CHAPTER I

INTRODUCTION

1.1. Background

Nowadays, the societies are living in vast development of information technology (IT) as shown in several aspects. One aspect that affected the development of IT is business competition. The interaction between business owner and users across countries is getting closer, it shows that economic globalization is growing in the right track. In indicates that in this era, technology plays a significant role to the success of company.

Recently, the business competition grows rapidly. The executives of the enterprises should make proper decision in order to survive the business. In today's business condition, considering competitive competition, Business Intelligence (BI) is a technique and solution that helps managers to understand business situation. The most current information technology is to gather together all needed data from the transactional system and then load them into a data warehouse, and then link to BI tools such as OLAP, data mining, query and reporting (Nofal & Yusof, 2013).

BI is defined as systems which collect, transform, and present structured data from multiple sources (Negash, 2008). Furthermore, BI is defined as the process of taking large amounts, analyze, and presents a high-level set of reports of data into the basis of business actions, enabling management to make fundamental daily business decisions (Stackowiak et al., 2007).

Requirements of integrating several data together in order to make interactive dashboard and reports for support decision makers to decide properly is the main objective of BI (Sad, 2014). It is apparent that the decision maker needs to compare some information to make a proper decision and compete in the competitive business environment. Business users should have better access to critical information at the right time and the right appearance. By using BI, those things can be provided and implemented.

According to Maheshwari (2015), BI is a broad set of Information Technology (IT) solutions that include tools for gathering, analyzing, and reporting information to the users about the performance of the organization and its environment. These IT solutions are among the most highly prioritized solutions for investment.

The concept of BI can be applied in all industries (Terborg, 2009). All industries that generate data or have database system can use business intelligence to improve their business process. BI is being used in every industry such as retail, transportation, pharmaceutical, healthcare, manufacture, to law firms.

Devlin (2010) stated that during the last two decades, business needs and technology have evolved significantly since the first data warehouse architecture. Over 25 years of first data warehouse architecture, the change of speed of response, agility in face change, and a significantly wider information scope for all aspects of the business are the main concern of differences between current and past 25 years. Furthermore, this research argued that the new data warehouse concept is needed to fulfill current business needs.

On the other hands, it is very hard to build a BI system as stated the failure rate of BI development is around 50 % (Collier, 2012). Several causes of failure are lack of expertise, unrealistic expectation, too much focus on technology, and too high dependency on IT. Furthermore, the cost of implementing and maintaining BI also become considerations among the organizations (Collier, 2012). Moreover White (2011) stated that from their survey of 587 technical and business professionals, it is found that

an overwhelming 78% of respondents stated that they needed a faster time to value from BI solutions.

According to Logi Analytics (2015) that conducted research which was based on an online survey of more than 800 business and technology professionals, the concept of traditional BI approaches are changing. The trend was that organizations must be able to work with data more easily rather than focusing on supporting power users, in this case IT department. Based on 91% of the survey's respondents, easy access to data, without helping from IT departments and power users, is needed. In response to this demand, the new and promising BI trend with long-term prospects is Self-Service Business Intelligence (SSBI).

Self-service BI is a concept that was proposed by Claudia Imhoff and Colin White. Imhoff & White (2011) stated that self-service BI is a facility in BI environment that enables BI users to become more reliant and less dependent to IT department. Moreover, Self-service BI can also be called as Do-It-Yourself BI (DIY BI) which shows that the environment provided is easy to access, analyse and share data with less IT dependency.

Because of those condition mentioned in the previous paragraph, it is apparent that end user or decision maker wants to implement a BI system which has cost-effective, affordable, and less dependency on IT people. Furthermore, the BI system should meet several conditions such as user-friendly and easily integrated with other systems. The Self-service Business Intelligence (SSBI) can be the best option that can be developed. SSBI enable business users to explore the data even though their background is not in statistical analysis, BI, or data mining.

This research will focus on development of Self-service BI for Decision Support System. Actually, there are lots of vendors in the marketplace that provide the Self-service BI solution, however, this research, will use Microsoft BI Tools as one of the market leaders. Using Microsoft's Adventure Works as a case study, this research is carried out the researcher in order to get a deeper understanding of the development of BI solution.

1.2. Problem Formulation

Based on the background above, the problem formulation is how to develop Self-service Business Intelligence as decision support system for system performance Microsoft BI Tools?

1.3. Objectives of Research

The objective of this research is to develop Business Intelligence as decision support system for system performance using Microsoft BI Tools.

1.4. Scope of Problem

The scopes of this research are:

- 1. This research only uses Microsoft Business Intelligence tools.
- 2. This research only uses AdventureWorks2017 database.
- 3. This research only proposed B2C (business to customer) analysis model.
- 4. The result of this research is only prototype and will not be deploy to the company.

1.5. Benefits of Research

The significance of the research as follows:

- 1. For the company
 - a. Accelerate and automate data processing into meaningful information started from data integration from data sources, ETL, manage dimensions until data visualizations for self-service business users
 - b. The company can visualize the information in a good way and easy user experience.
 - c. Self-service BI can support decision making by the company to be better and faster because the decision is made by fact and relevant information that can be drilled until the smallest unit of dimension.

2. For the researcher

The researcher can gain deeper knowledge about integration of Business Intelligence and implement in the industry. Besides, it also can give the benefit to the current knowledge especially in the development of Self-service Business Intelligence application.

1.6. Systematic Writing

Writing this study was based on the rules of scientific writing in accordance with the systematics as follows:

CHAPTER I	INTRODUCTION
	This chapter contains a preliminary description of research
	activities, on the background of the problem, formulation of
	the problem, the objectives to be achieved, the benefits of
	research and systematic writing
CHAPTER II	LITERATURE REVIEW
	This chapter elaborated on the theories of reference books and
	journals as well as the results of previous research related to
	the research problem which is used as a reference for
	problem-solving
CHAPTER III	RESEARCH METHODOLOGY
	Contains the description of the framework and lines of
	inquiry, the research object to be studied and the methods
	used in the study.
CHAPTER IV	COLLECTION AND PROCESSING DATA
	Contains the data obtained during the research and how to
	analyze them Data processing result is displayed either in the
	form of tables and graphs. Data processing includes analysis
	and Sulbus, 2 am brocessing merados analysis

of the results. In this section is provided a reference for the discussion of the results to be written in Chapter V.

CHAPTER V DISCUSSION It contains discussion on the results of data processing that have been conducted in research, compatibility with the objectives of research so as to produce a recommendation.

CHAPTER VI CONCLUSIONS AND RECOMMENDATIONS

Contains the conclusion of the analysis and any recommendations or suggestions based on the results that have been identified during the study.

REFERENCES

APPENDIX