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Research article

Analysis of Sales Data Visualization of Warung Indomie using the Looker Studio Platform

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ABSTRACT

Indomie stalls are stalls that serve noodles from Indomie products.because people's tastes are very familiar with indomie, the opportunity to do business in the field of warmindo is large.so research was carried out to analyze the sales data of the indomie stall. The method used is Sales Data Visualization Analysis at Indomie Warung Using the Looker Studio Platform, starting from data collection, data preparation and data exploration. The data taken is secondary data from the Bima Putra website. The attributes used are invoice_id,tanggal_transaksi, jenis_produk, quantity, harga_jual, jenis_pembayaran, jenis_pesanan, and nilai_penjualan.so as to produce several visualizations. From this visualization, it is known that the best-selling Indomie product type is Indomie soup with 682 sales and the non-selling product is Indomie Goreng which sold only 293 from January-August 2022. The favorite product is Indomie Soto Betawi flavor as many as 80 sales. With the overall indomie flavor is 18 flavors. For the type of orders that are widely made, delivery is 51.7% with cash payment, which is 20%.the highest monthly income is July 2022 with a total of 1.4 million and the lowest is April 2022 with a total of 899 Rp. With an overall total of 975 sales. Therefore, this indomie stall can pay attention so that the stock of best-selling goods is always available, increase the promotion, improve the service, comfort and facilities of the stall, and of course the taste of the indomie dish should attract customers. Because the factors that cause the success or not of the business come from the number of sales.In addition, from this information, customers can also know which products can be recommended.

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1. Introduction

Indomie stalls are stalls that serve or sell special noodles from Indomie products. Because the taste of the community is very familiar with Indomme, both children, teenagers, and parents generally like this instant noodle. Even today, there are many indomie stalls that can be found ranging from simple and modern. According to Husin, sales is an activity that offers goods owned to potential buyers if the price and quantity of goods are appropriate and have been agreed upon by the prospective buyer, then the sales activity occurs [1]. So with the power of sales, a process of exchanging goods or services between sellers and buyers can be created. Sales are generally directly offered to the public or consumers through intermediaries such as salespeople, who function as a link that connects the company with its customers[2].

In sales, it will not be separated from the name of sales data. By definition,Sales DataIt is a collection or summary of all information and transactions during business activities. Simply put, sales data is transaction data that occurs every day [3]. Sales data is very important for businesses because it is a source of information regarding business development and future business analysis [4]. So that this sales data can be a benchmark for assessing a business. If sales activity has a high number, it means that many customers need the goods or services being sold. If the opposite is true, it means that there is a fault with the product or something else [5]. Because in a business, income between time and time can change. Moreover , an important factor that must be considered so that the goods and services produced can be immediately sold out, The benchmark of consumer satisfaction is the matching of expectations with the performance obtained [6]. Because Increasing competition and pressure to improve operational efficiency, encourage sellers to optimize the availability level of desired goods or products based on better consumer information.

From this description, research was carried out to analyze the types of best-selling and non-best-selling indomie products, to find out what types of payments consumers make the most, determine the highest and lowest income from time to time from indomie stalls, orders that consumers often make, and the best-selling indomie product brands as well as what indomie menus are sold at the stall. So that this analysis provides benefits in terms of sellers and consumers. In terms of sellers, sellers can get knowledge about the best-selling and non-best-selling goods.so that later sellers can estimate what indomie stock must always be available and must be reduced to avoid hoarding or wasteful stock that will cause losses, then from this analysis, sellers can also improve the quality, security and comfort of customers who visit. Both in terms of service and facilities and cleanliness of the stalls, and sellers can also get knowledge on how to make products that are not selling well be sold. In terms of consumers, consumers can find out what menus are in the stall and what menus are the most recommended.

In this study, of course, data is used. Data is a collection of information or facts made with words, sentences, symbols, numbers, and others [7]. The data used is secondary data. Secondary data is data that has been compiled and processed by statistical methods, Datasecondary can be collected through various sources such as books, websites, or government documents[8]. In secondary data analysis, researchers use existing data to answer research questions or test hypotheses. Secondary data can be used to obtain relevant information and can help researchers save time and cost in data collection [9]. Provided that the secondary data used must be accurate, relevant and trustworthy. With the need for information from data that can be used in business activities, it is necessary to explore the data to be able to find out the information which can be done using graphs where the use of graphs can be useful to identify patterns in the data [10].

So to display these graphs, the author performs data visualization techniques using google looker studio tools which were previously known as google data studio. Data visualization is an art and a science. Data visualization is an umbrella term that describes any attempt to help people understand the significance of data by placing data in a visual context [11].Google Data Studio is a cloud-based program designed as an easy-to-use tool to represent complex data sets in an engaging and clear way. Google Data Studio can be used by anyone and can be accessed anywhere. Launched in May 2016 as part of Analytics 360 Suite [12]. The advantage of Google Data Studio is the ability to collaborate in creating data visualizations and the many functions offered for free when compared to its competitors [13]. Moreover By using Looker Studio, the data displayed is more informative and real-time. Looker Studio can turn data into attractive charts so that users can easily understand the data [14]. In addition, it can compile data that is processed into bar charts, line charts, geographic maps and so on [15].

So it can be concluded from the various available information, this study highlights several related studies regarding sales data analysis. Like previous research that aims to analyze the best-selling products in Micro, Small and Medium Enterprises (MSMEs) of Cetom to optimize sales and avoid hoarding of goods that are not in demand by using the K-Means Algorithm. And secondary data analysis to process data using Google Lockerstudio. So that it can be used as a reference for decision-making based on the results of data visualization.

2. Research Methods

Research methodology is a process used to solve a problem logically, which requires data to support the implementation of a research [5]. In this study, the method used is Analysis of Sales Data Visualization at Indomie Warung Using the Looker Studio Platform. Figure 1 shows the steps.

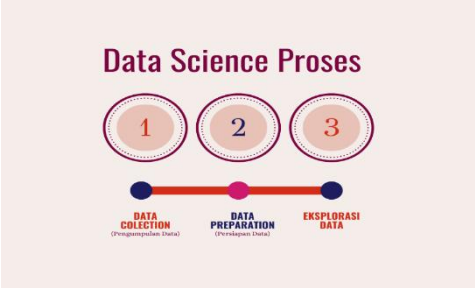

Figure 1. Data Science Process

a) Data Collection

The first step is the process of collecting data from various sources, both secondary and primary data. This data can be numbers, text, images, or sounds. The author must be careful in sorting out data that is relevant to the purpose of this research, as well as ensuring that the data is accurate, complete, and reliable. In this study, the data taken is secondary data from a personal website in the name of Bima Putra in the form of csv. Here is the data link (http://lynk.id/bima.putra1). This data is 1 year of data from an indomie stall which is quantitative data. This data includes sales reports from the indomie stall.

b) Data Preparation

Data preparation is a technique used to transform raw data into a useful and efficient format. So that later the raw data that will be processed will be more accurate and easy to understand, in the data that has been collected sometimes there is still data that must be corrected, so in this case data preparation also refers to the process of correcting data that may be empty, wrong or wrong and cleaning the data, removing unused varibael and so on. In the data preparation process, this is carried out using Microsoft Excel software. At this stage, the author loaded the raw data of the search results from the links mentioned in the 7 data collections, then changed the data format from csv to xlsx, carried out the data cleaning stage, by deleting several variables that were not used in the study.

c) Data Exploration

After the data has gone through the preparation process, the next stage is data exploration.

Data exploration is the process of investigating datasets to understand their structure, look for patterns, and identify relationships between variables. The main goal is to gain a deeper insight into the available data and can help in formulating more specific questions before applying further analysis techniques or Next steps. In addition, at this stage we can also display graphs from the dataset to make it easier to understand. At this stage, the author visualizes the data that is ready to use using Google Looker Studio. Looker studio is very useful because it is one of Google's free online tools intended for data analysis. Through this tool, you will be able to visualize data with visually appealing and easy to understand. So that in this process, the author can analyze and explore what information can be taken from the Indomie stall sales dataset, especially regarding the best-selling and non-best-selling Indomie products accurately and reliably.

3. Results and Discussion

This study analyzes 1 year of sales data from an indomie stall in order to gain knowledge about the indomie stall. Such as the best-selling and non-selling products, payments and orders that many customers make and the highest income from the Indomie stall.

a. Data collection results

The data (Figure 2) taken is secondary data from a personal website on behalf of Bima Putra in the form of csv. Here is the data link (http://lynk.id/bima.putra1). This data is 1 year of data from an indomie stall which is quantitative data

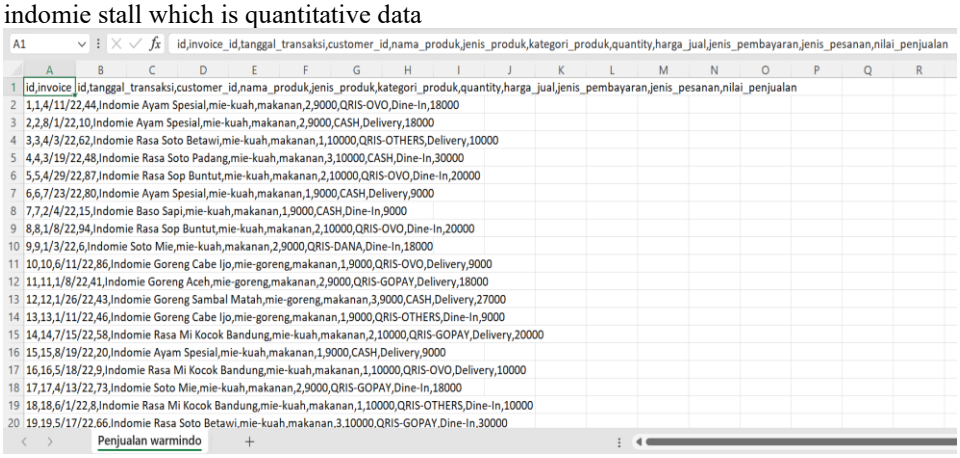

Figure 2. Data of indomie stalls

b. Data preparation results

For the indomie stall data (Figure3-4), the format is csv so it is converted into Excel format first so that later it is easier to process and see how it looks. The attributes used are invoice_id, tanggal_transaksi, jenis_produk, quantity, harga_jual, jenis_pembayaran, jenis_peesanan, and nilai_penjualan.

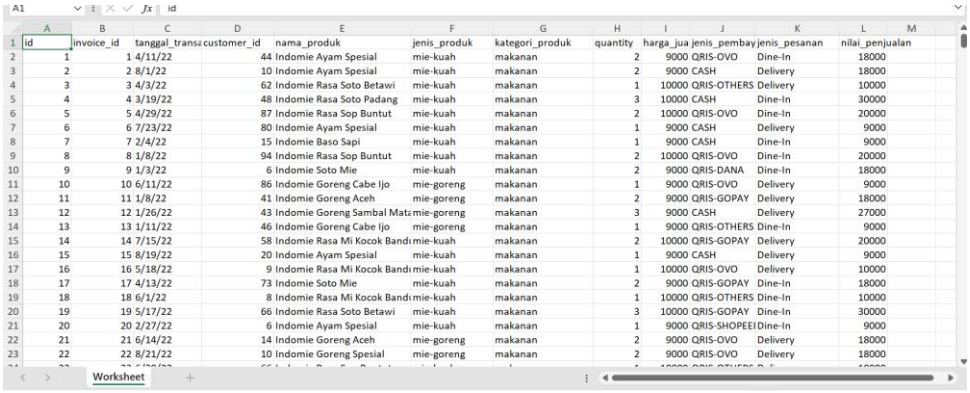

Figure 3. Data format from csv to excel

	A	B	C
1	nama_produk	jenis_produk	quantity
2	Indomie Ayam Spesial	mie-kuah	2
3	Indomie Ayam Spesial	mie-kuah	2
4	Indomie Rasa Soto Betawi	mie-kuah	1
5	Indomie Rasa Soto Padang	mie-kuah	3
6	Indomie Rasa Sop Buntut	mie-kuah	2
7	Indomie Ayam Spesial	mie-kuah	1
8	Indomie Baso Sapi	mie-kuah	1
9	Indomie Rasa Sop Buntut	mie-kuah	2
10	Indomie Soto Mie	mie-kuah	2
11	Indomie Goreng Cabe Ijo	mie-goreng	1
12	Indomie Goreng Aceh	mie-goreng	2
13	Indomie Goreng Sambal Matah	mie-goreng	3
14	Indomie Goreng Cabe Ijo	mie-goreng	1
15	Indomie Rasa Mi Kocok Bandung	mie-kuah	2
16	Indomie Ayam Spesial	mie-kuah	1
17	Indomie Rasa Mi Kocok Bandung	mie-kuah	1
18	Indomie Soto Mie	mie-kuah	2
19	Indomie Rasa Mi Kocok Bandung	mie-kuah	1
20	Indomie Rasa Soto Betawi	mie-kuah	3

Sheet1

Figure 4. Data preparation of indomie stalls

c. Data Exploration Results

To facilitate this research, the author uses Google Looker Studio to visualize the data.

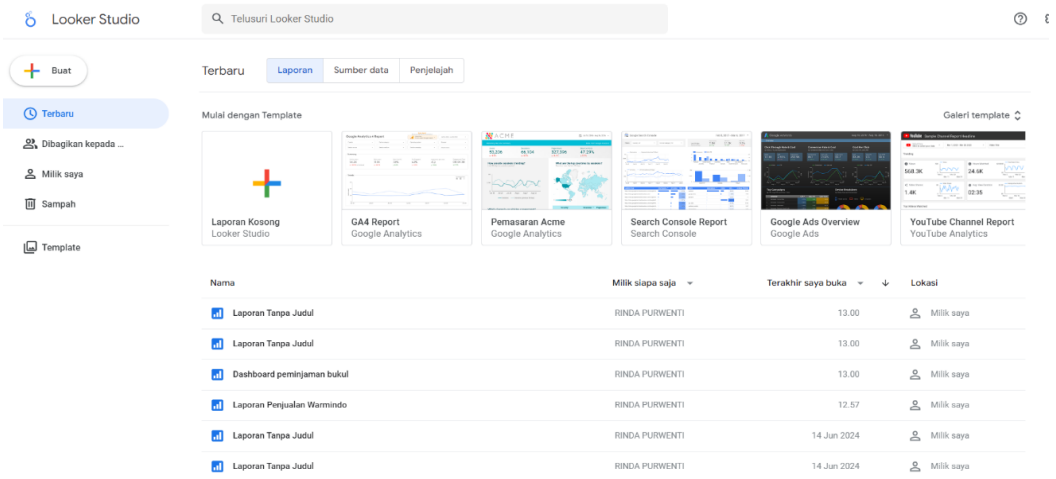

Figure 5. Initial View of Studio Lockers

On the initial display shown in Figure 5, you can click on the new report, to create a data visualization.

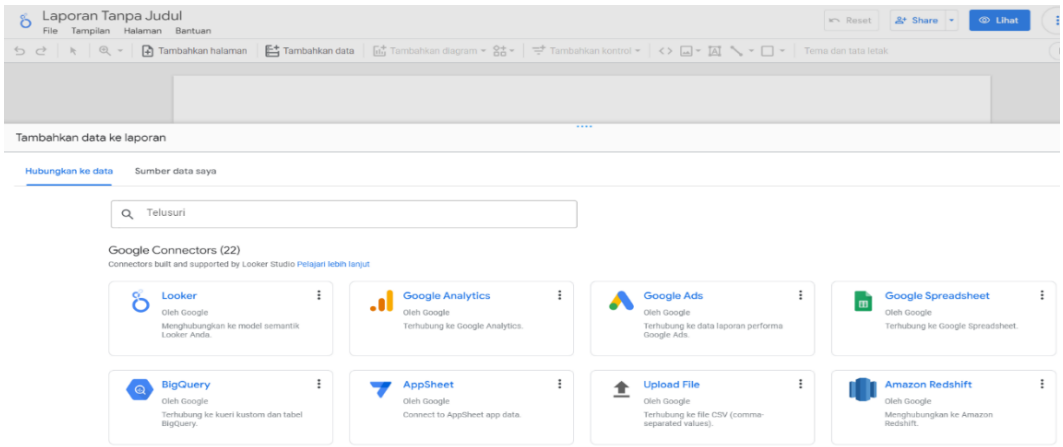

Figure 6. Data input display in looker studio

In Figure 6, the data input place used is Google SpreedSheet because the data prepared in this research is in the form of xlsx format.

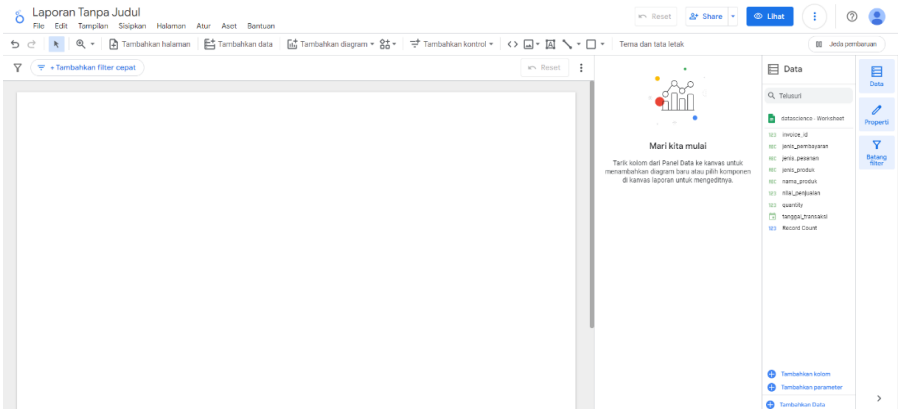

Figure 7. View of the studio looker after the data is inputted

In this Figure 7, visualization can be carried out according to the existing attributes, so that in this case the author can produce several visualizations including:

a. Chart of the types of best-selling indomie products

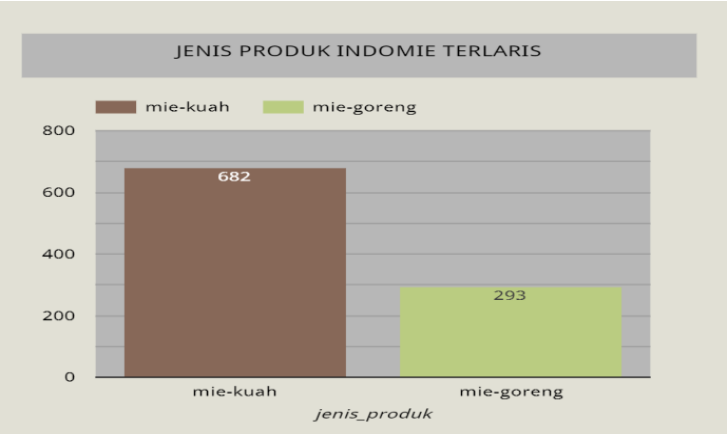

Figure 8 Chart of the types of best-selling indomie products

From this graph (Figure 8), it can be seen that the type of product that sells the most is noodle soup with a total sales of 682 while for fried noodles 293 sales. For this, Warung Indomie should provide more stock of noodle soup than the stock of fried noodles, and can improve the taste, beautify the presentation of fried noodles and encourage the promotion of its products, such as promotions in online media and others, as a way to make the sales of fried noodles and noodle soup balanced.

b. Favorite product graphics

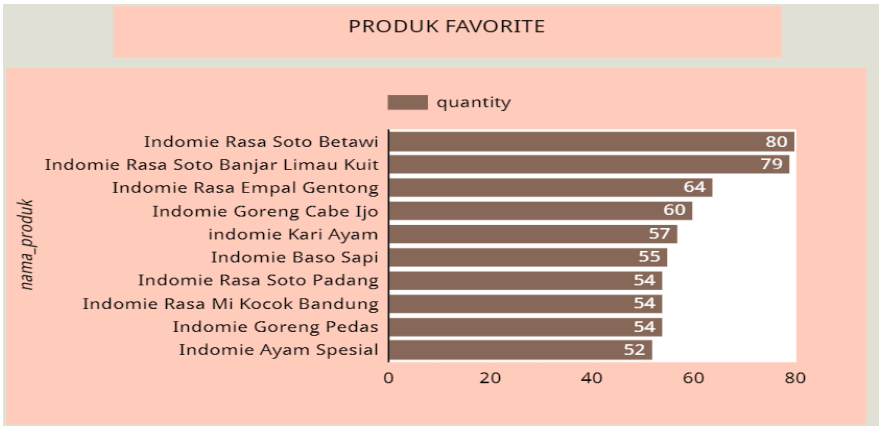

Figure 9 Charts of favorite products

From this graph (Figure 9), it can be seen that the favorite product is indomie Soto Betawi flavor with a total of 80 sales, then there is Indomie Soto Banjar Limau Kuit flavor with 79 sales, Indomie Tempura Gentong with 64 sales, Indomie fried green chili 60 sales, Indomie Chicken Curry 57 servings, Indomie beef baso as many as 55 sales, Soto Padang flavor, Bandung noodle flavor, Indomie Fried Spicy as many as 54 sales and Indomie Special Chicken as many as 52 sales

Therefore, it can be learned that customers of indomie stalls buy more Betawi soto flavors, besides that it can be information so that indomie stalls always ensure that the stock of the product is always available and with the taste and form of presentation maintained, and it will be better if it is improved again.

c. Pie chart Distribution Purchase type

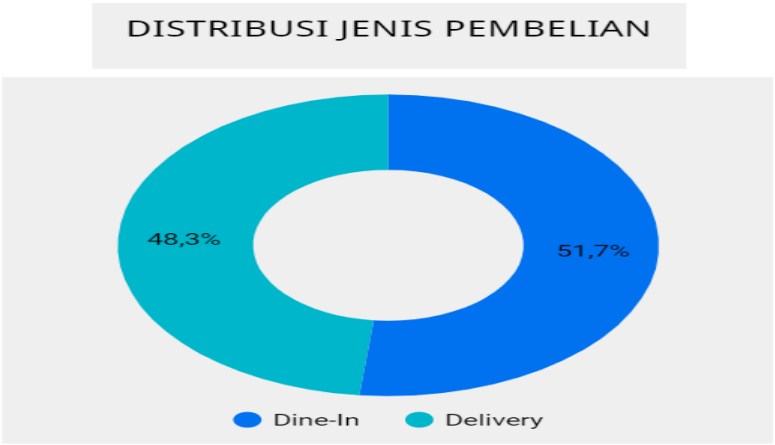

Figure 10. Purchase type distribution pie chart

This graph (Figure 10) provides information about the type of purchase that customers make, where the most orders made by customers are delivery orders as much as 51.7%, while for dine-in orders as much as 48.3%, based on this, indomie stalls can improve the quality of delivery, discipline in delivery time, hospitality in service, as well as the comfort of people who choose to order dine-in, such as improving stall decorations, improve stall facilities, cleanliness of places and so on.

d. Distribution of Payment Types

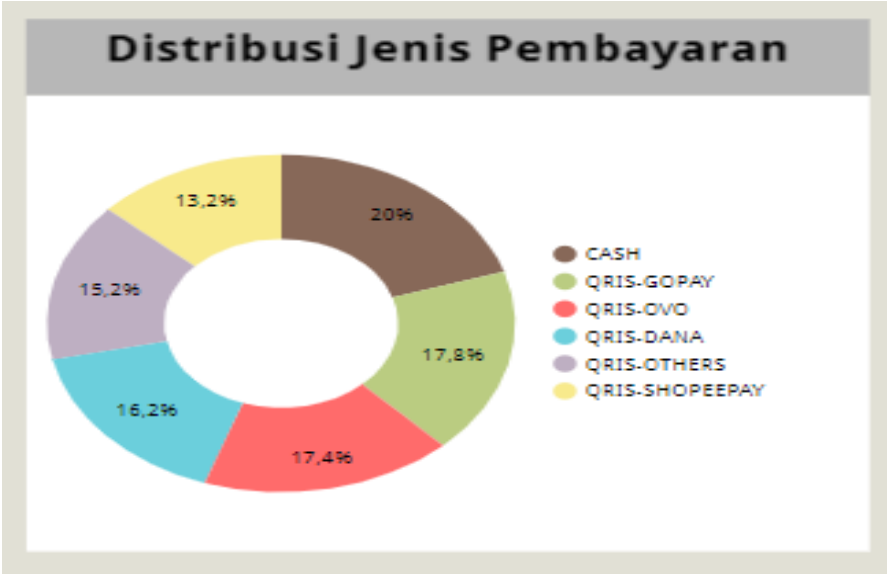

Figure 11. Payment type distribution chart

Figure 11 shows the most common types of payments made by customers are cash payments, which are 20%, qris-gopay as much as 17.8%, qris-ovo as much as 17.4%, qris-dana as much as 16.2%, qris-others as much as 15.2%, and qris-shopeepay as much as 13.2%.

e. Monthly sales chart

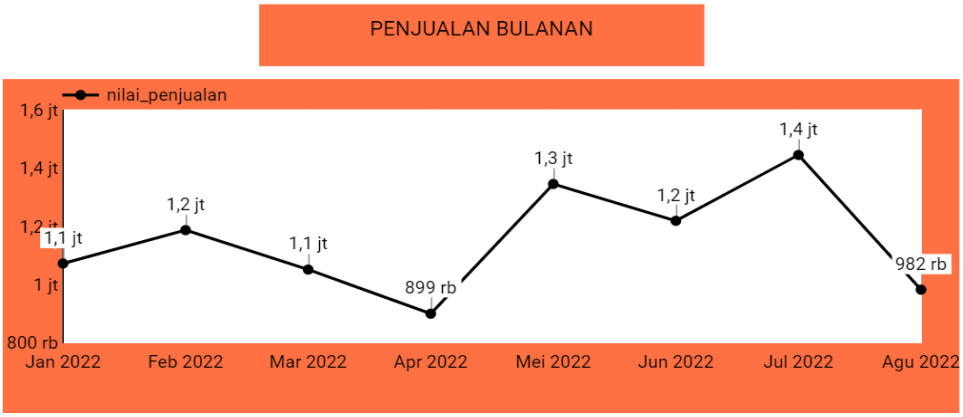

Figure 12. Monthly sales chart

From this graph (Figure 12), it can be seen that the highest income of this indomie stall was in July 2022 as much as 1.4 million while the lowest income was in April which was 899 thousand, for January and March as much as 1.1 million, February and June 1.2 million, May 1.3 million, and August 982 thousand. This means that the sales or income of this indomie stall are still experiencing fluctuations or are not fixed.

f. Visualization of indomie product menu list

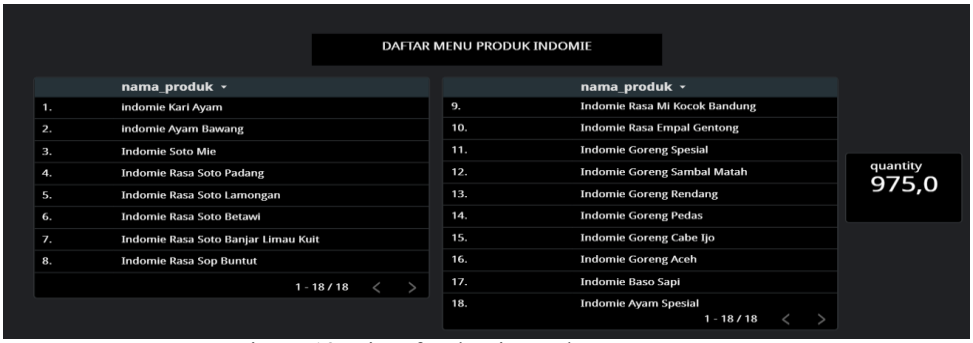

Figure 13. List of Indomie product menus

From the Figure 13, you can see a list of 18 product menus from indomie that can be selected when visiting the indomie stall, besides that information can also be seen that the total sales of the indomie stall are 975 sales.

4. Conclusion

Based on the analysis of sales data visualization at Warung Indomie using the Looker Studio platform with data taken from a personal website on behalf of Bima Putra (http://lynk.id/bima.putra1). There is knowledge in the form of the type of Indomie product that sells the best, Indomie soup with 682 sales, while the product that does not sell well is Indomie Goreng which was sold only 293 January-August 2022. Indomie Favorite product is Indomie Soto Betawi which sold 80 times. With the overall menu that can be chosen from prdouk indomie is 18 flavors. The most common type of order is by delivery, which is 51.7% with the most payment in cash, which is 20%. for the highest monthly income was in July 2022 with a total of 1.4 million while the lowest was in April 2022 with a total of 899 thousand. With a total of 975 sales. Therefore, this indomie stall can pay attention so that the stock of best-selling goods is always available, increase the promotion, improve the service, comfort and facilities of the stall, and of course the taste of the indomie dish should attract customers. Because the factor that causes a product to sell well or not comes from the number of sales, besides that from this information customers can also know which products can be recommended.

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