

CHAPTER 3: RESEARCH METHODOLOGY

This paper will investigate the theoretical framework show in diagram 1.

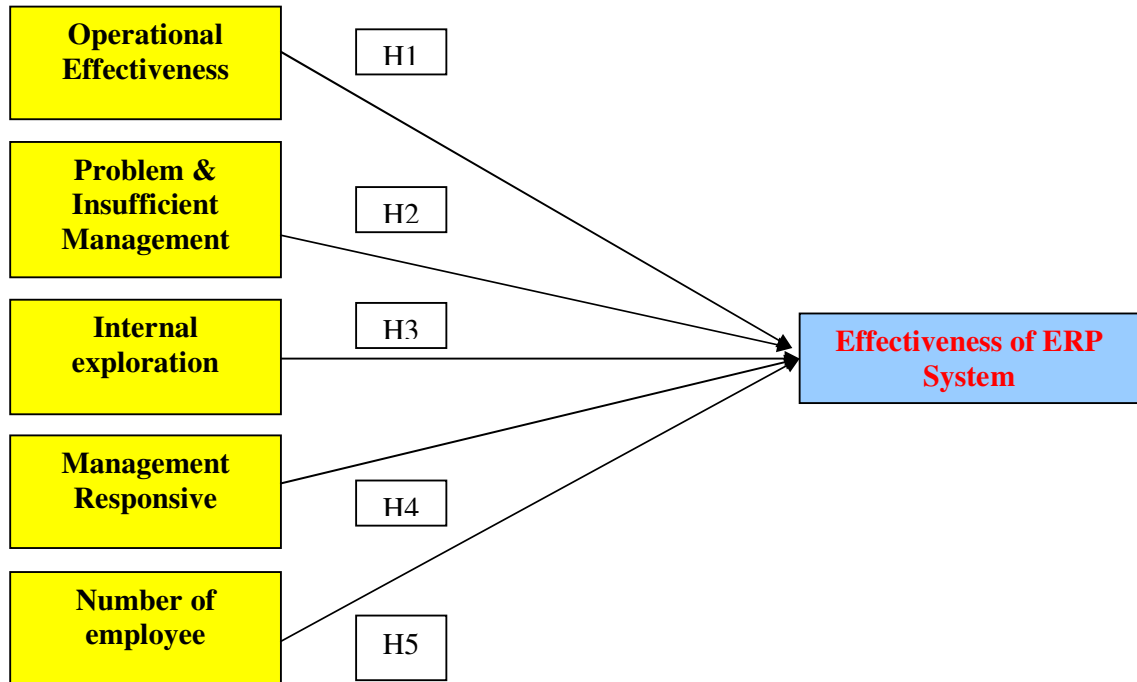


Diagram 1: Theoretical Framework

I have derived this framework based on research done in this field. In this way, I have adopted a positivist approach. Effectiveness of ERP system implementation has been researched extensively and many validated tools are available to measure this. I will investigate if ERP system reported greater impact on the overall management flow. We will see if this results in greater effectiveness.

Many different approaches to research have been utilized for the examination of ERP system effectiveness. Although some authors have performed case

study analyses, in order to obtain a comprehensive understanding of firms' experiences with ERP system, the findings do not enable generalization to the wider population. Specific aspects of ERP system have also been examined through the use of event of study. However, limitations of this method have included the difficulty in specifying the truth, and the possibility of bias in the computation of abnormal returns over extended periods.

Although not without limitations, the questionnaire method was selected for this research in order to test the hypotheses detailed. The use of a questionnaire allows distribution to a wider number of companies, enabling a more indicative view of the use and non-use of ERP system in organizations in Malaysia. To examine this model in detail, I will look at each independent variable in this framework individually and then we will examine the relationship between these variables.

3.1 Research Variable

3.1.1 Independent Variable 1: Operational effectiveness

Operational effectiveness will involve organizational cost, cycle-time, productivity, and data quality and customer service. Meanwhile, we need to know what the shortest cycle time for production is and what the factors to improve it are. From the survey received, I'm able to justify the satisfactory level of customers after implemented ERP system in their company. This is correspondence to the statement by Al-Mashari, M. and Zairi, M.

On the other hand, continuous improvement may become a better way for cost reduction and methods to reduce the cost in order to maximize profit. The quality level in an organization or product and their effect if quality plans are implemented together with the impacts to organization and side effects to firm's profit and lost will be discovered.

3.1.2 Independent Variable 2: Problem & Insufficient Management

Problem & insufficient management is referring to the resource management, decision-making and control system. The effectiveness of the resource planning, rewards and compensation and resources allocation may result the effectiveness of ERP system implementation in the firm and this statement I supported by Umble. This category of people may include top management, middle level manager, executives and general worker. Individual and corporate decision may vary from time to time due to political environment and government's policies. From here, we will know the effect of the said issues to the implementation of ERP system in the firm.

3.1.3 Independent Variable 3: Internal exploration

Economic stability will involve future business growth, leadership and competitiveness. The effectiveness of the current financial of the firm and business strategies will be taken in order to expand their wing to over-sea market. Haines and Goodhue also giving the same opinion on this phase.

Good economic environment will be able to attract foreign funds to make their investment in this country. The implementation of ERP system may change current firm's situation so that it can compete with foreign competitors. We need to study the effect of the ERP system in the firm during economic downturn and growth.

3.1.4 Independent Variable 4: Management responsive

Infrastructure such as IT and software is a very important asset to an organization. Continuous development and investment in IT would bring a lot of benefits in order to form corporate structure as suggested. This is correspondence to Ross, Geanne and Peter's statement. We will study whether the technology development will effect the implementation of ERP system in an organization and the solution of this. Infrastructure needed to be implemented to capture current market demand and the effectiveness of ERP system over implementation of IT? Does ERP system can effectively correct the weaknesses of human error in task job given and what is the solution to correct the present situation?

3.1.5 Independent Variable 5: Number of employee

Organizational responsive will include restructuring, employee skill empowerment, employee morale and satisfaction. Furthermore, we should know the benefits of firms' restructuring, if any. Examine the effectiveness of ERP system over employee skills and morale as supported by Al-Mashari and Zairi. To know what are the methods to improve employee technical and

management skill and empowerment process. Organization restructuring might affect employee satisfaction and loyalty to the firm.

Hence I noted that researchers have identified the following relationship between problems & issues and ERP implementation's effectiveness. My questionnaire will measure the relationships shown below:

a) Hypothesis 1 (H1): Operational effectiveness will have positive effect following the implementation of ERP system in their organization.

b) Hypothesis 2 (H2): Problem & insufficient management will have negative effect following the implementation of ERP system.

a) Does your company effectively implement the ERP system, which allow employee easier to manage daily operation within the organization?

1. To the personnel office
2. To immediate supervisors
3. To top management
4. To the head of department
5. To designated channel
6. To law enforcement officer
7. To the vendor or supplier.

c) Hypothesis 3 (H3): Internal exploration will have positive effect management flow than respondents in companies with no such system.

d) Hypothesis 4 (H4): Management Responsive will have positive effect on companies with ERP system than in companies with no such system.

b) Indicate your perception of the increase or decrease in effectiveness of ERP system after implemented it in organization?

1. To the personnel office
2. To immediate supervisors
3. To top management
4. To the head of department
5. To designated channel
6. To law enforcement officer
7. To the vendor or supplier.

e) Hypothesis 5 (H5): Number of employee will have positive effect on employee concerns and the level of implementation of ERP system.

c) Indicate your perception of the responsiveness of the company to employees who voice concerns about sensitive issues and problems.

1. Not interested in hearing employee concerns of wrongdoing in company.
2. Encourage employee to voice their concerns.
3. Has not provided enough internal communication channels for employees.
4. Carefully investigate employee concerns.

5. Is cooperative and supportive of employees who voice concerns about traditional system's issues.

3.2 Survey Method

Sampling design

The sample for the study reported herein was developed through direct contacts with employers and employees in the Klang Valley area. A total of 100 employers and employees agreed to participate. Total of 100 questionnaires has been distributed and 86 being received. It represents 86% response rate has been achieved in this survey.

The largest organization whose workers were surveyed is employs more than five hundred people while the smallest, fewer than hundred. Most of them who were surveyed work for different employers. Accordingly, the respondents represent a wide range of organizational perspectives.

It was hypothesized that employment characteristics would be the most important variables in determining, effectiveness level of ERP implementation. Thus, the respondent pool was planned to attain a distribution of employees in two respects: major occupational groups and non-agricultural sectors of the area economy. The sample is quite representative with respect to economic sectors and major occupational groups. In both instances, all categories are represented.

This study involved the participation of few different organizations in the service and manufacturing industries, and data collection occurred at the individual level. More specifically, the prospective participants of this study consisted of the entire population of the management level and also general employee.

To increase the likelihood of a high response rate, the anonymous surveys were administered internally by the corresponding human resource (HR) or organization development (OD) manager who assured the employees of complete confidentiality. Moreover, there are three organizations offered their employees the opportunity to win a monetary reward, which ranged from \$10 to \$20, for participation. The incentive was distributed after a random drawing of completed raffle tickets, which the participants provided on returning their survey. The response rate reflecting each organization and it was shown as below. Table below also includes the overall response, 86 percent. Given the high response rate, as well as the affirmative comments of the internals with regard to the degree of agreement between the obtained responses and observed employee behavior and climate in the organization, it was determined that the provided responses were not prone to non-response bias.

Many of the differences between the respondents and the actual data are small, and the overall correspondence is sufficiently close to allow generalization to the area population. The results also provide useful insights

regarding more widespread perceptions toward the effectiveness of ERP system implementation; questionnaires with explanatory cover letters were mailed to approximately 100 employees.

Table 1: Survey

Economic Sector	Survey Respondents (%)
Manufacturing	15.6
Construction	8.7
Transportation, utilities, Communications	6.0
Wholesale or retail sales	17.8
Finance, Real Estate, Insurance	8.7
Services	33.0
Government	6.9
No response	3.3

Occupational Group	Survey Respondents (%)
Clerical, admin, support	15.6
Production, maintenance, mechanics, Construction	23.9
Professional, paraprofessional, Technical	34.0
Service	6.2
Sales	4.3
Managerial, supervisory	12.7
No response	3.3