CHAPTER V
CONCLUSIONS AND RECOMMENDATION

5.1 Conclusions of the study

The objectives of this study were to develop and to test the model of factors affecting ERP adoption from the integration of antecedent variables and technology acceptance perspectives, and to provide recommendations for improving ERP adoption as guaranteed from the research. This study is expected to provide recommendations by specifying the major determinants of ERP adoption and report suggestions emphasizing managerial interventions that will facilitate more successful ERP adoption. Attention has been paid to the relationship among maritime organization factors, maritime technical factors, maritime individual factors, maritime regulation factor, perceived near-term consequence and intention to use in explaining ERP shipping system adoption.

The theorical reason for these factors drew upon multiple streams of theory, including the technology acceptance model (TAM), the theory of reasoned action (TRA) and Triandis Model of Choice which as a basic theoretical foundation. The implementation of these theories is integrated into the proposed conceptual model. To test the model, multivariate statistics were analyzed.

The model for analysis proposed eight significant factors that affect successful ERP shipping system adoption. The findings from the total populations supported the majority of the hypotheses. Among all independent variables, intention to use ERP shipping system shows the most important role that affects ERP shipping system adoption. An user's positive and satisfactory intention to use ERP shipping system is a basic concern for management to be considered for ERP shipping system adoption. In order to gain a positive intention to use, ERP shipping system must be perceived near-term consequences as beneficial for users and supported by maritime organization factors such as team management.

In addition, the antecedent variables; maritime technical factors, maritime individual factors, maritime regulation factors, were found to have a relationship to ERP shipping system adoption. Maritime technical factors encompasses IT integration, network communication, system compatibility and quality of data to support the task. The more operations of ERP shipping system that support task requirements, the greater the technical fit will be, and consequently the greater the

ERP shipping system adoption. The technical fit is one of the important determinants concerning whether ERP shipping system is perceived to be more useful, whether it is more relative benefit.

Maritime individual factors were also found significant effect on perceive near-term consequences and perceived ease of use. Users realized that ERP shipping system was used as tools for reducing uncertainty among the users with their structured business process. Moreover, it would be easier to have the proactive approach in ERP shipping system. ERP training provided the pass along mechanism that allows users of the ERP shipping system to explore the system both from a technical standpoint and from a functional perspective and to be easy in learning how to use software.

Maritime regulation factors strongly affected the perceived near-term consequences. A regulation and module for rules compliance were designed in a manner of being of capable the intelligent and interoperable functioning if shipping actors represents a feasible solution. The greater degree of feasibility in issuing shipping regulation increased the higher level of perceived benefit of ERP shipping system became.

The result of this study found that the integration of maritime variables (maritime organizational factors, maritime technical factors, maritime individual factors and maritime regulation factor) and the technology acceptance model had a stronger explanatory power concerning its influential impact on ERP shipping system adoption than using the technology acceptance model (TAM) alone.

In conclusion, the technology acceptance model itself cannot provide sufficient information to explain individual acceptance and use of the technology. This cause can be worked out through the integration of the antecedent variables (maritime organization factors, maritime technical factors, maritime individual factors and maritime regulation factor), theory of reasoned action, theory of choice and the technology acceptance model. Therefore, the complete model of ERP shipping system adoption can be determined.

5.2 Contributions

5.2.1 Theoretical Contributions

This research studied the area of information technology adoption. It incorporated and expanded upon the concept of information technology adoption

introduced by various researches. The study of ERP adoption was developed based upon the integration of the antecedent variables (maritime organizational factors, maritime technical factors, maritime individual factors, and maritime regulation factor), theory of reasoned action, theory of choice and technology acceptance model, and aimed at providing supporting empirical evidence. The empirical results from this study support the idea that the combined technology acceptance model and antecedent variables may even be a more effective model to explain information technology adoption than technology acceptance model or maritime variables alone.

The contribution of this study extended prior research in information technology adoption by offering a conceptual model of the impulses of perceptions and attitudes that integrate multiple theorical perspectives. By validating the technology acceptance model's fundamental assumptions of mediation of external variables on perceived usefulness (perceived near-term consequences) and perceived ease of use, the strength of the technology acceptance model as a powerful model to understand and predict user acceptance and use has been further established.

To conclude, in the extend of theorical contribution, testing many theorical perspectives in one study present an integrated view of technology acceptance perspectives and their variables, which are derived from maritime variables, theory of reasoned action and theory of choice.

5.2.2 Practical Contributions

The study was driven by the recognition that ERP is increasingly becoming a core information technology in organizations. Actually, in the shipping industry has obviously been affected by the emergence of new ERP. The adoption and use of ERP is increasingly being recognized as the profitable for the exchange of information between vessels and headquarters. Therefore, the shipping industry and researchers need to gain better understanding of factors impulse ERP shipping system adoption.

From the result of the study, in order to succeed in ERP shipping system adoption it is evident that the maritime organizational context, maritime technical context, maritime individual context and maritime regulation contexts are a critical predictor of users behavior toward technology acceptance and use, via its effects on the mediating construct of perceived near-term consequence and intention to use. The model suggests that users will present higher positive perceptions and intends to use system based not only on the intrinsic characteristics of the system, but also on the

extent to which the system meets their job requirement (maritime technical factors and maritime regulation factor) and individual requirement (maritime organizational factors and maritime individual factors).

The findings also suggest that carefully developed user evaluation of perceptions and beliefs can provide detailed diagnostics of information technology acceptance and use. Lower user perceptions of ease of use indicate specific problem areas where information technology is not easy to use and to learn. Since user perceived ease of use can present specific problems more precisely, it provides a better guideline for management to take any necessary to solve this problem.

This study articulated and tested a conceptual model that posited four different factors (maritime organizational, maritime technical, maritime individual and maritime regulation) that can influence perceived near-term consequence and intention to use ERP shipping system, which are antecedent variables in ERP shipping system adoption. Although there are some non-significance relationships between antecedent factors (perceived long-term consequences, perceived cost and perceived ease of use) and intention to use, practitioners may develop a comprehensive model to examine how organizations can enhance information technology acceptance and use, which will result in information technology adoption.

5.3 Managerial implication

The results had many managerial implications in connection with supporting the adoption.

Firstly, a supportive perceived usefulness and a benefit of system are very important. Top management must show the support and the encouragement to their employees in using the ERP shipping system. A strong leadership and a support from top management is a necessary condition for adoption the ERP shipping system.

Secondly, the shipping organization must ensure that the ERP shipping system would be technical fit for the working mode of the users. Customizing ERP shipping modules to suit individual use is almost necessary.

Finally, the training is also important to allow the users to obtain the first hand information and experience. Therefore, top management should provide training course to all employees.

5.4 Future Research

For the future research, the survey questionnaire should be distributed to the countries that have a main seaport such as Singapore and Indonesia where people in those countries may have different effects on adopting ERP shipping system.

Furthermore, perceived ease of use and perceived long-term consequences are non-significant because the users are not familiar with the system and ERP shipping system is a specific system which have to take more time to familiar with it. Therefore, we recommend future research to consolidate longitudinal studies to explore ERP shipping adoption over an extended period.

Lastly, the conceptual framework can be a prototype for future research to investigate ERP adoption in other transportation industries such as airline or inland transportation which are adopting ERP to their organization.