Comparative analysis of different Accounting/ERP software and determination of the best one to use in Kazakhstan

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# 1. Introduction

Formation of market relations in economy and successful implementation of economical reforms is strongly dependent on the scale of usage of new high technologies, creation of information systems, which ensure the functionality of any economical, organization and social structure. One of the areas of usage of the last achievements in information technologies is accounting. Any organization or enterprise deals with the vast documentation, containing the large amount of different information. Properly treated and systematized information can be a guarantee of effective production management while the absence of the reliable data leads to wrong decisions and, consequently, to serious financial losses.

Kazakhstan is a developing country with the fast growing economy. Many large companies seek to increase the efficiency of business process, reduce costs, obtain an administrative and financial reporting, and manage the quality of products and repair of equipment. Therefore the implementation of Accounting/ERP software became an important task to achieve the abovementioned goals. The aim of this paper is to conduct the comparative analysis of four Accounting/ERP systems 1C:Enterprice, Galactica, SAP and Oracle existing on Kazakhstan’s market and suggest the most suitable one. Multiple criteria will be used to access these products such as company type, technical opportunities, cost considerations, localization, convenience of use and study time. Conclusion will be drawn based on the discussion.

# 2. Key factors for assessment of software products in Kazakhstan

During the Data Automation in Accounting companies should choose a necessary system taking into consideration main targets and existing resources. The task is not to simply convert all paperwork into digital form, it is important to enhance the accounting performance and improve the control over the financial and economic activities of the company, which in turn will increase the efficiency of the enterprise management and as a result the overall effectiveness of its work. Good accounting systems regardless of their size, computer appliance and the cost should provide the quality accounting, reliability and convenience during the exploitation. In order to conduct Data Automation in accounting using Accounting software it must meet the certain requirements.

* *Cost.* The Total Cost of Ownership (TCO) should be considered.
* *Localisation.* To work in Kazakhstan the product should be localized, i.e. adapted to local clients or industry standards.
* *Type of enterprise.* Applicability to different types of companies (small and medium enterprises, big companies).
* *Technical opportunities.* Functional capacity, flexibility, ease of the system refining, technical support.
* *Simplicity and convenience.* The system should be convenient for user, have a comfortable user interface oriented on a wide range of specialists.
* *Study time.* The software should be easy to learn and available for a wide range of users with different background.

# 3. Analysis of different Accounting/ERP software

There is a wide range of Accounting software products available on Kazakhstan’s computer programmes market from the simplest ones, which can accomplish the limited number of operations, to advanced programmes for complex operations involving the deep analytics. In the following passages we will analyse advantages and disadvantages of four most popular products in Kazakhstan: 1C: Enterprise, Galactica, SAP and Oracle.

## 3.1 1C:Enterprise

1C: Enterprise is the most wide adopted product in Kazakhstan produced in Russia. Even though perception of “1С” as a software developer for Accounting is changing now meaning that the interest is rising to 1C: Enterprise itself, it remains mostly associated with 1C: Accounting. According to Toktabaev (2015) 1C: Accounting is considered as Accounting standard also in other countries in CIS and it is used in 92% cases within Kazakhstan. Therefore the further discussion will be concerned with this specific product.

1C: Accounting is a universal Accounting Software intended to conduct synthetic and analytical accounting in various sections. Analytical accounting is conducted on objects of analytical accounting in volume and value terms. The product allows manual and automatic accounting transaction. When viewing the entries in the journal it is possible to restrict them by an arbitrary time interval, sort in groups and search using various parameters. Apart from the journal of transactions the software supports several lists of additional information:

1. Chart of accounts;
2. List of types of objects of analytical accounting;
3. List of objects of analytical accounting;
4. Constants etc.

On the basis of input transactions calculation results can be obtained. The results can be an output in quarter, year, month, for any period confined by two dates. This system is used for conducting any type of accounting:

* Cash and bank operations;
* Foreign exchange transactions;
* Materials, goods, services and production;
* Settlements with debtors, creditors, institutions and accountable persons;
* Wages’ calculation;
* Budget calculation.

The cost of installation of the main product is $200-1000 per workplace and the cost of license - $150-600 per workplace (Makarova and Levtseva, 2009). 1C products are preferable for usage in small enterprises because of the short period of installation and relatively low cost per workplace (Galushkin and Rudenko, 2015). The main benefit of the system is its localization for industry standards with regular and full types of updates as part of subscription once a quarter in average (Toktabaev, 2015). 1C: Accounting is very flexible software, which could be used in different types of organizations. Moreover, its last version 1C: Accounting 8 shows a high productivity allowing accomplishing complicated tasks.

However, there are several disadvantages in the system listed below:

* The program has to be further developed in order to solve all given problems. As soon as each enterprise is unique there is a demand for individual solution for business process automation (including the automation of accounting and tax accounting);
* Serious difficulties can occur during the transition to 1C: Accounting from another software when transferring information from one database to another (much of the information is often necessary to transfer manually);
* It is difficult to search for the mistakes made in the processing of documents;
* The program is quite complicated to use and requires special user training.

## 3.2 Galactica

“Galactica” is one of the biggest developers of integrated solutions in Russia in the field of automation of production and the economic and financial activity of the enterprise. Toktabaev (2015) stated that this corporation works on Kazakhstan’s market about 17 years with fairly large companies from oil-gas and mining industries.

“Galactica” corporation offers programming systems for different scale companies and organizations taking into account the specific needs of small firms, dynamically developing medium enterprises and enormous corporations. “Galactica” – ERP system conducts a full-scale comprehensive automation of business processes for big and medium enterprises. Functionalities include:

* Development of accounting systems and the formation of various types of reporting;
* Material and financial flows’ management (logistics);
* Financial planning and operational financial management accounting C5;
* Production planning and production management, controlling;
* Human resources management and personnel policy.

The cost of license - $350-1200 per workplace while the cost of the system installation is about 50-100% of that cost (Makarova and Levtseva, 2009). The cost of transition to new levels is included in accompaniment price and technical support costs 36% of license cost.

Among the shortcomings of the system are:

* Working speed is firmly connected with the choice of IMS (Information Management System) and server’s configuration;
* Low level of technical support in the main office.

Nevertheless, the system suggests the substantial advantages such as flexibility to business processes of the company, simplicity of the system refining and an ability to record economic activities of the corporation composed of several legal entities (branches) in a single database (Galactica corporation). Furthermore, Galactica is stable with more than 500 users working at the same time.

## 3.3 SAP

SAP Company (German company) is a world leader among the program solutions developers for business management and as of June 2004 it has a third place among the world's leading software companies according to their market capitalization.

The main product of the company is the ERP-system SAP R/3 in which over 1000 business processes are realized. Nowadays there are 50 versions of this system developed on 28 languages. According to Gartner Group SAP R/3 system is designed for large companies with an annual turnover of $200 million. R/3 is implemented in a variety of industries: aerospace and defense, banking, chemical industry, engineering and construction, healthcare, insurance, media and so on. The company also offers affordable, pre-configured and easy for implementation solutions for small and medium enterprises. In addition to the functionality of SAP products, they provide companies with the business models of the best practices for specific industries.

Since the mid-90s company SAP AG started to pay a great attention to the Internet orientation of its software products, improving the R / 3 by complementing its client Internet-oriented modules that improve functioning of the system in the heterogeneous environments.

Among 165 clients of the company in 25 industries leaders of Kazakhstan’s economy are also included. LLP “SAP Kazakhstan” is a local representative of SAP AG Company. Experts suggest the vendor will further increase market share in the strategic industries such as the public sector, the oil and gas industry, banking, transport and energy, metallurgy and mining industry.

In 2013 SAP ERP was translated on Kazakh language, this localization process took 2 years and costs approximately 25 million euro. There is also a noticeable increase in a demand for SAP solutions in medium business sector in such industries as industrial and civil construction, retail and distribution, logistics, and production of consumer goods. However, in the annual report published on the official website of SAP AG it is seen that the company shows losses in the period between 2011 and 2013 (Toktabaev, 2015). Managers explain this trend with significant investment spent on product localization (although the main investments were made in 2012), in the development of the market and partners training. Losses are also associated with the specific method of accounting within the company.

Even though in current time SAP company is actively developing its programming solutions for the big companies of Kazakhstan there is a deficit of IT professionals which affects on the development of the SAP on the ERP market. Usually high costs and time of system installation are barriers for wide implementation of the product on country’s market. Effectiveness sometimes is also questioned.

## 3.4 Oracle

Oracle Corporation (American company) is the world largest supplier of corporative software and the first software company that has developed software fully integrated with the Internet and mobile networks. With annual sales over $10 billion the corporation provide its products and services in consulting, training and technical support in more than 145 countries in the world. Oracle products work on a variety of hardware platforms and operating systems. Oracle has more than 230,000 enterprises-customers around the world from small and medium companies to global corporations.

The main ERP-product is Oracle Applications software – package of 55 integrated modules, which offers the Oracle Exchange online procurement management platform. In addition, Oracle has implemented support for Web-clients in Oracle Applications and issued completely Web-based software Oracle Applications 11i.

There is a full range of technologies for building IT infrastructure and modern enterprise management:

* Oracle10g – basic software technology family;
* Oracle Collaboration Suite – ready solution for collective work;
* Oracle E-Business Suite – full-featured set of business applications;
* Oracle Data Hub – integrated solution for data management.

Set of Oracle CRM products covers various aspects of the interaction of the enterprise with its customers from marketing and sales to service, and provides the seamless integration with the client-side (front-office) and the internal business logic (back-end) of the ERP-system. CRM-component of Oracle Service 11i allows automating several areas of customer service through the Internet:

* field service;
* customer self-service;
* customer inquiries by e-mail;
* delivery of products;
* setting of timetables for contract management regarding the delivery of products to clients and providing them with maintenance services.

In CIS countries Oracle Corporation offers a full range of survives including selling Oracle software, technical support, training, consulting, implementation of complex Oracle E-Business Suite. In Kazakhstan, Oracle Niderland BV representative office was opened 10 years ago, in 1995. Toktabaev (2015) noticed that the corporation has about 100 partners in Kazakhstan and among the biggest clients is the Treasury Committee of the Ministry of Finance. Other large projects are on the implementation stage in the mining industry and the sphere of education. As company representatives claim Oracle has a leading position on key markets of Kazakhstan. According to Saktaganova (2012) Oracle system was localized and used for government procurement. However, the product is still expensive and only large companies could afford its installation.

# 4. Discussion and optimal solution

After discussing separately each of four Accounting/ERP software products the following table was constructed to make a comparison.

Table1. Comparison of Accounting/ERP software products

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **1C: Enterprise** | **Galactica** | **SAP** | **Oracle** |
| 1. Type of company | Small enterprises, budget organisations | Big and medium enterprises | Mostly big companies | Mostly big companies |
| 2. Cost | Low | Relatively low | High | High |
| 3. Localisation | Fully localised | Localised | Substantial expenses and time on localization | Substantial expenses and time on localization |
| 4. Technical opportunities | | | | |
| * functionality | Variety of functions | Highly functional | Highly functional | Highly functional |
| * flexibility | Flexible | Very flexible | Flexible | Flexible |
| * ease of the system refining | No | Yes | Yes | Yes |
| * technical support | Free technical support | Low level of technical support | Limited technical support | Qualitative technical support |
| 5. Simplicity and convenience | Complicated at the beginning | Convenient | Easy for implementation | Convenient |
| 6. Study time | Needs time for study and special training | Transfer to new level can be done in a short-time period | Requires re-qualification of cadres | Requires re-qualification of cadres |

Software products of “1C” company are preferable to use for small businesses. As it was mentioned before this can be explained by the fact that it takes relatively short time for installing (3-9 months) and the cost is also low. Another reason is that in comparison with Galactica, which withstands simultaneous work of many users, 1C: Accounting software requires a purchase of more powerful hardware platform to deal with more than 70 users. However, on the Kazakhstan market 1C: Accounting is the most popular product and despite the complexity of the program many workers already experienced to use it, therefore there is no need for time and expenses on training. Moreover, 1C: Accounting is accompanied with free technical support while for Galactica this technical point is a main disadvantage among all examined software products.

Two western ERP systems SAP and Oracle appeared on Kazakhstan’s market in recent years. It takes time and investments on creation of localized versions of the products which explains their high total ownership costs in comparison with the Russian products established on country’s market and already localized for needs of local industries. Moreover, special training is needed for users to handle newly adopted programming systems. Those companies in Kazakhstan, which chose the products of foreign vendors, have to adapt to their decisions and it leads to increase of time of project implementation and growth of costs of turnkey solutions’ support. Nevertheless, high functionality and firm integration with the Internet (especially Oracle) of SAP and Oracle products despite their high cost make them best solutions for large corporations for realization of optimal business models aimed to improve the operational and financial performance of the companies.

# 5. Conclusion

Companies seek to achieve leading positions on the market, enhance work productivity of personnel and create the effective management structure. It is necessary for accounting activity in the first place, which is seen from the emergence of software for accounting. Implementation of such programs in the manufacturing process allows improving the efficiency of data processing and reliability of information and thereby accepting more objective financial and management decisions. To choose the best available Accounting/ERP software on Kazakhstan’s market the comparative analysis was conducted between four popular products: 1C: Enterprise, Galactica, SAP and Oracle using the following criteria: company type, cost of ownership, availability of localized versions, technical characteristics (functionality, flexibility, system update, technical support), convenience and training time. Study revealed that 1C: Accounting software is the most suitable for small enterprises since it is relatively non-expensive comparing to identical products of competitors and can deal with the limited number of users. Galactica is a good solution for medium and big companies as soon as it oriented on the larger number of users and very flexible and simply can be updated. Both 1C: Accounting and Galactica as the Russian software products were used in Kazakhstan for a long period of time so it is difficult to move their position on the market. However, such huge corporations as German SAP and American Oracle started to present in the country offering their products to big companies. Though these products suggest business and data integration solutions for variety types of companies from small firms to big holdings, in Kazakhstan so far only large companies can afford to take advantage of SAP and Oracle products because of their high costs associated with expenses on localization and re-qualification of users.

All in all, it is difficult to choose single Accounting/ ERP software as soon as different companies depending on their size and specialization have specific requirements to ERP systems. It can be said that currently the most widespread product on Kazakhstan market is 1C:Accounting, but in the course of time the situation can change with the rising popularity of the western SAP and Oracle products. Companies and organisations choosing the appropriate software should carefully consider the fundamental ratio of price and quality.

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