

Digitalization of Fresh Fish Sales: A Study of the E Commerce Model at Toko Ikan Jayapura

Sitti Khairul Bariyyah [✉] Yudi Prayitno ² Annita Sari ³

^{✉,2,3}, Universitas Yapis Papua, Jayapura, Indonesia

Abstract

Toko Ikan Jayapura is a fisheries business unit specializing in the sale of fresh fish and local seafood products in Papua. With the increasing demand for digital access and ease of online transactions, this study aims to describe the implementation and effectiveness of a web-based sales model (e-commerce) at Toko Ikan Jayapura. The study was conducted qualitatively from April to June 2025 through interviews, observations, and digital documentation. The results indicate that e-commerce has a significant impact on increasing sales volume, enhancing consumer accessibility, and improving operational efficiency. The developed website enables customers to place orders directly, view product catalogs, make payments, and track deliveries. This model serves as a pilot example of digitalization in the fisheries business in eastern Indonesia.

Keywords: *E-commerce, fresh fish, Papua, Toko Ikan Jayapura, MSME digitalization.*

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✉ Corresponding author :

Email Address: rheea.tayang@gmail.com

INTRODUCTION

The development of digital technology has significantly impacted the transformation of various business sectors, including micro, small, and medium enterprises (MSMEs) in the fisheries sector. Digitalization is inevitable as it not only improves operational efficiency but also expands market reach and enhances the relationship between producers and consumers (Rahman et al., 2022)

As an archipelagic region rich in fishery resources, Papua has great potential in developing its marine and fisheries sectors. However, geographical challenges, limited market access, and infrastructure constraints often hinder the marketing of fishery products. In such circumstances, the use of information technology through e-commerce platforms becomes a strategic solution to connect local fishery products with a broader consumer base (Wulandari & Putra, 2021).

Toko Ikan Jayapura is one of the MSME players in Papua's fisheries sector that has responded to modern market demands by adopting a web-based sales system. This store offers a variety of locally caught fresh fish, including Sentani tilapia, red snapper, rabbitfish, and squid. Since 2024, the store has developed a simple digital platform that allows customers to order fish online via the website and social media.

This innovation not only overcomes physical access limitations but also ensures faster, safer, and more transparent transactions.

This web-based sales model allows customers to view real-time stock, select products based on their needs, schedule deliveries, and make payments all from the comfort of their own homes, without needing to visit the store. The system also opens up opportunities for analyzing customer data and purchase patterns to support better business decision-making (Sari & Lestari, 2020).

In Indonesia, e-commerce has experienced rapid growth over the past decade. Data from the Indonesian Internet Service Providers Association (APJII, 2023) shows that 73% of internet users in Indonesia have made online purchases. However, many MSME players—especially in Eastern Indonesia—still do not utilize this potential to its full potential. Therefore, studying the digitalization practices of Toko Ikan Jayapura's sales system is expected to serve as an inspirational model for similar businesses.

This study aims to identify and analyze the implementation of an e-commerce-based fish sales system at Toko Ikan Jayapura and evaluate its impact on operational effectiveness and market expansion. The findings are expected to enrich the literature on MSME digitalization in the fisheries sector and provide policy recommendations for strengthening local economies in island regions.

METHODOLOGY

Time and Place

The study was conducted from April to June 2025 at Toko Ikan Jayapura, located on Hamadi Pantai Street, South Jayapura, Papua.

Method

A qualitative descriptive method was used. According to Creswell (2016), this method aims to provide a systematic and factual description of the e-commerce implementation at Toko Ikan Jayapura.

Types and Sources of Data

▪ Data Types

Data were collected through direct observation, interviews with the store owner, and digital documentation, including sales summaries and website displays.

▪ Data Sources

Primary data: obtained through interviews and direct observation

Secondary data: obtained from sales records, product catalog archives, and digital store activity from April to June 2025

Data Collection Methods

Data were collected through three techniques:

- Literature Study: To strengthen the theoretical and conceptual foundations of e-commerce in fisheries MSMEs
- Observation: Observing ordering activity, catalog updates, and customer interactions with the system
- Interviews: Semi-structured interviews with the store owner and several active customers to gather in-depth and up-to-date information

RESULTS AND DISCUSSION

The digital sales system implemented by Toko Ikan Jayapura consists of three main stages: input, processing, and output. **Input:** Customers fill in the order form via the website or WhatsApp. **Process:** Includes stock verification, system updates, and invoice creation. **Output:** Generates daily transaction data, customer history, and monthly sales reports

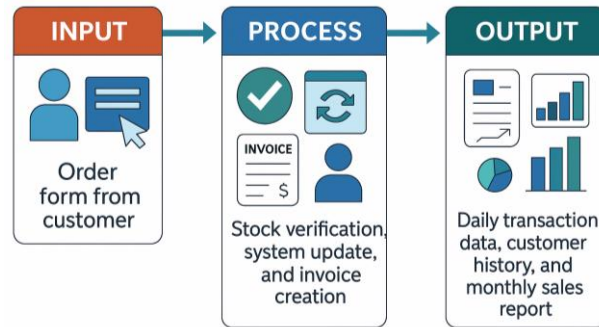


Figure 1. Digital Sales System Model of Toko Ikan Jayapura

Digital Sales Process Flow

The digital sales system involves three main parties: Consumers, Administrators/Cashiers, and Warehouses. All processes are fully integrated through digital media (website and WhatsApp Business API).

Consumer Stage

- **Access Online Order Form**
Consumers can access the store's official website or use the provided WhatsApp link to fill out the order form. This form includes information such as the customer's name, delivery address, type of fish ordered, quantity (in kg), delivery time, and payment method.
- **Complete Digital Form**
The submitted form data is automatically received by the admin system. Customers will receive a notification via WhatsApp or email as proof that the order has been received.
- **Digital Signature (Optional)**
In an advanced system, the digital invoice can be confirmed online by the customer as a form of approval before the invoice is issued.

Admin/Cashier Stage

- **Order Verification**
The admin receives an order notification and immediately checks the availability of the requested fish stock.
- **Stock Request for Warehouse**
If stock is available, the admin sends a digital request to the warehouse via an application system or an automated Google Sheet.
- **Digital Invoice Generation**

The invoice is automatically generated and sent to the customer via email or WhatsApp. The cashier verifies the payment (via bank transfer or QRIS) before proceeding with packaging.

- Online Payment Transaction

Customers make payments via mobile banking or e-wallet. The cashier verifies the payment proof.

Warehouse Stage

- Order Preparation

The warehouse receives the order request notification and packs the products accordingly.

- Automatic Stock Data Update

Each stock outflow is immediately recorded in the system, and the inventory is automatically updated.

- Report on Generation

All transactions are recorded in the dashboard, including customer history, order quantities, and daily/monthly sales reports.

Process Conversion Diagram (Digitalization)

Below is the mapping of the manual process to the digital version adopted by Toko Ikan Jayapura (Jayapura Fish Store):

Table 1. Manual to Digital Conversion Table - Toko Ikan Jayapura

Old Process (Manual)	New Process (Digital)
Fill out the form in store.	Please fill out the form via our website/WhatsApp.
Manual confirmation	Automatic notification to the admin
Printed invoice	Digital invoice (PDF/WA)
Cash payment	Digital payment (QRIS, bank transfer)
Manual stock recording	Automatic inventory update via spreadsheet
Delivery by memory	Scheduled delivery
Manual record keeping	Real-time digital dashboard reporting

Website Display and Product Catalog

Toko Ikan Jayapura developed a user-friendly website. The homepage features a fresh fish catalog, complete with product photos, prices per kilogram, stock availability, and order buttons. Featured products include Sentani Tilapia, Red Snapper, Rabbitfish, and Giant Tiger Prawns.

The website is integrated with WhatsApp for instant transactions and includes a shopping cart and customer data form (name, address, phone number, delivery time). Payment methods include bank transfers and QRIS for convenience.

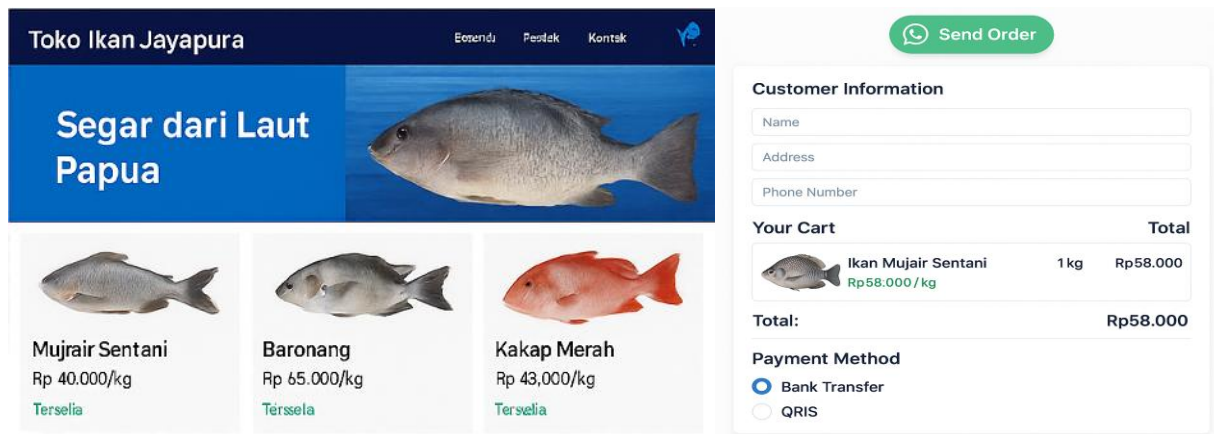


Figure 2. Product Catalog and Shopping Cart Display on Website

Sales Value and Transaction Growth

During the three-month e-commerce implementation (April–June 2025), Toko Ikan Jayapura recorded an increase in transaction numbers and revenue. Active social media promotion, an appealing website, and timely delivery drove the growth.

Based on digital dashboard records, daily transactions ranged from 20 to 35 orders, with an average daily sales value of IDR 3,000,000. Below is a graph of the monthly sales trend.

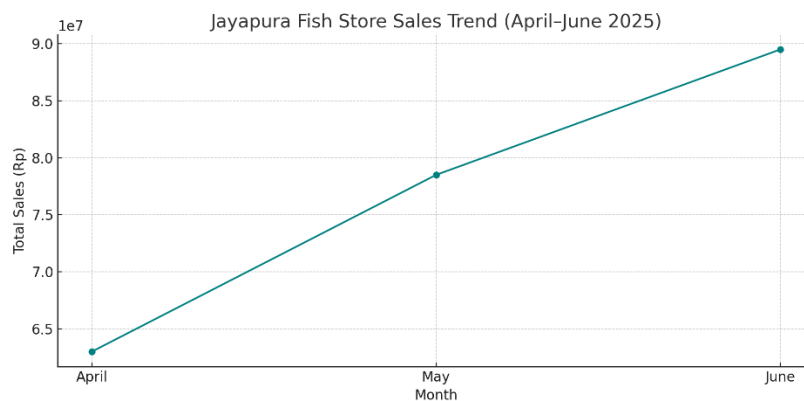


Figure 3. Sales Trend of Toko Ikan Jayapura (April–June 2025)

CONCLUSION

This study shows that implementing an e-commerce system at Toko Ikan Jayapura positively impacted operational efficiency, increased sales transactions, and expanded market access for local fishery products in Papua. Through digital ordering, payment, and reporting processes, the store created a more practical and transparent shopping experience for customers. The web-based system integrated with WhatsApp and digital payment methods offers an innovative solution to geographical and physical access challenges in eastern Indonesia. This model can serve as a reference for technology-based MSME development in the fisheries sector, particularly in archipelagic regions.

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