

## Critical Success Factors of ERP Systems: Kazakhstan Perspective

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**Abstract.** The primary objective of this research is to find out what are the critical factors in implementing Enterprise Resource Planning system in the Republic of Kazakhstan. These critical factors can be utilized in design and implementation of ERP systems in Kazakhstan. The survey has been conducted by distribution of questionnaires focusing on local companies which has either implemented or been implementing ERP system. It has been found that most of the respondents are aware of the ERP system, and companies where they work actually were implementing or had implemented the ERP system. Based on the results of our study it is noted that despite some difficulties in identifying right target for the survey overall positive impression was observed, as most projects were implemented successfully. This research concludes that gradually the ERP system is becoming widespread in Kazakhstan although mainly among large corporations, and there are some constraints for the wide implementation of the system such as the cost, not real commitment of whole organisation, not being educated and trained and on its advantages as a whole.

**Keywords:** ERP systems, Critical success factors, Kazakhstan perspective

### 1 Introduction

Kazakhstan is the one of the leaders in terms of economic growth among the CIS countries. Enterprises in Kazakhstan are growing and developing in a high pace, however the methods of management are lagging behind such development. As Khattak et al. (2012) defined: “ERP system is actually a strategic tool that may help an organization to gain an edge in successfully integrating key business operations as well as properly planning, synchronization an optimization of the available resources in the marketplace better than the competitors”. Its historical background comes from development of manufacturing resource planning in the 90s, but increased awareness of its importance not only in manufacturing, but in all spheres led to idea of the ERP system. So this system is about creating one platform for organization by creating network of all stakeholders (suppliers, distributors, clients, etc.). So, its main function is to integrate complex system of any business, so contributing to efficient operation and best management solution.

This research first focused on what enterprise resource planning system meant for companies, how it was perceived by Kazakhstan business entities, what was the pattern of use, what vendors were particularly popular. This is followed by outlining some examples of Kazakhstan companies that successfully implemented the ERP system. Then, the research methodology is presented and findings are discussed. The next section analyses and discusses the findings of the research, then the limitations of the research method are provided, recommendations based on findings are made.

## **2 Literature Review**

### **1. Kazakhstan ERP Market**

Kazakhstan enterprises are growing and developing in a high pace, and lately the Kazakhstan government has been stressing the importance of taking actions to facilitate development of business sector, particularly small and medium business, to increase their competitiveness, and to become export-oriented. Popular examples of EP systems in Kazakhstan are as follows: SAP AG, Oracle, Epicor/Scala, Microsoft Business Solutions, Galaktika.

### **2. Key success factors of ERP Implementation**

Through the literature review, key success factors are summarized as follows. In building ERP systems in Kazakhstan, the attention shall be presented to the following factors: Project Champion, Project Management, Business Plan and Vision, Top Management Support, ERP Team and Composition, Effective Communication, Appropriate Business and Legacy Systems, Commitment to the Change, Effective ERP Approach.

## **3 Research Methodology**

This research was conducted by applying the quantitative methodology, using questionnaire with 17 questions. The primary objective was to discover the important factors regarding awareness and implementation of the ERP system in Kazakhstan.

### **1. Profile of Respondents**

*Graph 1*

**Table t.** Profile of Respondents

	Response category	Kazakhstan respondents	
Age	20 to 29 30 to 39 40 to 49 50 and over	13 % 81 % 6 % 0 %	
Gender	Female Male	35 % 65 %	
Computer experience	< 1 year > 1 year to 2 years > 2 years to 5 years > 5 years to 10 years > 10 years	2.5% 2.5% 20.6% 45.2% 29.1%	
Occupation	Full time worker Managers	74 % 26 %	

The research findings reveals that most respondents do work in the Production industry – 36%, only 18% and 10% of respondents work for Education and Services providers as Bank, Insurance companies.

*2. Implementation Level*

It was revealed that they know about ERP systems as “Automated System of Management” in Kazakhstan. Due to data from the questionnaire it was identified that more than 60% of companies successfully implemented ERP systems in companies. Mostly ERP systems were implemented in the companies with more than 100 staff in the corporations and with more than 10 years existence in the KZ market. Also it was identified that most of these implementing companies are foreign companies (19 out of 31). The reason is foreign companies in Kazakhstan implementing system due to Global head office requirements in order to optimize some processes and increase effectiveness of the business. And 40% of companies are on stage of completing or thinking to implement the system, and this figure is usually represented by local small and medium companies.

*3. Top Vendors*

According to the research survey the successfully implementing ERP systems in the Kazakhstan market are dominated by as Sap, Oracle and Microsoft Business Solutions with market shares of 26%, 6% and 16% respectively. However these companies do mainly provide their services to foreign companies and large local

corporations due to high costs of implementation and support services. In many small companies that cannot afford implementation of expensive tools the local ERP tools such as Galaktica is used, 52% of companies use the services of such smaller IT companies.

#### *4. Implementation issues*

Majority of respondents expressed that the project team was not well organized, and it mainly consisted of just managers, and only small part was made of actual specialists. Level of communication was poor, even sometimes with no communication at all between the project team members. These results forces us to make assumption that implementation was mainly dictated by the managers of the companies, who are not so competent as specialists of company in the sense that they are not involved with routine everyday job. Consequently, chances are that people may not be aware of all problems arising everyday that shall be resolved by the new system.

The other important issue is project schedule and timing. How long does it take, and is project usually implemented within schedule time. With regard to the questions like “major issues of ERP system implementation”, 50% of respondents responded that it met the deadline and other saying it took longer, about from 1 to 5 years.

#### *5. Difficulties faced when implementing*

The most important part of the research provides us with some insight on what kind of difficulties were faced by the companies during implementation phase of ERP system. ERP is a very complex system, and there could be some problems due to the complexity and customization issues. The most reported one was the lack of qualified personnel, followed by poor planning and misunderstanding of what is the purpose and need of the ERP project, and lack of financial resources were mentioned. This is followed by poor quality of service and leadership changes. It is necessary to pay attention to unique Kazakhstan business culture of frequent change of leadership, restructuring of company, and character of secrecy which seem to lead to most of problems. Also during the implementation many new issues arise requiring additional financing, which is also problematic for companies, especially for the smaller ones with constrained budget.

#### *6. Results of implementation of the ERP System*

As mentioned above, the ERP system implementation is very complex. It requires ongoing care and ‘feeding of the system’ by IT specialists, with support of top management and proper logistics. For successful implementation the system must be regularly evaluated, if necessary revised. ERP strategy must be also assessed in line with replacement costs. So self-assessment by any organization in Kazakhstan is a must. As seen by results of pie chart only 45% of companies implemented the ERP system successfully and 36% partially successfully as presented in the following graph:

The survey results show that most of the respondents think that the project was actually implemented more or less successfully (81%), which provides somewhat

optimistic picture and demonstrates potential of the ERP system to be widely used and implemented by other companies.

### 3 Summary and Conclusion

Despite the above mentioned difficulties and constraints it is concluded that the successful implementation of the ERP systems in Kazakhstan need to be taken seriously to improve the competitiveness of the Kazakhstan businesses. There is a huge potential, just some actions shall be taken.

Critical success factors identified in this research might allow companies to explore a wide variety of opportunities for the successful implementation of ERP systems in Kazakhstan. The results of this research demonstrated that the ERP system is actually becoming very popular in Kazakhstan. Of course, some problems were noticed with implementation of the system, but overall impression created was good, as most of the difficulties reported can be easily solved. With increasing awareness of the system, the findings of this research will enable Kazakhstan companies to identify requirements for successful ERP implementation. The companies will follow recommendation and hopefully will face fewer problems. As mentioned before, most of the local companies implemented ERP system successfully. In this regard, it is natural to expect that this 60% will grow even more in future, especially with increasing declaration of importance of the ERP system in Kazakh news websites, forums and in speeches of key authority people. In addition, examples of successful projects will play a role of a facilitator for other companies.

It can be concluded that successful ERP system implementation provides a huge number of benefits to companies. Investment for ERP project will be quickly paid back with improved efficiency, operational cost reduction, effective decision making, and better image and reputation. As long as all companies understand its full advantage, more Kazakhstan companies will be using advanced IS technologies. The only essential thing for all companies in Kazakhstan is to understand that there will be some factors arising during the process of implementation, so these factors shall be accurately analyzed and proper solutions to be designed, preventing unexpected results. The ERP system is very effective way of improving global competitiveness of companies in Kazakhstan. Successful ERP implementation is accomplished when companies try to be leader, and do things better than competitors.

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