

**Enterprise Resource Planning System
Global and Malaysian Perspective**

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Abstract:

Business management has entered the era of networking competition. This has moved the competition from a local to that of global business environments and from company against company to that of a supply chain against supply chain. Enterprise Resource Planning (ERP) system has become one of the main pre-requisites for many companies enabling them to compete in the local and global market, a price of entry to gain a competitive advantage in the global economy, and a backbone for e-business as well as for the whole supply chain. Many companies are still reluctant to implement ERP system and therefore they will not be able to connect their supply chain with several global and local companies where ERP system has become a pre-requisite and a price of entry for the global economy. This study has investigated the main issues, challenges and the benefits of ERP system. ERP systems will be the price of entry and a prerequisite for many companies enabling them to run their business smoothly and effectively, and to be able to connect with other companies in the current global network economy.

1. ERP Global Change

The big five ERP vendors in the ERP global market are SAP, Oracle, PeopleSoft, J.D. Edwards, and Baan. In 1999 they acquired 59 percent of ERP revenue and each has specialty in a particular module area, for example, SAP specialized in logistics, Oracle in financials, PeopleSoft in human resources management, and Baan in manufacturing. SAP was the largest ERP vendor among them with revenue of \$5 billion, and then Oracle with \$2.4 billion in sales, followed by PeopleSoft with \$1.3 billion, J.D. Edwards with \$979 million, and finally Baan with sales of \$743 million. The most three famous ERP vendors in ERP market are SAP, Oracle, and PeopleSoft. Figure 1.1 describes the three biggest ERP vendors' competitors in the global market (McAdam & Galloway, 2005; Holland & Light, 1999).

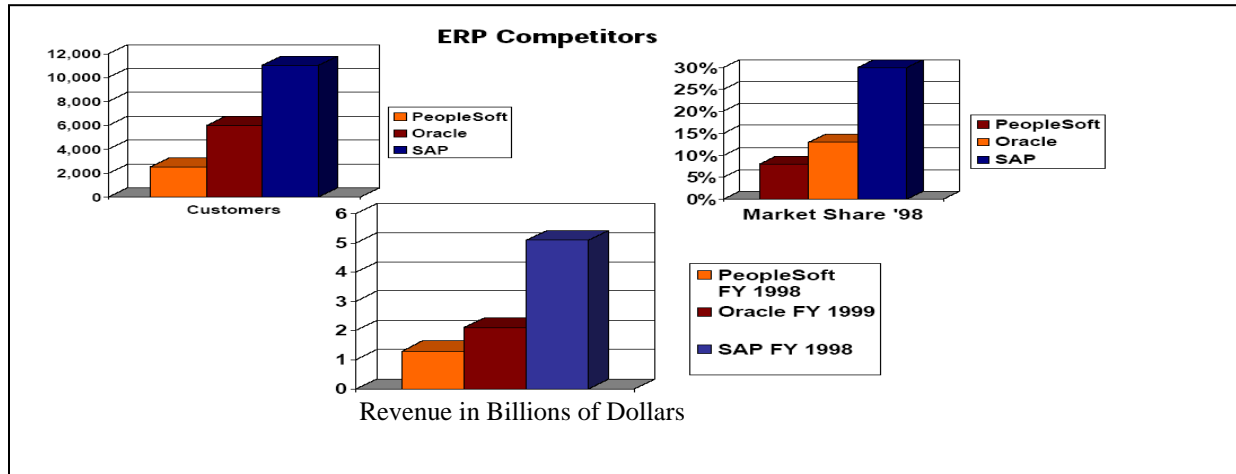


Figure 1.1: The three biggest ERP vendors' competitors in the global market
 Source: PricewaterhouseCoopers (1999 & 2000)

1.1 The importance of ERP system in the marketplace:

SAP R/3 is the most prevalent of ERP products and was the most successful software in many companies for over 30 years, it obtain the biggest market share among all other ERP products. In 1990s, SAP R/3 was the dominant of ERP business solution and one of the largest software houses in the world. SAP R/3 is a model designed and fully integrated in order to have the best applications among other software. In 2000, SAP acquired shares in ABC technology in order to integrate its functionality in R/3 to be able to measure supply chain performance. In fact, ERP package was produced by SAP in Germany in 1972 and was expected to achieve revenues of \$52 billion in 2002 (Huang & Palvia, 2001; Rashid *et al.*, 2002; Lapide, 2000; Yusuf *et al.*, 2004).

According to SAP report in 2001, 36000 software installations were installed by SAP in 15000 companies across 120 countries. Figure 1.2 reveals the ERP packages and the industries that they can serve. It is clear from the following Figure 1.2 that SAP R/3 able to serve all industries.

| | Aerospace/ Defense | Automotive | Consumer Packaged Goods | Electronics | Industrial/ Manufacturing | Oil/Gas | Pharmaceuticals |
|------------------------|-----------------------|------------|----------------------------|-------------|------------------------------|---------|-----------------|
| Baan Series | • | • | | • | • | | |
| J.D. Edwards One World | | • | • | • | • | • | • |
| Oracle Applications | • | • | • | • | • | • | • |
| PeopleSoft | | • | • | • | | | |
| SAP R/3 | • | • | • | • | • | • | • |
| % ERP Penetration | 10-15 | 5-10 | 35+ | 40+ | 35 | 30 | 20 |

Figure 1.2: ERP packages and the industries they serve
 Source: Mendelson (2000)

1.2 Global challenge of ERP system implementation

Y2K problem was one of the main issues among many issues such as fast changes of technology, fierce competition, globalization, European Union and Euro single currency, the proliferation of e-commerce, e-business, and Internet, and the advancement of computer and software technology. All these reasons have contributed in the growth of ERP systems sales during the second half of 1990s. In order to avoid all these issues many companies replaced their own legacy systems with new one (Klaus *et al.*, 2000; Mendelson, 2000).

Many companies around the world commence implementing ERP systems in 1990s; the main reason behind the implementation of ERP systems is to re-engineer business processes through a uniform information system (Rajagopal, 2002.). During the mid of 1990s to 2000, around 30,000 companies worldwide, as a minimum, have implemented ERP systems (Mabert *et al.*, 2003). Companies worldwide have been spending \$10 billion dollar per year on ERP system (Yusuf *et al.*, 2004). Since 1996 until 2003 there was a tremendous upward growth of ERP systems, but in the last few years ERP systems seems to be forgotten and that lead to a significant drop in ERP market.

A study has been conducted in Thailand on Thai-owned and multinational companies reveals that, ERP system has become a core part of IT investments in Thailand, where Thai-owned and multinational companies give a large attention on ERP systems. A positive image on ERP system has been drawn from various interviews conducted in Thailand on Thai-owned and multinational companies which shows believes from IT managers stated that ERP systems able to reduce all costs including inventory, labor, and overhead costs. On the other hand, they also believe that ERP systems able to increase sales, efficiency, effectiveness, and customer satisfaction (Arunthari, 2005). In fact, this is an opportunity for ERP venders to penetrate Thailand market and increase the number of companies that implements ERP systems.

Figure 1.3 demonstrates the ERP software market revenue from 1993 to 1999.

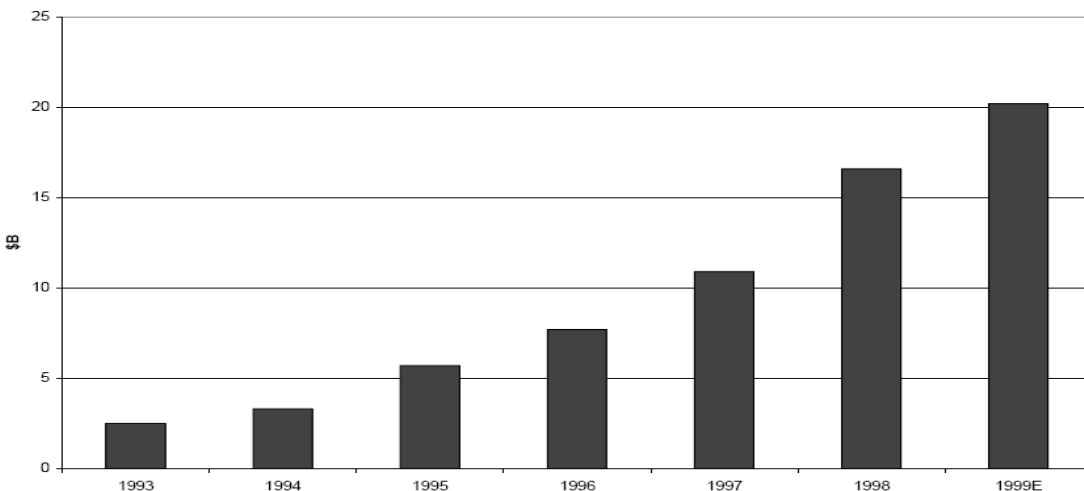


Figure 1.3: ERP Software Market Revenue from 1993-1999
Source: Mendelson (2000)

1.3 ERP system's market share

According to the annual report of AMR research, ERP market obtained \$16 billion in 1998 and increased to \$60 billion in 2003. More than \$47 billion dollar was expected to be invested by companies on ES packages (AMR 2001). European ERP market revenues expected to increase by 7 percent annually until 2009. Moreover, 43% of 800 US companies' application budgets were spent on ES packages while ES industry expected to worth \$66 billion in 2003. In 2004, the global ERP revenue increased by 14 percent, and SAP revenue increased by 17 percent.

Figure 1.4 demonstrates the ERP and ERP related packaged application market from 1998 to 2003.

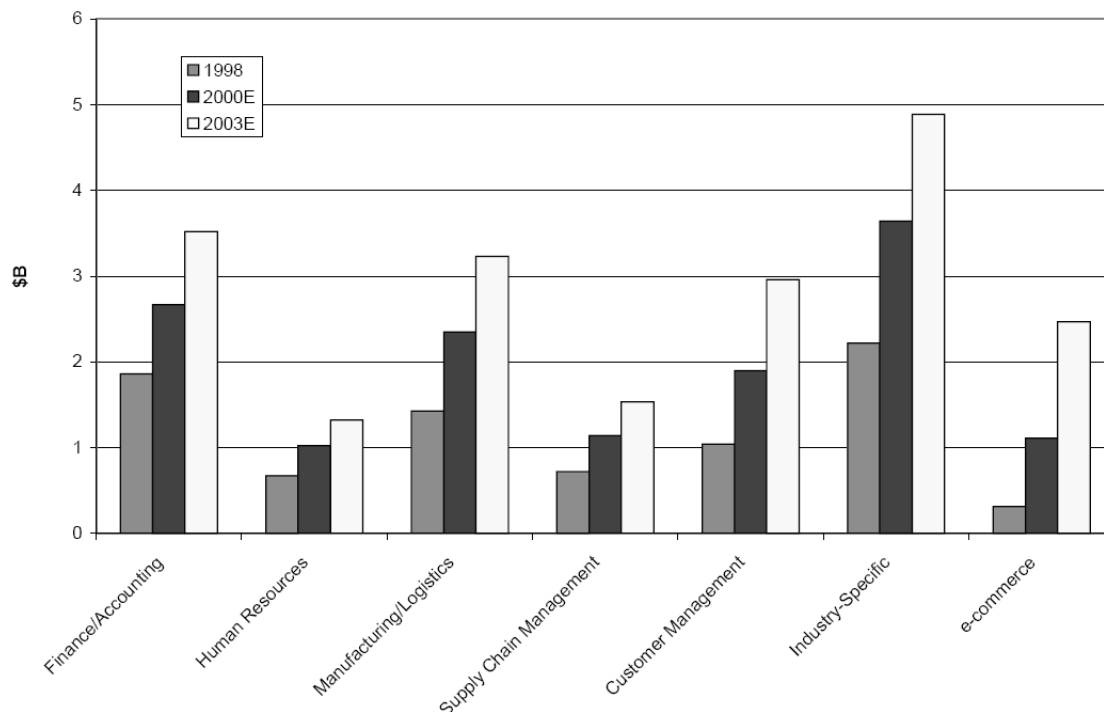


Figure 1.4: ERP and ERP Related Packaged Application Market from 1998 to 2003
Source: Mendelson (2000)

In 1999, ERP vendors such as SAP, Oracle, PeopleSoft, J.D. Edwards, and Baan acquired 59 percent of ERP worldwide market revenue which increased to 69 percent in 2000 as it is reveals in Figure 1.5. These vendors are the top ERP vendors in the marketplace. However, in 2005 a researcher expected the top 5 vendors will be SAP, Oracle, Sage Group, Microsoft, and SSA. Currently the top 5 ERP vendors in the market place are SAP, Oracle, PeopleSoft, J.D. Edwards, and Baan, these vendors tried to make end-to-end business solution. Figure 1.5 reveals the ERP vendors' worldwide market share in 2000, where it was the apex of ERP market in that time (Chorafas, 2001; Mendelson, 2000).

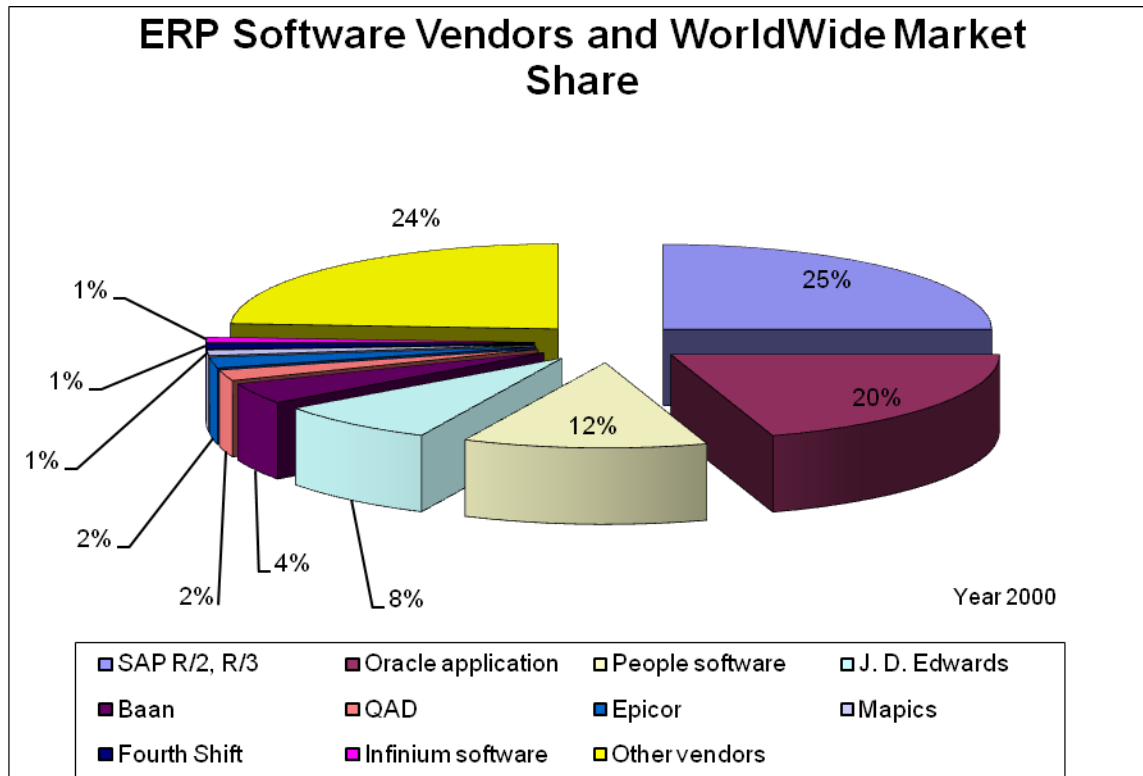


Figure 1.5: Market Share of ERP Applications
 Source: Chorafas (2001)

There are many success records of ERP systems implementation in many companies such as Cisco systems, Eastman Kodak, Autodesk, IBM, Fujitsu Microelectronics, Panasonic, ChevronTexaco, and Tektronix. These companies have achieved the expected benefits of ERP systems. For example, Autodesk Software Company used to take two weeks to deliver an order to a customer but after ERP implementation it takes only 4 hours to deliver the same order. Another example, ERP systems enabled Cisco to save large costs and improved their revenue which makes the company able to reap a tremendous millions of dollars every year. ChevronTexaco improved its supply chain management through ERP system and achieved a profit of \$100 million every year. IBM's R/3 implementation was one of the largest success implementation in the world (Chen, 2001; Davenport, 1998; Mendelson, 2000; Turban *et al.*, 2008; Sheikh, 2003).

On the other hand, there are also other companies experience failures in ERP systems, for instance Dell Computer, FoxMeyer Drug, Boeing, Dow Chemical, Hershey Foods, and Mobil Europe, encountered large loss due to ERP systems failure. For example, Dell computer anticipated that ERP systems fail to cope with their sales volume. Therefore, Dell cancelled the ERP project and lost \$115 million dollars. Another example, FoxMeyer Drug suffered a loss of \$100 million dollars and was bankrupt after ERP implantation (Chen, 2001; Davenport, 1998; Mendelson, 2000).

However, in this research we attribute the failure of ERP systems in many companies could be due to low involvement of employees, lack of support from the top management, poor attention from the whole company of the huge business change, as well as to the cultural misfit problem.

Implementation of ERP systems is very costly and takes long time to implement the systems, this reason prevents many companies to implement ERP systems and also limit the market share of ERP systems. However, in order to solve this problem, top ERP vendors need to develop a special ERP packages to meet the need of small size companies to increase the market share of ERP systems. With this solution small and medium companies can also benefit from ERP systems advantages, and will not be limited only to large companies, this solution also enables ERP systems to spread worldwide. However, the proliferation of ERP systems in the global market could be attributed to the additional new application to ERP package such as CRM and SCM and also attributed to the integration of internet-enabled applications for e-business (Zheng *et al.*, 2000; Rashid *et al.*, 2002).

In order to keep the growth of ERP market upward, ERP vendors need to find a solution for the problems associated with ERP implementations such as, time consuming, paying a huge amount of money, lake of top management support, low involvements from system users, and finally cultural misfit. In fact, most of companies need a cheap, simple, suitable, and easy to implement ERP package.

ERP market found a great acceptance in developed countries such as USA, UK, Canada, and Australia, while in developing countries, ERP systems is a new idea and still in infancy stage because there are many untapped countries such as China, Korea, and Malaysia. In 2001, ERP market share was 66% in North America, 22% in Europe, and only 9% in whole Asia. Therefore, ERP venders have a great target to increase market share in the developing countries in Asia, such as Malaysia and China, as well as in Latin America (Huang & Palvia, 2001).

North America and Western Europe are the two largest market segments for the ERP system in 2004 with approximately 51.6 and 29.9 percent, respectively. However, in the same year, the Asia/Pacific region was the third largest market segment for ERP system, with approximately 13.6 percent of the total spending on ERP system. The results of a market research conducted by the Korea IT Industry Promotion Agency indicated that the total ERP market in Korea was \$252 million in 2001 and increased to \$262 and \$277 million in 2002 and 2003, respectively (Katerattanakul *et al.*, 2006).

The total ERP market in Korea was \$290 million in 2004 which is approximately 8 percent of the total spending on ERP system in the Asia/Pacific region. It was also estimated that the ERP market in Korea would continue to grow with an estimated growth rate of 4.8 percent during 2005-2010 (Katerattanakul *et al.*, 2006). Moreover, MIC (2002) reported a rapid growth of ERP systems in Taiwan market, the market grew from \$2.113 billion in 1997 to \$4.68 billion in 1998, and from \$6.13 billion in 1999 to \$8.01 billion in 2000, and from \$9.88 billion in 2001 to \$12.65 billion in 2002. These results indicate a rapid growth of ERP market in Asia. However, ERP market was expected to increase up to \$36.1 billion in 2008 (Sonnen *et al.*, 2005).

1.4 Global growth of ERP system

International Data Corporation (IDC) shows a growth in ERP market in China, for instance, from 1997 to 2002 the ERP market increased from \$78.4 million to \$243 million, and expected to increase by 25% annually. One the other hand, a study has been conducted on five companies in China indicates unsuccessful results of ERP systems because of seven main

problems such as language, price, report format and content, cost control module, customer support, consulting partner, and business process. The study recommended that, foreign ERP vendors need to overcome all these problems in order to penetrate the Chinese marketplace, for example, regarding the language problem, they need to translate all ERP modules to Chinese language (Liang *et al.*, 2004).

The investments of ERP systems in China record billions of dollars. For example, in 2001 more than 1000 Chinese companies implemented ERP systems, 300 of them used SAP's R/3 software package. However, globally, China market considered as the third largest IT market after US and Japan. Therefore, China market is a good target place for foreign ERP vendors to penetrate this market, for example, the CEO of SAP company (Henning Kagermann) noted that, the company revenue growth increased 50% annually in China (Martinsons, 2004). Figure 1.6 demonstrates the ERP market share and major ERP vendors in china. It is clear that the leaders of ERP systems in China are SAP and Oracle.

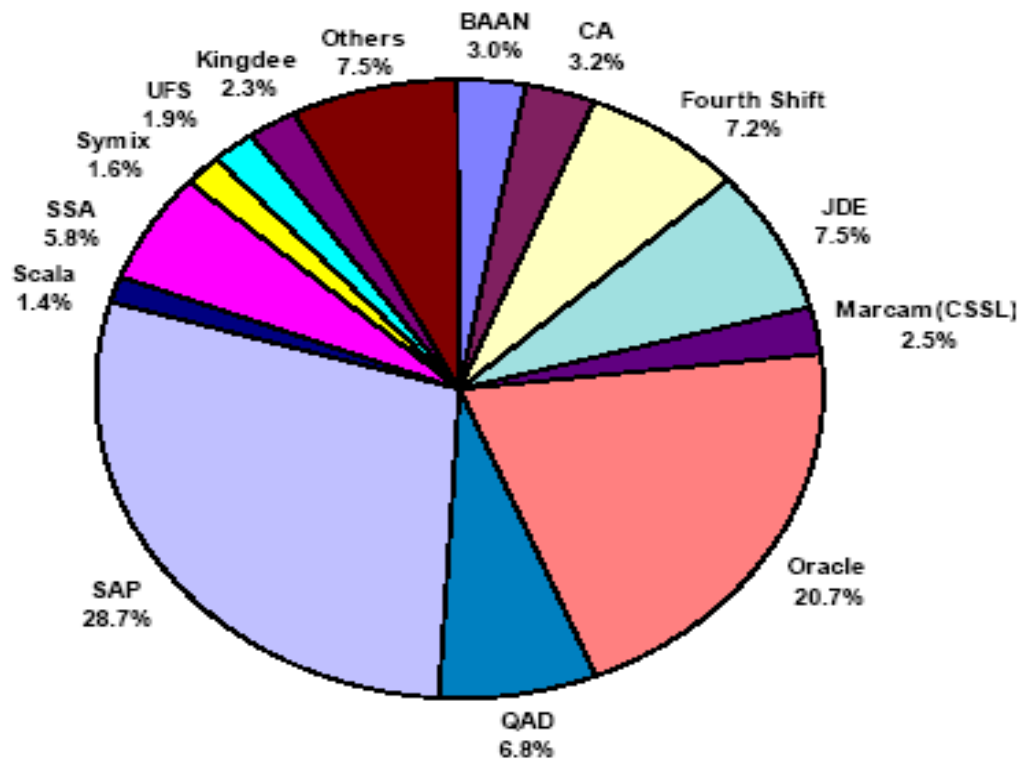


Figure 1.6: ERP Market Share and Major ERP Vendors in China
Source: Zhang *et al.* (2002)

According to AMR annual report, ERP market growth in 2008 seems healthy from the beginning of the year. A survey data has been conducted by AMR research indicates that, for large companies with 1,000 or more employees, ERP budgets will have an average growth of 5.4% in 2008. If this result compared to 2007 projection for budget increases of 12.3% for all sizes of companies, then the current 2008 projection is a reasonable scale for large companies. In

fact, many companies have already standardized an ERP package for core financials and are now expanding that footprint to include other functionality, such as manufacturing operations support and CRM in order to connect and improve the relationship with customers and suppliers (AMR Research, 2008). Figure 1.7 illustrates the ERP budget growth for 2008 by company size.

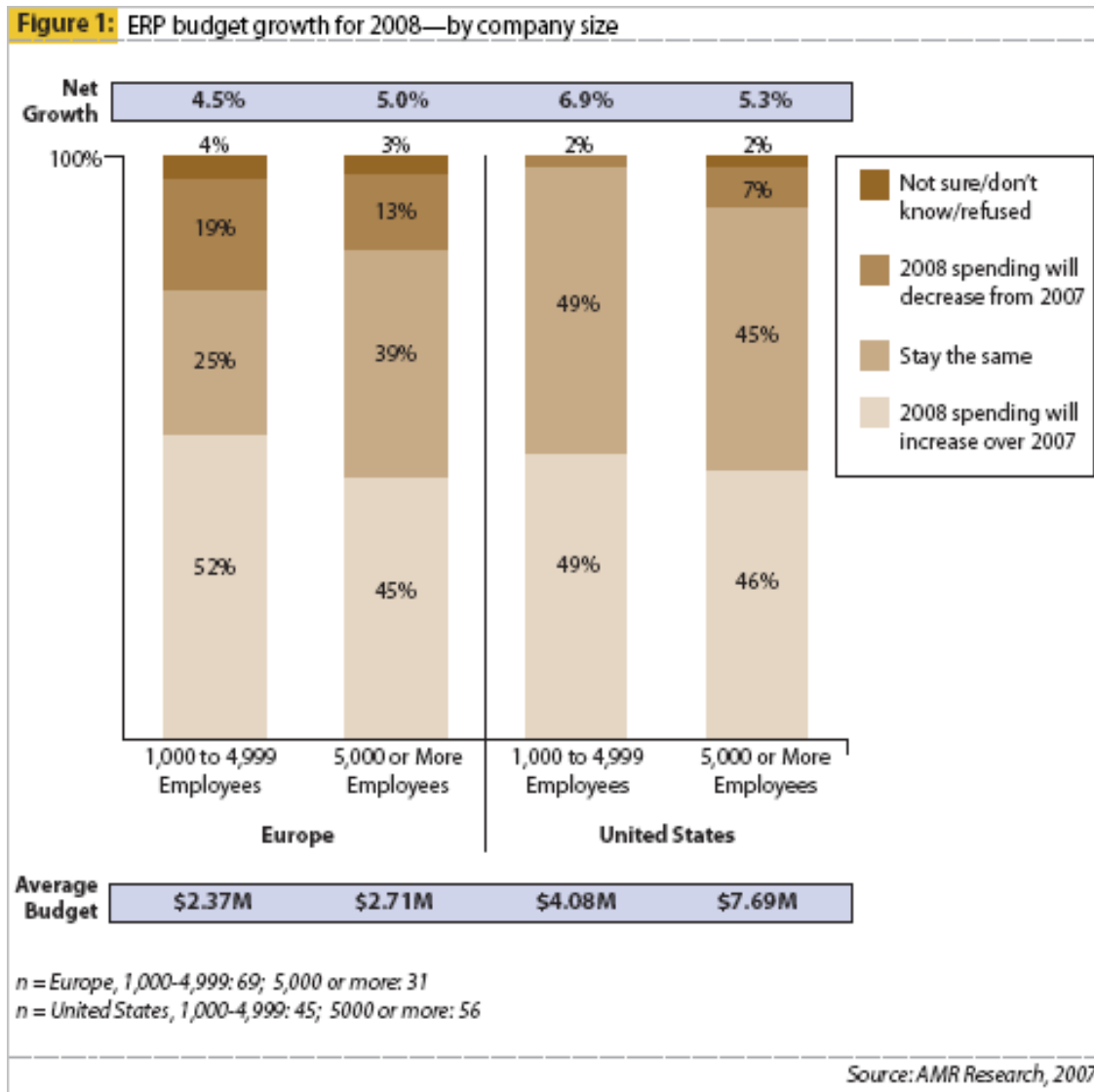


Figure 1.7: ERP budget growth for 2008 by company size
 Source: AMR Research (2008)

2. ERP Malaysian Change

ERP systems are growing progressively in Malaysia and the implementation of the systems increasing rapidly among many of Malaysian sectors, particularly in manufacturing sector. In 2003 the manufacturing sector shows a high growth in Malaysia which contributed in 70 percent of the revenue and 55 percent of the employment. However, many companies in

Malaysia struggling to improve their business performance enhance customer satisfaction, increase profits, and decrease operational costs in order to gain a competitive advantage in the global marketplace (Frost & Sullivan, 2004).

2.1 Growth of ERP system in Malaysia

In fact, the increasing number of manufacturing companies and the competitive environment between companies in Malaysia provides large opportunities for ERP vendors to penetrate Malaysian market, for example, SYMIX Computer Systems jointed with two local companies, HSO Business Systems and YNY Technology in order to sell and implement its package of ERP systems in Malaysia. The mission of these companies is to increase the number of local manufacturing companies that implemented ERP systems and thus grow the market of ERP systems in Malaysia (Frost & Sullivan, 2004).

IFS Malaysian Sdn Bhd manager stated that, there is a clear tendency for ERP solution in the local market. In addition, many companies in Malaysian are turning to ERP solution in order to compete in the global market. The implementation of ERP systems among small and medium-enterprises (SMEs) still low, this is could be because the understanding of the benefits of ERP systems among top management is quite low (Financial Times Information Limited, 2002).

Francis Chai, the managing director of systems integration house NWS Solutions (M) Sdn Bhd, stated that, education among top management of SMEs could contribute toward enhancing their understanding about the benefits of ERP systems and thus contribute in nation's economy. A seminar held by NWS in Eastin Hotel in Petaling Jaya (Malaysia) between chief executive officers, chief information officers, managing directors, and information technology directors of the company, the purpose of this seminar was to provide top managers with information about ERP systems such as benefits of implementing ERP systems and the cost of ERP implementing. At the end of this seminar, NWS and their partners offer special and cost effective package of ERP systems (Financial Times Information Limited, 2002).

However, IFS (M) Sdn Bhd, give the customers the right to select the appropriate components of ERP systems that their company needs. In fact, the aim of IFS is to increase the local market share of ERP systems, enhance their products with new features and functionality, and find better ways to deal with customers such as selling some of ERP systems modules better than selling the whole ERP systems which is not affordable by many companies. In 2001, FIS recorded growth in revenue RM 10 million compare to year 2000, presently the company having 25 customers from different sectors in Malaysia (Ravendran, 2002).

In addition, KarenSoft Technology Bhd, an Enterprise Resource Planning (ERP) software provider, plans to make ERP implementation more reasonable and at affordable price. Currently the company offers "KarenSoft Mini ERP" (MERP), and also provides financial facilities for small and medium enterprises (SMEs). In 2004, KarenSoft Technology Bhd, recorded revenue of RM 6.211 million compare to RM 5.238 million in 2003 and reported a profits of RM 977,000 (Emmanuel, 2005).

NEC Malaysian is an ERP systems provider including system hardware, software, support, and service. NEC Malaysia planned to acquire 33 percent of the local manufacturing ERP market share within three years, with target sales revenue of RM 50 million. In order for SMEs to build strong business infrastructure, NEC Malaysia recommends the VisionMan7 solution for them because it is completely suitable for SMEs to gain competitive advantage.

VisionMan7 costs RM15,000 per module, and can be implemented within less than two months. However, NEC Malaysia joined with Bottlenosed Systems Developer Sdn Bhd for six years in order to develop VisionMan7, which is 100 percent locally developed, they spent about 40 man years to develop VisionMan7, and the system was released since six years (Manecksha, 2000).

International Business Systems Asia-Pacific Competence Centre Sdn Bhd (IBS APCC), a subsidiary of Swedish outfits (IBS AB). In 1999, the company recorded turnover of RM 6 million with net profit of RM 2.5 million and in 2000 they aimed to increase the revenue by 35 percent from their manufacturing system in Malaysia. However, IBS APCC predicted a huge potential for ERP systems in local market. According to AMR research the revenue of the IBS APCC increased from 63 percent to 74 percent from 1998 to 2003. IBS APCC also planned to join with Rainbow suite in order to improve their business performance in Malaysia (Sangaran, 2000; AMR research, 2004).

JD Edwards seeks to obtain bigger share in Malaysian ERP market, because they observe upward growth and big demand for ERP systems in the local market. The company also evaluates Malaysia's information technology market for RM 1.6 billion based on information from International Data Corporation (IDC). Therefore, JD Edwards setup a branch in Malaysia in order to benefit from this opportunity as well as to increase market share (Asia Intelligence Wire from FT Information, 1998).

SAP Malaysia Sdn Bhd signed an agreement with VANTAGE Point Consulting Sdn Bhd (VPC), in Kuala Lumpur Malaysia, to work together in order to capture the local ERP market and also to provide consultancy and services of various SAP products and solutions. Both of the companies expected to record RM 66.6 billion in 2003. VPC also willing to be major SAP player in e-business by using mySAP.com as a platform and introducing its services to small-and medium-scale industries and extended to public sector and utility market (Hamid, 2000).

ASP Software Sdn Bhd, Malaysia, has joined with SYSTEM Software Associates (SSA) (an ERP systems provider) to work together in order to expand their market share in Malaysia. The cooperation between the two companies was due to the huge growth in market demand which requires more ERP provider to supply the local market (Rosario, 1999).

2.2 ERP system in Malaysia

Majority of the companies' ownership was local ownership rating 58.8%; on the other hand the foreign companies' ownership was rating 41.2%. All companies' type was manufacturing companies because this study focused only on manufacturing companies. The size of the companies in term of employees' number shows that, the majority of respondents were having more than 150 employees constituting 72.5%. The geographic scope of most companies was worldwide rating 46.3%.

In term of customers' and suppliers' number, more than half of the respondents were having more than 150 customers rating 53.8% and more than 150 suppliers rating 51.3%. On the other hand, 31.3% of the target companies selected SAP as the provider of their ERP systems, where SAP is the leader of ERP systems in the global market. Typically, companies need eight months after the implementation of ERP systems in order to start reap the benefits of the systems and observe its impact on the companies. In this study the majority of companies implemented and currently uses ERP systems since more than 5 years rating 47.5%. The main two reasons behind adopting ERP systems in most of the companies was to improve supply chain management performance and overall business performance rating 47.5% and 43.8% respectively.

The results of the descriptive analysis for the demographic profile of respondents are shown in Table 1.

Table 1
Summary of Demographic Profile of Respondents

| Variables | Category | Frequency | Percentage |
|--|--------------------------------------|-----------|------------|
| Company Ownership | Local | 47 | 58.8 |
| | Foreign | 33 | 41.2 |
| Company Type | Manufacturing | 80 | 100 |
| Company size in term of Employees | 5-50 Employees | 2 | 2.5 |
| | 51-150 Employees | 20 | 25 |
| | More than 150 Employees | 58 | 72.5 |
| Geographic Scope | Local | 32 | 40 |
| | Regional | 11 | 13.8 |
| | Worldwide | 37 | 46.2 |
| Customers Number | Less Than 50 Customers | 19 | 23.8 |
| | 51-100 Customers | 10 | 12.5 |
| | 101-150 Customers | 8 | 10 |
| | More than 150 Customers | 43 | 53.7 |
| Suppliers Number | Less than 50 Suppliers | 9 | 11.2 |
| | 51-100 Suppliers | 15 | 18.8 |
| | 101-150 Suppliers | 15 | 18.8 |
| | More than 150 Suppliers | 41 | 51.2 |
| ERP Provider | SAP | 25 | 31.2 |
| | Oracle | 5 | 6.3 |
| | PeopleSoft | 1 | 1.2 |
| | J.D. Edwards | 5 | 6.3 |
| | Baan | 4 | 5 |
| | Others | 40 | 50 |
| Start using ERP Systems | Less than 1 year | 8 | 10 |
| | 1-2 years | 8 | 10 |
| | 2-3 years | 8 | 10 |
| | 3-4 years | 9 | 11.3 |
| | 4-5 years | 9 | 11.3 |
| | More than 5 years | 38 | 47.4 |
| Reasons to adopt ERP System | Improve overall business performance | 35 | 43.8 |
| | Improve SCM performance | 38 | 47.5 |
| | Enhance decision making | 1 | 1.3 |
| | Integration of application | 3 | 3.7 |
| | Integration of information systems | 3 | 3.7 |

2.3 Status of Supply Chain Management Performance in Malaysia

According to Table 2, the majority of respondents rating 77.5% are agree that, the management able to renew their capability in any time in order to meet changing customer needs.

This result indicated that ERP systems provide flexibility to the company in order to respond to the changes in customer needs as well as in marketplace.

Moreover, 72.5% of the respondents agree that, the management can take quick actions based on the available information within the supply chain. In other words, ERP systems provide on-time and accurate information that enable the management to take rapid and precise actions. This is followed by 68.8% of the respondents believe that accurate information is usually available for decision making, whereas 67.5% of the respondents agree with the quick flow of the information within the supply chain.

The overall results obtained from Table 2 indicated that ERP systems improve supply chain management performance through reducing inventory and operational costs, improving product quality and on-time delivery, and enhancing flexibility and customer satisfaction. Briefly, the majority of Malaysian manufacturing companies believe that supply chain management performance has been improved after the implementation of ERP systems. The details for each element of SCM performance are presented in the following Table 2.

Table 2
Summary of Distribution for SCM Performance in Malaysia

| Supply Chain Management (SCM) Performance | Frequency (80) | Percentage (100%) |
|--|-----------------------|--------------------------|
| Inventory costs have been reduced | 46 | 57.5 |
| Operational costs have been reduced | 45 | 56.3 |
| Products quality has been improved | 42 | 52.5 |
| Response to the changes has been improved | 62 | 77.5 |
| Quick action can be made based on accurate and on-time information | 58 | 72.5 |
| On-time delivery has been improved | 47 | 58.8 |
| Customers responsiveness has been improved | 52 | 65.0 |
| Customers are satisfied | 47 | 58.8 |
| Quick information flow | 54 | 67.5 |
| Accurate information is usually available | 55 | 68.8 |
| Link of information systems | 42 | 52.5 |
| Joint with production planning and scheduling | 36 | 45.0 |

2.4 Challenges of ERP system in Malaysia

SAP Data Processing (M) Sdn Bhd has chosen JSP Consulting (JSPC) Sdn Bhd as a partner in Penang (Malaysia) to cooperate in ERP implementation and in achieving target of 30

to 40 percent of ERP market in Penang which could contribute in 15 percent of the total SAP Malaysian's business growth and achieving the competitive advantage in Penang marketplace. JSPC planned to focus on hi-tech and small and medium enterprises (SMEs) market due to the availability of such enterprise in Penang. JSPS offer these enterprises with competitive and affordable packages price in order to allow them to use technology and turning to IT environment (SAP, 1998; Asia Intelligence Wire from FT Information, 1998).

Moreover, SAP further planned to invest and add two more training rooms to the existing five rooms which will cost them around RM 250,000 and will also double the courses to 248 courses. However, they expect RM 3.5 million training revenue, compared to RM 1.9 million in the previous years, from their customers in Malaysia such as Tenaga Nasional Bhd, Binariang Sdn Bhd, Petroliam Nasional Bhd, Diethelm Holdings (M) Bhd, Sapura Holdings Bhd, Telekom Malaysia Bhd, Artwright Holdings Bhd, Mun Loong Bhd, and Esso Production (M) Inc. However, 60 percent of SAP customers use R/3 application while 40 percent use R/2 application which uses main frame computers, currently R/3 gaining popularity between SAP customers (SAP, 1998; Asia Intelligence Wire from FT Information, 1998).

Malaysian market contains many novel things that can offer to the world economy as well as to the future global marketplace. In fact, Malaysian market is constantly growing and it is a promising marketplace particularly with the continuous encouragement of ERP systems in large companies as well as in small and medium enterprises. Yet, it requires more attention from researchers and professionals. However, Malaysian market is still untapped and unexplored at large from local and foreign ERP vendors and it is still at a developmental stage. Therefore, it is a good opportunity that is opens the market for foreign ERP vendors in order to penetrate the Malaysian market. In fact, the implementation of ERP systems in Malaysia has raised the job opportunity as well as the income for many individuals and entities in the country (ERPwire.com, 2008; Erp Implementation, 2008).

The Ministry of International Trade and Industry (MITI) stated that, the Malaysia government provided a grant for ICT applications for Small and Medium Enterprises (SMEs), and this grant included the purchasing of ERP software related to manufacturing (MITI, 2002, cited from Jafari *et al.*, 2006). However, the Small and Medium Industries Development Corporation (SMIDEC) is responsible for this grant (Jafari *et al.*, 2006). Therefore this research would contribute toward stimulating the ERP systems again between Malaysian companies through elucidating the benefits of ERP systems and clarifying the positive impact of the system on companies' business performance which would encourage them to implement ERP systems and also encourage the Malaysian government to provide the financial assistant and grant for SMEs and support the ERP system implementations and thus contribute in technology diffusion between Malaysian companies.

In fact, there are quite reasonable number of Malaysian companies implemented and used ERP systems, particularly manufacturing companies such as Proton, Petronas, Perodua, Modenas, Naza, Nippon, Basf, Kobay, Rehon, Denko, Inari, ISO technology, Amalgamated Metal Builders, Mieco, EMICO, Pentamaster, Rapid Growth Technology, and many other companies. But on the other hand there are also many other companies are reluctant to adopt ERP systems, and this is could be because of the failure records of ERP systems in many international and local companies.

Figure 1.8 demonstrates the ERP market forecast in Malaysia. The growth of ERP systems in Malaysian companies grow progressively. ERP systems captured RM432.44 million

sales in year 2000 and this is expected to grow to RM691.4 million by year 2005. These results show a stable growth of 59.9% from year 2000 to 2005 (IDC, 2002).

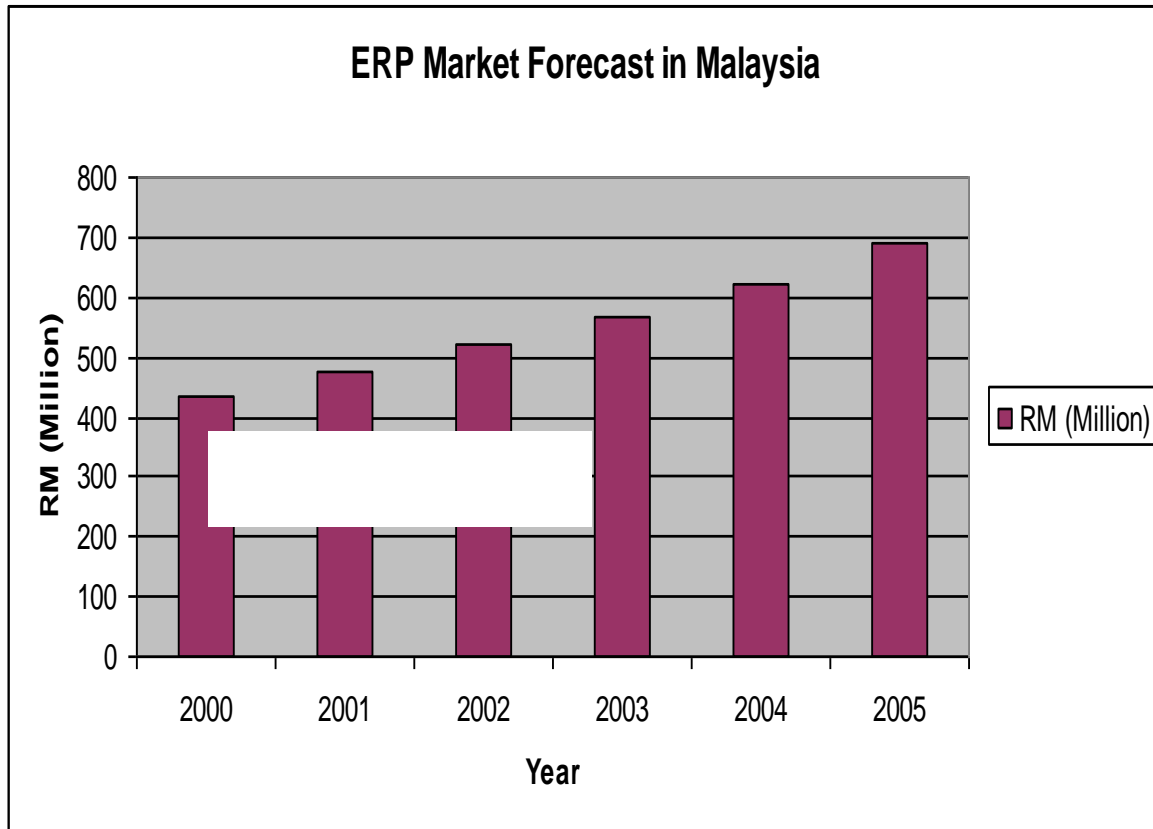


Figure 1.8: ERP Market Forecast in Malaysia.

Source: Source: IDC (2002)

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