloud segment, regulatory

measures (particularly antitrust and European legislation) remain a significant source of risk for the company. At the same time, DeepMind technologies, Gemini and Veo models, as well as substantial M&A activities, are providing a strategic advantage [6].

Microsoft shares have risen 20–45% since the beginning of 2025, breaking several historical records, particularly in the Azure and Copilot segments, which have been performing exceptionally well. The current price is estimated to be around $578–$ 600, and analysts are optimistic about the forecast. Microsoft plans to spend $80–$ 84 billion on artificial intelligence and cloud infrastructure in fiscal year 2025, approximately half of which will be allocated in the United States.

The investment is aimed at developing AI-based services, expanding data centres, and strengthening partnerships in AI. South Africa plans to invest $300 million in cloud and AI infrastructure by 2027, while Poland has allocated $700 million to develop its post-pandemic digital infrastructure [7].

Operating margins are stable, and the company has a strong balance sheet with minimal debt — its current credit ratings indicate strong financial health. Microsoft is investing more than $80 billion in AI and cloud infrastructure by 2025, driven by strong growth in Azure and Copilot.

[Fig.1: Microsoft's Earnings Report] [8]

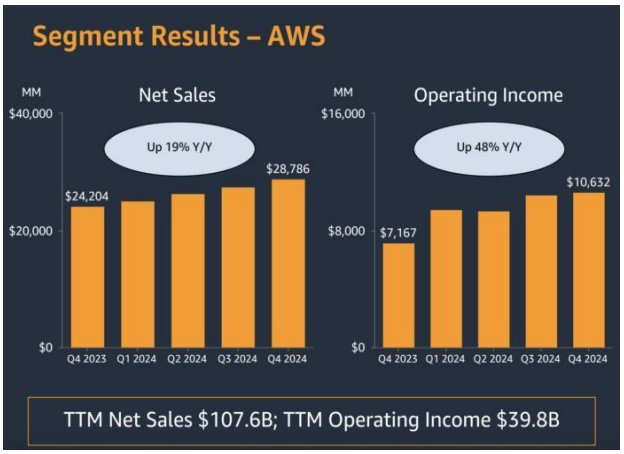
Amazon is investing extensively in artificial intelligence, server services, data centres, and logistics technologies through Amazon Web Services.

In 2025, Amazon Web Services plans to invest more than $100 billion in the field of artificial intelligence. Approximately 70% of these funds will be directed toward expanding the infrastructure of Amazon Web Services, including building new data centres and modernising existing ones [9].

[Fig.2: 2023-2025 Amazon Web Services Income and Indicators]

is looking to strengthen its position in the generative artificial intelligence and large language model (LLM) market through new services, such as Bedrock.

Amazon Bedrock users are expected to grow 4.7 times in 2024, reflecting the growing demand for AI services. It plans to invest more than $5 billion to open a new data centre in Taiwan. The move is designed to strengthen the company's position in the Asian market and enhance its competitiveness in the region [10].



[Fig.3. Amazon Web Services for 2024 Income and Indicators]

Amazon Web Services' annual revenue is expected to reach $110 billion in 2024, a 19% increase. The company continues to develop new revenue streams through artificial intelligence services, ensuring its financial sustainability.

Amazon Web Services: In 2025, Amazon's investments are aimed at strengthening the company's leadership in the artificial intelligence and cloud services market. Through new technologies and global expansion, Amazon Web Services aims to enhance its competitiveness and maintain financial stability.

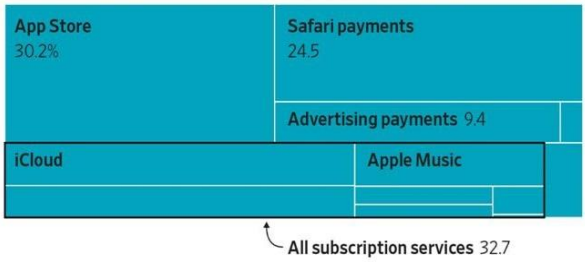
Apple, on the other hand, is investing in its production chain for innovative devices, custom processors (such as the M1 and M2 chips), and mobile technology.

Apple has announced plans to invest more than $500 billion (investments and acquisitions) in the United States between 2025 and 2029. The funds will be directed to artificial intelligence, silicon engineering (chip manufacturing), data centres, and training.

The package includes a new server factory in Houston, Texas, and the creation of an Apple Manufacturing Academy in

Michigan, a $10 billion expansion of the Advanced Manufacturing Fund, and an expansion of Apple Services and Apple Intelligence infrastructure. R&D spending increased from $21.9 billion to $31.4 billion in 2023–2024, driven by innovations such as generative artificial intelligence, Apple silicon, and visual interfaces.

The Apple Intelligence Platform (on-device and server model) is an AI operating at the GPT-3 and GPT-4 levels. It will be offered to users with expanded capabilities starting in early 2025 [11].



[Fig.4: Apple's Services Revenue Share for 2024]

Expanding collaboration with Dassault Systèmes in Vision Pro and spatial computing — helping to integrate AR/VR technology into industrial design. Apple maintains a balanced investment strategy — investing in innovation and capacity expansion while maintaining stable liquidity and cash flow [12].

Apple's free cash flow is expected to be $108.8 billion in 2024, with a net debt-to-EBITDA ratio of 0.5x, which strengthens the company's ability to fund capital investments. Apple spent more than $95 billion on share repurchases in 2024, which had a positive impact on EPS [13].

Investment analysis has shown that every dollar invested in IT by international companies quickly pays for itself financially.

For example:

- Microsoft sees 20% growth in 2024 from artificial intelligence and cloud platforms**.**
- AWS is forecasting a 30% revenue growth by 2025.
- Google, on the other hand, is improving the user experience and boosting advertising effectiveness by integrating artificial intelligence into its advertising systems.

Companies are also gaining an advantage over their competitors by bringing innovative products to market quickly, demonstrating that investments are being made in a timely and targeted manner [14].

V. CONCLUSION

Investments in information technology by international companies are becoming a key factor in innovative development, financial efficiency and competitiveness. These companies are achieving not only technological leadership but also global economic dominance by investing in strategic areas such as artificial intelligence, cloud technologies, and cybersecurity.

In turn, this experience can serve as an essential guide for developing countries, particularly Uzbekistan, in forming a digital economy, developing information technology infrastructure, and mastering international technologies.

The analysis shows that the experience of international companies is very relevant for Uzbekistan and other developing countries. The following conclusions can be drawn for them:

- Investment in information technology infrastructure through public-private partnerships will accelerate the digital economy.
- It is necessary to adopt and localize international standards for artificial intelligence and cybersecurity.
- Information technology startups in Uzbekistan will have the opportunity to develop faster by absorbing foreign investments and technologies.

The study's results show that investments in IT significantly increase not only technological progress but also a company's financial performance, innovative potential, and competitiveness in the global market.

Information technology has become a key factor in the strategic development of companies today. Trends such as digital transformation, automation, artificial intelligence, cloud infrastructure, and cybersecurity are serving as a source of not only technological advantage but also economic efficiency for companies.

DECLARATION STATEMENT

I must verify the accuracy of the following information as the article's author.

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