MARKETING RESEARCH OF CUSTOMER DEMAND AND FACTORS AFFECTING THE CREATION OF SOFTWARE PRODUCTS

Ibragim Rayimbayev
Phone number: +998 90 920 33 36
Rayimbayev@gmail.com
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Abstract. This study explores the factors influencing customer demand in the software industry and the role of marketing research in shaping the development of software products. As the digital landscape evolves, understanding customer needs becomes increasingly complex, with demand driven by a variety of macroeconomic, microeconomic, technological, and regulatory factors. This research employs both quantitative and qualitative research methods, including surveys, interviews, and competitor analysis, to gain insights into customer preferences and market trends. The findings reveal that factors such as economic conditions, technological advancements, and industry-specific requirements significantly influence software demand. Additionally, emerging trends like remote work solutions and cybersecurity are shaping the future of software development. The study also emphasizes the importance of Agile methodologies, specifically Scrum, in managing software development projects and ensuring alignment with customer expectations. The results provide valuable insights for software companies looking to adapt to evolving market conditions, meet customer needs, and maintain a competitive edge.

Keywords. Software Demand, Marketing Research, Customer Preferences, Software Development, Agile Methodology, Scrum, Technological Trends, Economic Factors, Competitor Analysis, Software Industry

Introduction. In the modern digital landscape, the software industry is a key driver of innovation, transforming industries and altering how businesses operate globally. As the demand for software grows, it is critical for companies to understand not only what customers desire in terms of functionality but also the underlying economic, technological, and social factors influencing these demands. The development of software products represents a complex interaction between technological progress, market trends, regulatory environments, and user expectations. This research seeks to explore the various factors that shape customer demand for software and how companies can conduct marketing research to better align their products with these needs.

In recent years, the pace of software development has accelerated, largely driven by advancements in digital solutions such as artificial intelligence, cloud computing, and blockchain. At the core of this transformation is the need to deeply understand customer preferences. However, this is not limited to identifying new applications or systems but extends to understanding broader industry trends, macroeconomic factors, and specific business requirements. This multifaceted approach to demand analysis is essential for software developers and strategists to stay competitive in an increasingly complex market.

The information and communication technology (ICT) sector, particularly in emerging economies like Uzbekistan, is undergoing rapid growth. The growing emphasis on high-tech production, digital transformation, and the increasing number of start-up projects is indicative of the evolving software market. This research examines the role of customer demand in software development and the essential marketing research methods that allow companies to anticipate market changes and ensure long-term success.

Methods. To understand the factors affecting software demand, a comprehensive research approach was utilized, combining both quantitative and qualitative techniques. The research methods included:

1. Quantitative Research: Surveys, statistical analysis, and market data were employed to understand the demand for various types of software, including custom-built solutions, Software-as-a-Service (SaaS), and mobile applications. Data on consumer preferences and industry-specific requirements, such as healthcare (e.g., Electronic Health Record systems) and retail (e.g., e-commerce platforms), was also collected to gauge market trends.
2. Qualitative Research: Interviews with industry experts, software developers, and customers were conducted to gain deeper insights into consumer needs and challenges. Focus groups provided additional qualitative data on how customers perceive software products, what features are most valued, and what barriers they face in adoption.
3. Competitor Analysis: An analysis of competing software companies helped identify market leaders, emerging trends, and potential gaps in the market. By comparing products, services, and marketing strategies, companies can better understand how to position themselves within the competitive landscape.
4. Trend Analysis: Emerging trends in technology and customer behavior were studied, with particular attention to the rise of remote work solutions,

cybersecurity needs, and the growing importance of user experience (UX) in software products. This analysis is vital for companies to predict the future direction of the market and align their product development efforts accordingly.

Results. The research revealed several key factors influencing customer demand for software products. These factors can be broadly classified into macro and micro factors, industry-specific requirements, and emerging technological trends.

1. Macroeconomic Factors

- Economic Conditions: Global economic trends, such as economic growth or recessions, significantly influence software demand. For example, during periods of economic expansion, businesses are more likely to invest in advanced software solutions that improve efficiency and drive growth.
- Technological Advancements: Innovations such as cloud computing, artificial intelligence (AI), and blockchain are reshaping software demand. Companies increasingly require software that integrates these technologies to enhance operational efficiency and data security.
- Regulatory Factors: Legal frameworks such as GDPR (General Data Protection Regulation) in Europe and HIPAA (Health Insurance Portability and Accountability Act) in the U.S. affect software demand, particularly in industries like healthcare and finance where data privacy and security are paramount.

2. Microeconomic Factors

- Company-Specific Needs: The internal growth of companies—through mergers, acquisitions, and expansion—drives demand for customized software solutions. Additionally, companies are often seeking software to modernize outdated IT infrastructures and streamline operations.
- Competitive Environment: The increasing number of software providers and solutions in the market means that companies must offer unique functionalities or superior customer service to differentiate themselves.

3. Industry-Specific Demand

Different industries have distinct software needs. For instance:

- Healthcare: Demand for Electronic Health Record (EHR) systems, telemedicine platforms, and health data analytics is growing as the healthcare sector embraces digital solutions.
- Retail: E-commerce platforms, customer relationship management (CRM) systems, and inventory management solutions are in high demand as the retail sector undergoes digital transformation.

4. Technological Trends

- Remote Work Solutions: The shift towards remote work has led to increased demand for collaboration tools, VPNs (virtual private networks), and remote desktop software.
- Cybersecurity: As data breaches become more frequent, organizations are seeking software that offers enhanced security features, such as encryption and multi-factor authentication.
- Automation and AI: Automation in software development and machine learning algorithms are increasingly being integrated into software products to improve user experience and operational efficiency.

5. Customer Preferences

Software buyers tend to prioritize the following characteristics when choosing a product:

- Ease of Use: Simple, intuitive interfaces that require minimal training.
- Scalability: The ability to scale the software as business needs grow.
- Integration Capabilities: Seamless integration with existing systems.
- Cost: Competitive pricing that aligns with the company's budget and resources.
- After-Sales Support: Strong customer service and technical support.

6. Barriers to Adoption

Despite the growing demand, several barriers exist that prevent companies from adopting new software:

- High Costs: Software implementation and maintenance costs can be prohibitive for smaller businesses.
- Complexity: Some software solutions are difficult to implement and require significant training, which may discourage adoption.
- Compatibility Issues: Older systems or legacy software may not integrate well with newer solutions, leading to resistance from businesses.

Discussion. The research highlights the complexity of understanding customer demand in the software industry. It is evident that both macroeconomic and microeconomic factors influence software demand, and companies must be agile in responding to these shifts. The global economic landscape, technological advancements, and regulatory changes will continue to shape the software market, making it crucial for companies to stay ahead of these trends.

Effective **marketing research** is essential for software companies to better understand customer needs and tailor their products accordingly. By leveraging both quantitative and qualitative research methods, businesses can gain a comprehensive view of the market and customer preferences. Competitor analysis and trend forecasting further equip companies to make informed decisions and anticipate future market shifts.

The adoption of **Agile methodologies**, such as the Scrum framework, can offer significant advantages in managing software development projects. Scrum emphasizes collaboration, regular feedback, and iterative development, which are essential for responding to customer demands and delivering high-quality software products. Furthermore, the role of project managers is crucial in ensuring that customer requirements are accurately translated into software solutions and that development timelines and budgets are adhered to.

Conclusion. The findings from this research underscore the importance of marketing research in understanding customer demand in the software industry. The integration of macroeconomic, microeconomic, and technological factors into the development process allows companies to create software products that meet both current and future customer needs. By employing Agile methodologies and keeping a close eye on emerging trends, software companies can position themselves for success in a highly competitive and dynamic market.

Moreover, the study emphasizes the importance of qualified leadership in software development projects. The ability of project managers to navigate complex stakeholder relationships, manage resources, and ensure alignment with customer expectations plays a pivotal role in the success of software projects.

As the software industry continues to evolve, businesses must remain adaptable and customer-focused to thrive in this rapidly changing environment.

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