A Comparative Study between the Different Sectors Using the ERP Software in Jeddah Region- KSA

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Abstract: The purpose of this research is to provide a comparative study between the three giants of the ERP software, SAP, Oracle and Microsoft in the three different sectors. The results of this research has revealed that SAP and Oracle are now more and more viable for small and medium-sized enterprises while Microsoft Dynamics is now more viable for the average company to large size. The data have been collected by conducting interviews of human resources manager, senior manager, Sr. Executive, HR Specialist and Sr. HR Implementation specialist of various private companies such as BPO, call center, medical, manufacturing, the computer industry, telecommunications, the financial sector, the construction, oil and gas industry, water diffusion from the industry, the chemical industry, pharmaceutical, banking, beauty products co., public buildings and airport division and Airlines sector. The main conclusion and the overall data show that Oracle is selected more often than SAP or Microsoft Dynamics to meet various needs, priorities and competitive advantages for finding the right fit.

Introduction

Today, a large number of organizations are offering ERP software to different industries to enhance business efficiency and increase profits, in a cost-effective manner. An advanced ERP solution has the capacity to simplify the slow and time-consuming procedures of different enterprises.

Thus, it is very necessary to understand the functionality and advantages of an advanced ERP solution that perfectly suits and caters to an organization's specific needs and requirements. ERP refers to a software solution with integrated data system that provide to all sections of a company. It consist of modules, such as financial accounting system (FA), real estate management system (REMS), real estate lease and maintenance management system and human resource and payroll management system (HRPMS).

The goal of ERP software is to integrate all departments and functions from across a company (the enterprise) onto a single computer system and software solution that can serve the different needs of every particular department in the company. This can be a daunting task. If you compare two departments within the typical business, HR and Finance, you'll find that they usually have their own computer system optimized for their specific tasks. ERP takes these distinctly different tools and combines them together into a single database. The end result is that the various departments can more easily share information and communicate better with one another. If the ERP software is installed correctly, this integrated approach can have tremendous payback. The subsequent paragraphs will describe the most important giants: SAP, Oracle and Microsoft.

SAP

SAP began as an ERP vendor and today is the main player in the ERP software market.

SAP has developed close links with a variety of alliance partners, which have fueled its growth through the 1990s and 2000s there was an abundance of third party -. Developers that offer many add - on programs that work in conjunction with SAP products. SAP also offers suitable for all sizes of business ERP solutions. Based on the SAP technology platform Net Weaver, SAP Business Suite is a set of integrated business applications that provides industry - specific functionality and scalability. Although very powerful, SAP may be more difficult to change as a Evolution of the company. This is both strength and a weakness: firstly, it is tightly integrated and used to apply uniform business processes of the company, but it can also be more difficult to modify the software to fit the evolution of core processes and requirements.

SAP offerings include SAP Business All- in-One and SAP Business One. SAP Business All - in - one is integrated and comprehensive company that provides industry - oriented solutions software. All in - one focuses on small to mid- sized organizations with up to 2,500 employees. SAP Business All- in-one model -

based and configurable derivative SAP Business Suite. It offers over 700 industry specific solutions, deploying their "best practices."

SAP Business One is a single, integrated application designed for small businesses with fewer than 100 employees. It mainly supports the wholesale trade, services and manufacturing. With third - party adds - ons, SAP Business One is able to support a variety of industries and functions. To meet the needs of small and medium - size enterprises, SAP offers SAP by design. Available in USA, Germany, France, the UK, India and China, SAP by design supports businesses with 100 employees -500. As a SaaS - on-demand type - system, SAP by design low initial cost and may require fewer IT resources traditional ERP software. Some functional SAP among the highlights: • strong product development capabilities • Support Facility Make - order processing • Integrated Retail Module • clear visibility of goods - in - transit orders • Good quality control and assurance functionality • Good compliance with SOX and tax regulations • High quality cash management function.
Oracle

Oracle was originally known for its management systems database rather than its ERP systems. The company has increased its share in the ERP market through organic growth and a number of high profile acquisitions including JD Edwards, PeopleSoft, Siebel CRM and others. Given this growth model, Oracle has become a flexible and configurable option and offers a best-of- breed option for its customers. Oracle has developed mainly through the acquisition of best - of - breed solutions developed and has made considerable progress merging JD Edwards Enterprise functionality in Oracle EBS. Oracle EBS is composed of more than ten product lines, each with several modules which are separately licensed.

Oracle ERP offerings include other key JD Edwards and PeopleSoft. JD Edwards supports the manufacturing industry in particular. It is a complete integrated suite of applications ERP software that supports a wide range of business processes with a common database. JD Edwards Enterprise One is an open platform, which provides extensive support for different operating systems, databases and middleware Oracle and other vendors systems. PeopleSoft targets large organizations, particularly in the public sector and financial services sector. PeopleSoft has eight different solutions including HR and CRM are the most desirable application solutions such as financials, supply chain, HR, CRM. Before being acquired by Oracle, PeopleSoft suite was based on a client - server approach with a dedicated client. The current PeopleSoft version is based on a web - centric design which allows all the company's business functions to be accessed and run on a web browser. Oracle offers

solutions with various deployment models, including both on-site and on demand. Examples include E-Business Suite On-Demand, PeopleSoft Enterprise on - demand and JD Edwards Enterprise One on - demand, which are all hosted applications, but that is not true SaaS applications. There is a movement to provide "virtualization," which is the terminology for the Microsoft cloud environment.

Oracle best - advanced approach sometimes allows more flexibility to adapt to changing business needs, but this strength can become a weakness when it becomes more difficult to enforce standardized processes across a large organization. Based on qualitative data of our customers, some of Oracle's functional among the highlights: • Strong finance and accounting functionality • Advanced Pricing Module supports complex pricing scenarios • E -Portal provides to facilitate interaction with customers and • supplier's well- built architecture best product configuration • good feature for production operations.
Microsoft

Already established as the leading supplier of operating systems and software company Microsoft Corporation entered the arena of ERP software through the acquisition. In 2000, Microsoft acquired Great Plains, one of the leading accounting software in the U.S., which has been designed and written to be multi- user and run under Windows 32-bit software. This was quickly followed by the 2002 acquisition of Navision, Danish software company that offered accounting and ERP solution available for Microsoft Windows 2000 Professional operating system. Navision Damgaard was merged with software in 2000. Damgaard product was Axtapa highly respected accounting system and ERP solution originally brought to the United States of Europe by IBM in 1996. Written entirely in Java, Axapta was designed to be a complete ERP solution that included advanced distribution process and discrete manufacturing, built in CRM Capacity, and in a integrated development environment. The products have maintained their own identities and Microsoft were initially marketed as Microsoft Business Solutions, until it is changed to Microsoft Dynamics ERP in 2006. Microsoft Dynamics GP, Great Plains old product, is designed for small and medium businesses who want a simple, out-of- the - box software solution. Microsoft Dynamics NAV, the former Navision product is designed for small and medium businesses that need more functionality and the ability to customize their software solution. Former Axtapa product, now marketed as Microsoft Dynamics AX is the flagship product of the Microsoft Dynamics offers, and is oriented towards large enterprises - wide implementations. Other products range include Microsoft Dynamics SL (formerly Solomon), which is

designed for project - oriented companies and CRM. Microsoft Dynamics has always relied on its extensive network (10,000 +) of partners in the development and extensive industry specific - functionality beyond commodity. However, the recent AX 2012 version incorporates the core that provides specific functionality for manufacturing, public sector, service industries and distribution. In addition, this version includes significantly improved "cloud" capabilities. Microsoft Dynamics offers several technical advantages, including: • Customization facility • High flexibility • Easy integration • Familiar user interface functional strengths include: • Strong inter-and multi-company support • Strong multi- location capabilities and data • dimensional tracking enabled physical movements (inventory, etc.) and financial transactions • Strong MRP and capacity for trade.

Objectives:

The main objective of this research is to compare between different ERP software' in terms of Cost Effective, Implementation, Customer Satisfaction, Operational Disruption time, Innovation, Selection Rates, Market share, Rates of being shortlisted and Data Security. Secondly study and examine the latest ERP software's used by Private/Public/Semi Private companies in Jeddah Region- KSA.

The below table shows the comparative study of ERP Software's in terms of cost effective, Customer Satisfaction, Implementation, Operational Disruption Time, Innovation, Planned Project costs and Actual Project costs, Data security, Satisfaction Rates, Market share, Rates of being shortlisted. Table no.1

Table 1: Comparison study between the three service providers.

	SAP	Oracle	Microsoft
Cost Effective	More Expensive	Less Expensive	Least Expensive
Customer Satisfaction	39%	80%	33%
Implementation	13 Months	11 Months	14 Months
Operational Disruption Time	High % of Disruption	High % of Disruption	Lowest % of Disruption
Innovation	Three dimension of new Innovation for SAP HANA@Platform	Latest Innovation is fusion applications	Latest Innovation is Flagship operating system
Planned Project Costs and Actual Project Costs	8% ($19 million planned vs. $20.6 million actual)	15% ($1.4 million planned vs. $1.6 million actual)	14% ($408,000 planned vs. $464,000 actual)
Data security	Vormetric data security solutions protect SAP data.	Oracle Database Security Oracle Label Security Transparent Data Encryption Data Masking Database Vault Audit Vault.	System Center Data Protection Manager (DPM) is a software product from Microsoft that provides near-continuous data protection and data recovery
Satisfaction Rates	28%	34%	32%
Market Share	24%	18%	11%
Rates of being Short listed	35%	24%	17%

The above table is originated to help organizations to get a quick read on the high level characteristics of each ERP Software, as well as provide insights into respondent's experiences with the chosen software. The analysis is based on all solutions offered by three vendors and is not segmented by industry. The intent of this research is to provide an independent and balanced comparison of the ERP markets software's providers.

1. Cost Effective: SAP is more expensive than Oracle and Microsoft is least expensive comparative to both of them.
2. Customer Satisfaction: In terms of customer satisfaction, Oracle has the highest rate at 80 percent compared to SAP at 39 percent. Microsoft has 33% of customer satisfaction.
3. Duration of Implementation: SAP also takes an average of 13 months to implement, two months longer than Oracle. And Oracle comes out a little

cheaper than SAP measured by total cost of ownership. Microsoft takes 14 Months longest duration in implementation as compared to both.
4. Operational Disruption time: SAP & Oracle has the highest operational disruption time and Microsoft has the least disruption time involved.
5. Innovation: Three dimension of new Innovation for SAP HANA@Platform. Oracle has latest innovation in fusion applications. Microsoft has latest innovation as Flagship operating system.
6. Planned Project Costs and Actual Project Costs: SAP may be more expensive, however it is said that it has the lowest average cost overrun (8 percent over budget), with Oracle at 15 percent. To his mind, that means while SAP users may spend more, they generally have a better sense of what it takes to implement ERP and budget accordingly.

7. Data security: Vormetric data security solutions protect SAP data. Oracle Database Security Oracle Label Security Transparent Data Encryption Data Masking Database Vault Audit Vault. System Center Data Protection Manager (DPM) is a software product from Microsoft that provides near-continuous data protection and data recovery.

8. Listing and Selection Comparison: Among the key data points in the report are the rates SAP, Oracle and/or Microsoft Dynamics has of being short -listed and the selection rates of the three vendors following short -listing. The survey data reveals that SAP is the most commonly short -listed ERP system (short -listed by 35 - percent of the organizations in our study).SAP is followed by Oracle at 24 -percent and Microsoft Dynamics at 17-percent.

Rates of Being Short Listed	
Vendor	Frequency
SAP	35%
Oracle	24%
Microsoft Dynamics	17%

Source: Figure 2: Panorama consulting solutions @2012

After being shortlisted, the popularity of the three vendors flips. Oracle has the highest Percentage of selection following short-listing (34%).Microsoft follows closely with 32% and SAP with 28%.

Selection Rates When Short-Listed	
Vendor	Frequency
Oracle	34%
Microsoft Dynamics	32%
SAP	28%

Source: Figure 3: Panorama consulting solutions @2012

1. Market share: The collected data conclusively shows that SAP ranks the highest of the three vendors, with more than one-fifth (24%) of total market share. It is followed by oracle with 18% and Microsoft with 11% of total market share.

Data and result analysis

The above table 4 shows that the most commonly used ERP software is Oracle than SAP and Microsoft in private/semi-private/public companies. However, this study reveals some interesting insights as to how companies have fared with both SAP and Oracle. The study reveals and found that on average, Oracle is implemented in less time and at a lower cost than SAP. Even when adjusted for variances in company size and scope, Oracle's ERP system is implemented at a lower cost and in less time.

According to the study made in three different sectors, Oracle is the best ERP Software's in order to meet the organizational needs. The five key points:

1. Customer Satisfaction: — Oracle enjoyed the highest satisfaction rate by far—*at 80 percent!*—followed by SAP (39 percent) and Microsoft Dynamics (33 percent).
2. Return on Investment: 90% of Oracle customers can expect a positive ROI in fewer years then 5years.
3. Cost Effective: Oracle is less expensive as compared to SAP.
4. Implementation: Oracle customers, claiming the shortest average implementation period among the three (11 months), were the most satisfied by a very wide margin.
5. Data Security: The system provided enough security to protect data stored on the database.

Conclusion and managerial implications

Oracle, SAP and Microsoft have built strong reputation as the powerhouses of Tier I enterprise software. To conclude, an ERP solution can play an important role within an organization if implemented correctly. It can boost an organization's strategies and operations and can increase productivity and help companies cut down on cost. An ERP solution can increase an organization's security as it allows companies to keep their customer and company information in a secure environment. It can immensely improve the level of communication across different departments; thus allowing managers to make better decisions. The solution also consists of various web based applications that are fast and easy to use.

Both SAP and Oracle have strengths and weaknesses and tradeoffs. Different clients have different needs, ranging from functional requirements, technical maturity, and tolerance for risk, budget, and a host of other factors.

The best of the feature of practicality vs. modules closely additional embedded: The strategy of software of the two suppliers could not be very different. Recital that SAP has designed a solution mainly from the bottom to the top, Oracle has increased mainly through the acquisition of solutions best- of-breed use. For example, Oracle has acquired Demantra sales and operations of advanced planning, Hyperion for the financial information, and Siebel CRM, while SAP has designed a large part of this feature in its ECC of base and all-in-one ERP solutions.

Product road map: SAP continues to make on and improve its offer of basic products, while Oracle is directed toward Fusion. While some might advocate that Oracle is more innovative or visionary in the direction of the technology, this means in addition, there is also an additional uncertainty with the product lines of Oracle. This is often true for customers taking

account of JD Edwards and PeopleSoft Oracle solutions.

Flexibility: Although very powerful, SAP can be more difficult to change as an organization evolves. It is both strength and a weakness: it is closely integrated and allows you to apply business process standardized throughout the enterprise, but it is often more difficult to change the software to regulate to the evolution of the process of database and the necessities. Oracle best approach of practicality, on the other hand, will allow more flexibility to accommodate ever changing business wants to, but this force will become a weakness when it becomes more difficult to enforce standardized processes in a larger organization.

Implementation Value, the duration and the risk: Although each solution generally appreciate more and take more time to implement than most ERP package of level II, it square measure distinct variations between the two. Oracle has a slight advantage in implementation period average and an even more important benefit in the cost of implementation average, to 20 per cent less of SAP. SAP, on the other hand, entails a risk of the company the bottom of two,

measured by the probability of a disturbance important operational at the time of go-live.

Benefits to the business and customer satisfaction: It is often perhaps the greatest strength of SAP. Although Oracle has the level of customer satisfaction the highest of all the suppliers of ERP systems across the world, SAP carried the ball in real business benefits achieved. Assuming that the reason number one most companies implementation of the ERP package is to achieve tangible benefits to your business, which may be sufficient to justify SAP as a solid solution of primary several companies.

The takeaway key here is that, like any ERP solution, SAP and Oracle have both their strengths and weaknesses. Even within the same industry, a solution can be the best solution for an organization, while not a good fit for the other. The only way to give a positive direction and negative in a way that is significant for your organization is to engage in a process of selection of ERP software robust who considers your needs, priorities and competitive advantages for finding the right fit.

Table 4: Shows the list of different sectors using ERP software's in Jeddah Region- KSA.

| S. No. | LIST OF DIFFERENT SECTORS USING ERP Software's | | | |
	Private[1] /Public[2]/Semi Private[3]	SAP	Oracle	Microsoft
1	Automobile[1]		√	
2	Airlines[3]	√		
3	Oil and Gas Industry[1]	√		
4	Telecommunication[1]		√	
5	Water Desalination Industry[2]		√	
6	Petroleum Industry[1]	√		
7	Telecommunication[1]		√	
8	Pharmaceutical cooporation[1]	√		
9	Medical Cooportation[1]			√
10	Pharmaceutical cooporation[1]		√	
11	National Aviation cooporation[1]		√	
12	Pioneer Medical Company[1]		√	
13	Medical Manufacturing company[1]		√	
14	Research based Pharmaceutical company[1]		√	
15	Financial company[2]		√	
16	Construction company[2]			√
17	Manufacturing company[1]		√	
18	Steel Industry[1]	√		
19	Marketing &Consumer Goods and Services co.[1]		√	
20	BPO Industry[1]			√
21	Beauty products, Fragrance & Perfumes[1]		√	
22	Public Buildings and Airport division co.[2]		√	
23	Construction company[2]		√	
24	Banking Sector[2]		√	
25	Call Center[1]	√		
26	Chemical company[1]	√		
27	IT Industry[1]	√		

Source: Figure 4: Depicts the data collected through interviews in three different sectors

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