

Implementation Of Inventory Management System On Baby Stuff Batam

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INFORMASI ARTIKEL

ABSTRAK

Kata Kunci:

Economic Order Quantity
Manajemen Persediaan
Manajemen Rantai Suplai
Reorder Point
Usaha Mikro Kecil Menengah

Baby Stuff Batam merupakan salah satu UMKM di Indonesia yang bergerak dalam bisnis baju bayi hingga anak-anak. Dari hasil wawancara dengan pemilik usaha Baby Stuff Batam diketahui bahwa pemilik sering kali mengalami kesulitan dalam mengatur stok produk yang dijual karena banyaknya stok produk yang kelebihan atau kekurangan, serta pemilik usaha hanya mengandalkan catatan berdasarkan tulisan tangan. Kegiatan pengabdian ini bertujuan untuk menerapkan sistem manajemen persediaan berbasis website dengan menggunakan metode EOQ dan ROP dalam mengendalikan persediaan barang yang dimiliki oleh Baby Stuff Batam untuk memperoleh laba yang lebih banyak serta kinerja operasional yang lebih efektif. Lewat kegiatan ini diharapkan dapat memberikan informasi kepada pemilik usaha lainnya bahwa penting untuk menerapkan sistem manajemen persediaan dalam suatu usaha bisnis. Hasil penelitian ini berupa output yang dihasilkan dalam sistem manajemen persediaan berupa laporan stok, laporan transaksi pembelian dan penjualan, serta laporan EOQ untuk mengetahui jumlah dan waktu yang tepat dalam membeli suatu barang. Setelah diimplementasikan sistem manajemen persediaan berbasis website pada Baby Stuff Batam memperoleh hasil yang cukup positif dan berguna untuk meningkatkan keefektifan kinerja operasional bisnis mitra.

ABSTRACT

Keywords:

Economic Order Quantity
Inventory Management
Supply Chain Management
Reorder Point
Micro Small Medium Enterprises

Baby Stuff Batam is one of the MSMEs in Indonesia which is engaged in the business of baby and children's clothes. From the results of the interview with the business owner of Baby Stuff Batam, it is known that the owner often has difficulty managing the stock of products because of the large number of product stocks that are excess or lacking, and the business owner only relies on handwritten notes. This study aims to implement a website-based inventory management system using the EOQ and ROP methods to control the inventory of products owned by Baby Stuff Batam to obtain more profits and more effective operational performance. This activity is expected to provide information to other business owners that it is important to implement an inventory management system in a business venture. The results of this study are the output generated in the inventory management system in the form of stock reports, purchase and sale transaction reports, and EOQ reports to find out the right amount and time to buy the products. After implementing a website-based inventory management system on Baby Stuff Batam, the results are quite positive and useful for increasing the effectiveness of partner business operational performance.

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I. INTRODUCTION

The process of buying and selling in a business can be facilitated by the use of information technology by a company. The utilization of information technology can be adapted to the needs of the company so that it can answer the problems faced in carrying out business operations every day (Darusalam et al., 2021). In maximizing the profits to be obtained by the company, one way that can be done is by implementing a management policy that focuses on calculating optimal inventory so that the company's goal of getting a lot of profit can be achieved and the effectiveness of the company's operational performance is getting better (Han et al., 2016). Companies that can control their inventory will get more profits and more effective

operational performance due to a reduction in the company's operational costs in the form of ordering and storage costs (Sofiyannurriyanti, 2017).

MSMEs in Indonesia have various fields such as clothing, culinary, household needs, etc. One example is Baby Stuff Batam which sells various baby and children's clothes. Baby Stuff Batam was established in 2019 and now Baby Stuff Batam still exists. Even though there is no physical store, Baby Stuff Batam's business utilizes online platforms in its business operations, namely social media such as Instagram and WhatsApp. Because the business is run online, therefore Baby Stuff Batam operates every day from 08.00 to 18.00. Currently, the Baby Stuff Batam business is only run by a business owner and assisted by a courier to deliver packages to consumers.



Picture 1. Logo and Instagram profile of Baby Stuff Batam

The role of MSMEs is very large for Indonesia's economic growth, with their number reaching 99% of all business units. The contribution of MSMEs to GDP also reaches 60.5%, and to employment is 96.9% of the total national employment absorption (Limanseto, 2022). Refer to this fact, it is important for every MSME business owner to continue to develop their business and performance. Through the implementation of an inventory management system in business ventures can help MSME to obtain more profits and more effective operational performance (Lahu et al., 2017).

There are several objectives to be achieved by implementing inventory management in Baby Stuff Batam as follows:

1. Developing an accurate, centralized, and efficient Baby Stuff Batam inventory management system using a website that has been designed
2. Calculating the right stock for repurchasing by considering the uncertainty due to fluctuating consumer demand
3. The owner knows when is the right time for Baby Stuff Batam to restock through the calculations performed
4. The owner knows the right stock to secure inventory so Baby Stuff Batam doesn't run out of stock for sell
5. Helping Baby Stuff Batam to maximize profits by reducing costs incurred in ordering products
6. Add insight into Baby Stuff Batam business owner about good and efficient inventory management

II. PROBLEM

From the results of the interview with Ms. Dhita the owner of Baby Stuff Batam, it was found that the owner often had difficulty managing the stock of products because of the large number of product stocks that are excess or lacking and the business owner only relies on handwritten notes. If Baby Stuff Batam runs out of goods, consumers tend to look for other places that sell similar goods so that Baby Stuff Batam loses the opportunity to make a profit. To get ahead of its competitors, Baby Stuff Batam can implement website-based inventory management using the Economic Order Quantity (EOQ) method so that the possibility of running out of goods and other costs incurred can be avoided.

III. METHODS

Data Collection Technique

Collecting the data needed to design website-based inventory management, it takes from two data sources. The first is primary data in the form of interviews about the business and problems faced in

operational activities and also direct observation at the house of the owner of Baby Stuff Batam as product storage. The second is secondary data in the form of transaction recordings written directly by the business owner. The data taken is in the form of inventory data, purchase transactions and sales transactions from the period 01 September 2022 to 31 October 2022. This data will be entered into the website so that it can produce output reports that can be used as consideration in placing an order again with the right stock and report details of business operations.

With the implementation of a website-based inventory management system, it is intended that Baby Stuff Batam can obtain maximum profits by reducing storage costs and ordering costs as low as possible by using EOQ calculations (Rambita et al., 2018). The formula for calculating EOQ is as follows:

$$EOQ = \sqrt{\frac{2DS}{H}}$$

Description:

S = Cost incurred per order

D = Amount of goods needed in a certain period

H = Storage cost of average inventory

Source: Fahzi & Suroto (2018)

Reorder Point (ROP) indicates the point when a business owner must place an order again for a product so that the product can be received on time (Rachmawati et al., 2020). The ROP formula is as follows:

$$ROP = D \times T + SS$$

Description:

SS = safety stock

D = Average usage rate per day

T = Lead Time

Designing the output of activities in this practical work by inviting Baby Stuff Batam business owner to be able to work together and agree that in the process of making a website the author will act as a host. The design begins with a website that has been provided by the author with a scope that includes inventory reports, purchase and sales transaction reports, and EOQ reports. The website will be adapted to the data and needs of Baby Stuff Batam. The estimated time required for designing and building a website-based system is 1 month and the estimated time for inputting data such as data on products, suppliers, customers, and transactions made by Baby Stuff Batam takes 2 weeks.

IMPLEMENTATION STAGE

Carrying out practical work is divided into 4 stages of implementation, namely as follows:

1. Preparation stage

This stage begins by searching for a partner who will be invited to work together in carrying out this practical work. After obtaining a partner which is Baby Stuff Batam, the process will continue with an interview process with the business owner related to the business information. This is done to obtain more reliable information and to find out the obstacles or problems faced by Baby Stuff Batam in operational activities. From the description of the problems that have been known, namely obstacles in managing stock of goods, then through this practical work can be found the right solution/answer to overcoming these problems/constraints. The best solution in answering the problems faced by partners is to use a system that can control the inventory of the products.

2. Implementation stage

By entering the implementation stage, the process from design to implementation of a website-based system that is used to control products sold at Baby Stuff Batam will begin. The implementation process requires a laptop from the owner which is used as a medium to be able to access the website that has been

designed. Then proceed with the user training process and monitor whether the website is running smoothly or not.

3. Assessment stage

The assessment stage was carried out by Baby Stuff Batam to obtain output results from the system, namely inventory management reports. From these results, it can make it easier for the owner with reports whether are running well or not.

4. Reporting stage

The last stage is the reporting stage which is carried out by entering the data that has been obtained into the system so that it can produce reports that are useful as documents for analysis by the owner of Baby Stuff Batam.

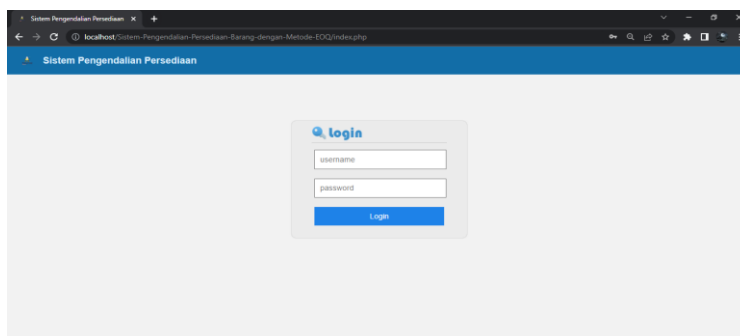
IV. RESULT AND DISCUSSION

Activity Implementation

The following are the results of a website-based inventory management design on Baby Stuff Batam as an output in this practical work.

1. Login menu

Starting with opening the website of the inventory management system that has been designed to be the first step that must be taken by business partners. There are 5 users namely, admin, warehouse, purchase, sales, and leadership. Because Baby Stuff Batam is only run by the business owner, the user role that will often be used is the admin user which has been designed to cover roles from warehouse users, buying, and selling, to leadership.



Picture 2. Login Menu on the Baby Stuff Batam website-based inventory management

2. Data master

The master data section will be divided into 3 parts, namely product data, customer data, and supplier data. These three data will form the basis of the reports that will be generated.

a. Products data

The products master data contains the products traded in the business. This section includes the code or ID (Min 5 characters) given by Baby Stuff Batam, the name of the item, the price of buying goods from the supplier, the price offered to consumers to buy the product, the cost of ordering, and the cost of storage (20% of the purchase price), as well as lead time and the number of stock items. All items sold at Baby Stuff Batam can be seen in picture 3 below.

ID Barang	Nama Barang	Harga Sell	Harga Jual	Biaya Pesan	Biaya Simpan	Lead Time	Stok
1 JV001	Aya Tunk	56000	75000	5000	11200	10	2
2 JV002	Ayana	74000	85000	7000	14000	10	1
3 AZ001	Azalea Set	63000	73000	10000	12600	10	1
4 BA001	Baby Blanket Hude	69000	89000	10000	13800	10	4
5 BA002	Baby Plants by Malilids	25000	30000	2000	5000	10	6
6 BE001	Bedong Malilids	33000	39000	5000	6600	20	2
7 BO001	Boho Set	54000	60000	5000	10000	19	3
8 BL001	Ballerie Set	63000	75000	10000	12600	15	3
9 BM001	Bomber Jacket	79000	90000	10000	15000	6	3
10 BO001	Bookie Boho	24000	27000	1000	4800	13	3
11 BO002	Boonie Set Pig	76000	86000	10000	15200	13	3
12 CO001	Collar Dress Palmer	37000	50000	3000	7400	6	6
13 CO002	Collar Suit Palmer	45000	60000	5000	9000	6	2
14 CR001	Centre Set	55000	69000	5600	11600	6	3
15 CI001	Collar Jeans	65000	65000	5600	11600	12	1
16 CI002	Collar Pinstriped	65000	70000	5600	11600	12	1

Picture 3. Batam Baby Stuff Item Data

b. Customer data

The customer master data contains customers or consumers who buy products sold in the business. This section includes the code or ID (Min 5 characters) given by Baby Stuff Batam to its customers, then information about the customer consisting of name, residential address, telephone number, and city of origin of the customer. The following are customers who purchased products sold by Baby Stuff Batam in the September-October 2022 period.

ID Pelanggan	Nama Pelanggan	Alamat	Telepon	Kota
1 CU001	Fery D Hasibuan	Kantamari Blok B3 No 40	81288430778	Batam
2 CU002	Hani Riahana Syahira	Gesya Residence Blok M No 1	82361500969	Batam
3 CU003	Iin Novita	Bukit Palembang C No. 32	87743500943	Batam
4 CU004	Rozalina	Balai Mas Blok A No 3	85537463900	Batam
5 CU005	Nadia Dery Octami	Costancia Residence Blok D No 21	81244878329	Batam
6 CU006	Gandia Ricci	Hawaii Garden Blok B No 2	87822864757	Batam
7 CU007	Shinta Marolla	Taman Harapan Indah Blok J No 3	85247209986	Tanjung Pinang
8 CU008	Yolanda Semangantak	Winnor Milenium Blok O No 15	85277492030	Batam
9 CU009	Rina Marhasyani	Perumahan Taman Impium Blok D No. 09	81208843637	Karimun
10 CU010	Aena Chandra Dewi	Livia Garden Blok H No 22	81238309230	Batam
11 CU011	Nur Annisa Fitriani	Pesona Boulevard Blok A No 5	81953202547	Batam
12 CU012	Kartha Kamila Sari	Bangleng Jaya Blok C No 34	82285698038	Batam
13 CU013	Febby Jordan	Balai Indeh Blok O No 3	82248482021	Batam
14 CU014	Octalena Hill	Anggrek Permali Blok J No 4	87820397821	Batam
15 CU015	Rachy Ajeng Pratiwi	Buana Indah Blok R No 21	81295030404	Batam
16 CU016	Prima Kharisma Putri	Taman Harapan Indah Blok P No 11	81971648316	Batam

Picture 4. Batam Baby Stuff Customer Data

c. Supplier data

The supplier master data contains suppliers or vendors who supply products sold by Baby Stuff Batam. This section includes the code or ID (Min 5 characters) given by Baby Stuff Batam to the supplier, then information about the supplier consisting of name, address, telephone number, as well as the city and province of the supplier. The following are Batam Baby Stuff suppliers in the September-October 2022 period.

ID Supplier	Nama Supplier	Alamat	Telepon	Kota	Provinsi
1 SU001	Supplier 1	-	0	Jakarta	DKI Jakarta
2 SU002	Supplier 2	-	0	Medan	Sumatera Utara
3 SU003	Supplier 3	-	0	Batam	Kepulauan Riau

Picture 5. Batam Baby Stuff Supplier Data

3. Product stock report

Product data that has been inputted into the master data will produce a stock report that is useful for knowing the remaining stock of products sold. From the results of the input that has been done, it can be seen that there are 59 types of products sold in Baby Stuff Batam with a total stock of 221 stocks. Stock reports can also be printed as a PDF file to make it easier for business owner to save the document as an archive.

ID Barang	Nama Barang	Stok
1. AJ001	Ayia Tunik	2
2. AJ002	Ayana	1
3. AZ001	Azalea Set	1
4. BA001	Baby Blanket Hoodie	4
5. BA002	Baby Pants by Matlelids	6
6. BE001	Beding Matlelids	2
7. BH001	Bhoho Set	3
8. BL001	Balene Set	3
9. BM001	Bomber Jacket	3
10. BO001	Bootee Socks	3
11. BO002	Bloomie Set Pigi	3
12. CO001	Collar Dress Palmer	6
13. CO002	Collar Suit Palmer	2
14. CR001	Cratek Set	3
15. CJ001	Cake Jeans	1
16. CJ002	Cute, Pampas Kaki	1

Picture 6. Batam Baby Stuff Stock Report

4. Transaction report

The transaction report is divided into two parts, namely the purchase transaction report and the sales transaction report. This report can provide information to Baby Stuff Batam business owner regarding purchases and sales made within a certain period of time. This transaction report can also provide information on the net profit obtained by the business.

a. Purchase transaction report

The purchase transaction report can show the activities of purchasing goods from suppliers within a certain period of time. Purchase transaction reports can also be printed as PDF files to make it easier for business owner if they want to save the document as an archive. The following is a report on purchase transactions made by Baby Stuff Batam in September and October 2022.

ID Transaksi	Tanggal	Supplier	Nama Barang	Harga Barang	Jumlah	Total Harga
1. PB11220001	2022-09-02	Supplier 1	LD Pepukun Tee	31000	3	93000
2. PB11220002	2022-09-02	Supplier 1	Hahahaha	50000	2	100000
3. PB11220003	2022-09-10	Supplier 3	L.C. Sale	40000	2	80000
4. PB11220004	2022-09-10	Supplier 3	L.C. Sale Jerseyah	57000	2	114000
5. PB11220005	2022-09-10	Supplier 2	Shiper Set	26000	2	52000
6. PB11220006	2022-09-14	Supplier 1	LD Pants	24000	3	72000
7. PB11220007	2022-09-14	Supplier 2	Curly Sandal Kids	65000	1	65000
8. PB11220008	2022-09-14	Supplier 2	Curly Sandal Coupie	145000	1	145000
9. PB11220009	2022-09-26	Supplier 2	Baby Pants by Matlelids	25000	2	50000
10. PB11220010	2022-09-26	Supplier 3	Headband	19000	1	19000
11. PB11220011	2022-09-26	Supplier 1	Pelley XL	95000	2	190000
12. PB11220012	2022-09-26	Supplier 1	Collar Dress Palmer	37000	2	74000
13. PB11220013	2022-09-26	Supplier 1	Sala Set Sini	71000	2	142000

Picture 6. Batam Baby Stuff Purchase Transaction Report September 2022

From the report, it can be seen that the total expenditure of Baby Stuff Batam to supply goods sold in the September 2022 period is Rp. 1,192,000. The report also shows that Baby Stuff Batam supplies the most goods from Supplier 1 in Jakarta.

ID Transaksi	Tanggal	Supplier	Nama Barang	Harga Barang	jumlah	Total Harga	
1	PB11220014	2022-10-05	Supplier 1	LD Peplum Tee	31000	3	93000
2	PB11220015	2022-10-05	Supplier 1	Hahatava	50000	2	100000
3	PB11220016	2022-10-07	Supplier 2	Stripe Set	26000	2	52000
4	PB11220017	2022-10-07	Supplier 2	Baby Pants by Malikids	25000	2	50000
5	PB11220018	2022-10-07	Supplier 2	Handuk Palmerhaus	48000	1	48000
6	PB11220019	2022-10-07	Supplier 2	Stripe Tee Pdk	26000	1	26000
7	PB11220020	2022-10-11	Supplier 3	Headband	19000	2	38000
8	PB11220021	2022-10-11	Supplier 3	Daily	55000	1	55000
9	PB11220022	2022-10-26	Supplier 1	LD Pants	24000	2	48000
10	PB11220023	2022-10-26	Supplier 1	Finley XL	93000	2	186000
11	PB11220024	2022-10-31	Supplier 1	Collar Dress Palmer	37000	2	74000
12	PB11220025	2022-10-31	Supplier 1	Solo Set Sml	71000	1	71000

Picture 7. Batam Baby Stuff Purchase Transaction Report October 2022

From this report, it can be shown that Baby Stuff Batam's total expenses to purchase goods to be sold in the October 2022 period amounted to Rp. 841,000. The report also shows that Baby Stuff Batam mostly supplies goods from Supplier 1 in Jakarta.

b. Sales transaction report

Through sales transaction reports, it can show the activities of selling goods to consumers/customers within a certain period of time. Sales transaction reports can also be printed as a PDF file to make it easier for business owner to save the document as an archive. The following is a report on sales transactions made by Baby Stuff Batam in the September and October 2022 periods.

ID Transaksi	Tanggal	Pelanggan	Nama Barang	Harga Barang	jumlah	Total Harga	
1	PJ11220001	2022-09-03	Rozakia	Baby Pants by Malikids	35000	2	70000
2	PJ11220002	2022-09-03	Rozakia	Headband	35000	1	35000
3	PJ11220003	2022-09-03	Rozakia	Moana Sandal	85000	1	85000
4	PJ11220004	2022-09-06	Anisa Chandra Dewi	Setel Bedang	98000	1	98000
5	PJ11220005	2022-09-08	Shinta Maerika	Monochrome Mum	139000	1	139000
6	PJ11220006	2022-09-08	Shinta Maerika	LD Peplum Tee	40000	1	40000
7	PJ11220007	2022-09-12	Pabby Andyan	LD Peplum Tee	40000	2	80000
8	PJ11220008	2022-09-15	Rina Mahayanti	Headband	78000	1	78000
9	PJ11220009	2022-09-17	Rina Mahayanti	Finley XL	105000	1	105000
10	PJ11220010	2022-09-18	Fery D Hauluan	Karakter Set 110, 120	43000	1	43000
11	PJ11220011	2022-09-18	Karlita Kamulia Sari	Balena Set	75000	1	75000
12	PJ11220012	2022-09-18	Anisa Chandra Dewi	Boonie Set Pkg	86000	1	86000
13	PJ11220013	2022-09-20	Isi Novita	Boho Set	60000	1	60000
14	PJ11220014	2022-09-21	Robby Ajeng Pratiwi	Collar Dress Palmer	50000	1	50000

Picture 8. Batam Baby Stuff Sales Transaction Report September 2022

Baby Stuff Batam sales transaction reports in the September period amounted to Rp. 1,447,000. The product most purchased by consumers is LD Peplum Tee. Through the sales and purchase transaction reports, the business owner's profit in September 2022 was Rp. 255,000.

ID Transaksi	Tanggal	Pelanggan	Nama Barang	Harga Barang	jumlah	Total Harga	
1	PJ11220022	2022-10-01	Yohana Sarajantak	Monochrome Boy	105000	1	105000
2	PJ11220023	2022-10-02	Rozakia	LD Peplum Tee	40000	2	80000
3	PJ11220024	2022-10-02	Oktavia Vira	Hahatava	78000	1	78000
4	PJ11220025	2022-10-04	Rina Mahayanti	Collar Dress Palmer	50000	1	50000
5	PJ11220026	2022-10-07	Shinta Maerika	Baby Blanket Nude	88000	1	88000
6	PJ11220027	2022-10-08	Fery D Hauluan	Curly Sareles Couple	105000	1	105000
7	PJ11220028	2022-10-09	Karlita Kamulia Sari	Daily	70000	1	70000
8	PJ11220029	2022-10-09	Ran Kowanto Putra	Hahatava	78000	1	78000
9	PJ11220030	2022-10-10	Pabby Andyan	Headband Palmer	19000	1	19000
10	PJ11220031	2022-10-12	Isi Novita	LD Pants	24000	1	24000
11	PJ11220032	2022-10-13	Hatika Devi Octavia	LC Sate Jajajah	88000	1	88000
12	PJ11220033	2022-10-15	Hanga Octavia Thalanda	Stripe Set	43000	1	43000
13	PJ11220034	2022-10-15	Hani Rukhaya Syahira	Solo Set Sml	71000	1	71000
14	PJ11220035	2022-10-17	Suci Susanti	Stripe Set	43000	1	43000

Picture 9. Batam Baby Stuff Sales Transaction Report October 2022

Sales transaction report on Baby Stuff Batam in the October period of Rp. 1,633,000. The product most purchased by consumers is LD Peplum Tee. Through sales and purchase transaction reports, the business owner's profit in October 2022 was Rp. 792,000.

5. EOQ report

EOQ calculation is an inventory management method that focuses on determining the number of purchases that must be made to suppliers by considering storage costs and ordering costs as low as possible so that Baby Stuff Batam can be more efficient. Through the EOQ report, you can show the EOQ and reorder point (ROP) that Baby Stuff Batam needs to do when purchasing goods. EOQ shows the number of goods that must be purchased while the reorder point (ROP) indicates when Baby Stuff Batam must repurchase goods from the supplier. The EOQ report will use 9 Batam Baby Stuff items that are often purchased by consumers. The following is the EOQ Baby Stuff Batam report for September and October 2022.

ID EOQ	Tanggal	Bulan	Nama Barang	Biaya Pesan	Biaya Simpan	Permittan	EOQ	Lead Time	Periode	ROP	Total Biaya
1	2022-09-01	September	LD Peplum Tee	3000	6200	8	3	9	6	6	95465
2	2022-09-01	September	Hahatawa	5000	10000	5	2	10	4	4	128803
3	2022-09-01	September	Shipe Set	2000	5200	5	2	8	3	3	58190
4	2022-09-01	September	LD Pants	2000	4800	6	2	5	3	3	60466
5	2022-09-01	September	Baby Pants by Malikiids	2000	5000	3	2	10	3	3	45730
6	2022-09-01	September	Headband	2000	3800	2	1	5	1	1	33360
7	2022-09-01	September	Finley XL	7000	18600	4	2	7	2	2	186989
8	2022-09-01	September	Collar Dress Palmer	3000	7400	3	2	6	2	2	68106
9	2022-09-01	September	Solo Set Sml	7000	14200	4	2	5	2	2	162198

Picture 10. Batam Baby Stuff Sales EOQ Report September 2022

In the September 2022 period it shows that the total costs incurred were Rp. 837,283. Each item for which the EOQ is calculated will get an EOQ and a reorder point (ROP) presented in the report. As an example of LD Peplum Tee with a request of 8, the EOQ is 3 and must make a repurchase when the product's stock reaches 6.

ID EOQ	Tanggal	Bulan	Nama Barang	Biaya Pesan	Biaya Simpan	Permittan	EOQ	Lead Time	Periode	ROP	Total Biaya
1	2022-10-01	Oktober	LD Peplum Tee	3000	6200	7	3	9	5	5	88805
2	2022-10-01	Oktober	Hahatawa	5000	10000	4	2	10	3	3	115900
3	2022-10-01	Oktober	Shipe Set	2000	5200	4	2	8	3	3	52807
4	2022-10-01	Oktober	LD Pants	2000	4800	3	2	5	1	1	44747
5	2022-10-01	Oktober	Baby Pants by Malikiids	2000	5000	4	2	10	3	3	51721
6	2022-10-01	Oktober	Headband	2000	3800	5	2	5	2	2	48989
7	2022-10-01	Oktober	Finley XL	7000	18600	3	2	7	2	2	165350
8	2022-10-01	Oktober	Collar Dress Palmer	3000	7400	3	2	6	2	2	68106
9	2022-10-01	Oktober	Solo Set Sml	7000	14200	2	1	5	1	1	128800

Picture 11. Batam Baby Stuff Sales EOQ Report October 2022

Meanwhile, in October 2022, the total costs incurred were Rp. 757,905. Every item that is calculated EOQ will get an EOQ and reorder point (ROP) which is presented in the report. For example, an LD Peplum Tee with a demand of 7 has an EOQ of 3 and must buy back when the product's stock reaches 5.

When compared with the total cost without using the EOQ method, Baby Stuff Batam must spend Rp. 1,989,800 for September and October 2022. If you use the EOQ calculation, then Baby Stuff Batam can save 25%.

Table 3. Calculation of Products Purchase without the EOQ Method

No	Code	Item Description	Order Cost	Storage Cost	First Stock	Purchase	Total Cost
1	LD001	LD Peplum Tee	3,000	6,200	12	24	Rp 295,200
2	HA002	Hahatawa	5,000	10,000	4	15	Rp 265,000
3	ST003	Stripe Set	2,000	5,200	7	15	Rp 144,400
4	LD002	LD Pants	2,000	4,800	5	19	Rp 153,200
5	BA002	Baby Pants by Malilkids	2,000	5,000	2	15	Rp 115,000
6	HE002	Headband	2,000	3,800	3	12	Rp 81,000
7	FI002	Finley XL	7,000	18,600	3	15	Rp 439,800
8	CO001	Collar Dress Palmer	3,000	7,400	2	15	Rp 170,800
9	SO001	Sola Set Sml	7,000	14,200	5	12	Rp 325,400
Total Cost (September & Oktober 2022)							Rp 1,989,800

Post-Implementation Stage

From the implementation of a website-based inventory management system at Baby Stuff Batam, the results are quite positive and useful for increasing the effectiveness of partner business operational performance. The output from the website can show the right number of products to be restocked referring to the Economic Order Quantity (EOQ) and Reorder Point (ROP) methods. Through the existence of EOQ, it can show the most effective amount to purchase goods because the EOQ method focuses on minimizing costs and better quality of goods. In addition, the Baby Stuff Batam business owner does not need to rely on handwritten notes anymore to monitor the amount of stock of the goods sold,

V. CONCLUSIONS

Baby Stuff Batam is a business venture engaged in the sale of baby and children’s clothes. From the results of the interview with the business owner of Baby Stuff Batam, it is known that the owner often has difficulty managing the stock of products because of the large number of product stocks that are excess or lacking, and the business owner only relies on handwritten notes. Therefore, in this practical work a website-based inventory management system will be implemented at Baby Stuff Batam so that it can show the right number of products to be restocked referring to the Economic Order Quantity (EOQ) and Reorder Point (ROP) methods.

After implementing a website-based inventory management system at Baby Stuff Batam, the results are quite positive and useful for increasing the effectiveness of partner business operational performance. Through the existence of EOQ, it can show the most effective amount to purchase goods because the EOQ method focuses on minimizing costs and better quality of goods. In addition, the Baby Stuff Batam business owner does not need to rely on handwritten notes anymore to monitor the amount of stock of the goods sold.

Not only is the EOQ report generated in this system, but there is also a stock report that serves to find out the amount of stock for each item sold in a business venture. Then there are transaction reports in the form of purchases and sales. Through the purchase and sale transaction reports, it can provide information to the owner about the profits obtained from buying and selling business activities within a certain period of time.

From the results of the implementation which was carried out for about 2 months, it obtained quite good results, therefore Baby Stuff Batam is advised to continue using the system that has been designed so that inventory management continues to run well and improve accuracy in calculating stock items. For future practical work academics, they can consider expanding the output of activities that can influence business operational performance for the better, such as in the field of marketing. So that it can produce varied practical work outputs

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