

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Increasing competition in the business world especially in the sales industry, requires management to rack their brains for opportunities to stay in business. In today's competitive business world, there is a need for business development to always survive in the competition. The economic growth of the retail business in Indonesia is increasing rapidly, marked by the fourth largest population in the world, which has enormous potential for the existing retail market. One type of modern market that is currently growing rapidly offers store locations or outlets that are close to consumers and prioritizes practicality and speed or a short shopping time. To increase the efficiency of shopping time, it is necessary to place goods in accordance with consumer shopping patterns. The layout of goods that are not in accordance with consumer shopping behavior can cause consumers to feel uncomfortable in shopping.

Marzan Jaya Building Store is one of the building materials store in Balikpapan, East Kalimantan Province. This shop sells various kinds of tools and building materials. Based on the results of the researcher's interview with the shop owner, information was obtained that consumers in shopping for goods have habits that are not in accordance with the layout of goods in the store. This causes consumers to take longer to make transactions.

There are several things that can be done to solve this problem, namely by basket analysis analyzing company data and implementing market. Market Basket Analysis is an association method in data mining that can find attributes that appear at one time. This process analyzes customer buying patterns by finding relationships between the different items that consumers buy in a transaction. The results that have been obtained can

later be used by retail companies such as shops or supermarkets to develop marketing strategies by looking at which items consumers are likely to buy together. as has been done in previous research.

In the research carried out by Erlin Erlisa<sup>1</sup> entitled "Market Basket Analysis of Ayu minimarkets with the Apriori algorithm" explains that the application of the Apriori Algorithm in Data Mining techniques is very efficient and can speed up the process of forming trends in itemset combination patterns resulting from sales of staple household goods at Ayu Tembesi Minimarket -Batam with the highest support and confidence is oil and milk with a support value of 42.85% and a confidence of 85.71%.

Another study carried out by Amer Sharif<sup>2</sup> entitled "Data mining to predict itemset sales promotion of goods using Market Basket Analysis (MBA) method (case study: Sentra Phones Shop)" concluded that the use of the market basket analysis method can find trends in itemset patterns so that they can used as very valuable information in the sales process. From the results of the calculations performed, there are 2 association rules that fulfill the 10 rules, i.e. the consumer buys an Asus cellphone, so he also buys accessories cellphone with a confidence value of = 89%, and if the consumer buys Xiaomi, so he also bought a case with a confidence value of 82%.

If you pay attention, mapping and placing items that are considered trivial by a company, can be an example of professionalism towards a company's management. Increasing professionalism when opening a company can generate a sense of trust from consumers. Which can also be called a trust. The concept of trust in this modern era can be in the form of product branding, convenience when shopping, to professionalism at work. With the following statement relating to the verses of the Qur'an Surah An-Nisa 59

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<sup>1</sup> Rekayasa Sistem and Erlin Elisa, "JURNAL RESTI Dengan Algoritma Apriori" 2, no. 2 (2018): 472–78.

<sup>2</sup> Amer Sharif, "Data Mining Untuk Memprediksi Itemset Promosi Penjualan Barang Menggunakan Metode Market Basket Analysis ( Mba ) ( Studi Kasus : Toko Sentra Ponsel )" 3, no. 2 (2019): 117–23.

إِنَّ اللَّهَ يَأْمُرُكُمْ أَنْ تُؤَدُّوا الْأَمَانَاتِ إِلَىٰ أَهْلِهَا

Meaning: Indeed, Allah commands you to convey the message to those who are entitled accept it.

The verses written relate to the interpretation of Buya Hamka in the book he wrote entitled Tafsir Al-Azhar. which «Indeed Allah commands you to fulfill the mandate to the experts»<sup>3</sup>. Maintaining the mandate or trust which also aims to generate trust in consumers. The concept of trust is not only related to people who can be trusted, but also related to professionalism in doing work. Consumers will see the management of a company and can generate a sense of trust in the company.

## 1.2 Formulation of the problem

The formulation of the problem that can be drawn from the background description is product placement that is not in accordance with consumer habits when buying products.

## 1.3 Objective

Based on the formulation of the problem discussed above, the research objective obtained is to provide recommendations for the layout of goods based on sales data using the market basket analysis method.

## 1.4 Benefits

The benefits expected from the results of this study are as follows:

### 1.4.1 General Purpose:

Implementing Market Basket Analysis at the Marzan Jaya building materials store using the Apriori Algorithm.

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<sup>3</sup> Hamka, *Interpretation of Al-Azhar Volume 2: Enriched with Historical, Sociological, Sufism, Kalam, Literature, and Psychological Approaches* (Achievements, 2020).

### **1.4.2 Specific Objectives**

- 1.4.2.1 As a condition of fulfilling the final assignment of lectures or thesis.
- 1.4.2.2 Adding knowledge and experience about data processing.
- 1.4.2.3 Increasing the variety of research on Market Basket Analysis.

### **1.5 Limitation of the problem**

In order for this research to be directed and achieved with research goals and objectives, several problem boundaries are defined, including:

- 1.5.1 The dataset used is sales data at the Marzan Jaya building materials store in January 2022.**
- 1.5.2 This research is limited to sales data associations at the Marzan Jaya building materials store.**