

BREAK-EVEN POINT (BEP) ANALYSIS OF THE IMPACT OF PAYMENT METHODS AND SALES VOLUME ON HEIHO HEALTHY FOOD CATERING BUSINESS IN DEPOK, 2024

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Abstract

Advances in digital technology have encouraged small and medium-sized enterprises (SMEs) to shift to cashless payment systems, including the Quick Response Code Indonesian Standard (QRIS). This study aims to assess the effect of QRIS implementation on the cost structure, profitability, and break-even point (BEP) of Heiho Healthy Food Catering in Depok in 2024. The method used is BEP analysis, taking into account an additional cost of 0.3% in the form of the Merchant Discount Rate (MDR) for QRIS transactions. The results show that before implementing QRIS, the contribution margin per unit was IDR 21,451.61 with a BEP of 3,131 units. After using QRIS without any adjustment to the selling price, the margin decreased to IDR 21,296.77, and the BEP increased to 3,155 units, indicating a higher risk to profitability if sales decline. However, increasing the selling price by 0.3% to IDR 50,150 per unit raised the margin to IDR 21,446.77, and the BEP decreased to 3,134 units, approaching the level before QRIS implementation. The findings indicate that QRIS can still generate profit, provided that it is accompanied by an appropriate pricing adjustment strategy to maintain margins and business efficiency.

Keywords: *Digital Transactions, QRIS, BEP, MDR, Pricing Strategy*

INTRODUCTION

The digital revolution has transformed various aspects of life, including the social, cultural, political, and economic sectors. Among these, the economic sector currently has the greatest impact on everyday life. Through digital transformation, companies can expand their market share. Services such as SMS banking, internet banking, and e-commerce have introduced new payment systems for consumers, who are no longer limited by physical location or time. Policy makers in Indonesia are also responding to the rapid growth of fintech companies and online payment systems. The evolution of money and payment systems is dynamic, evolving with technological advances and the tools used to facilitate transactions (Dr. Ana Srikaningsih, 2020). In the past, Indonesian society conducted transactions by exchanging one commodity or service for another. Later, transactions began to use fiat money, such as coins and paper currency, which were accepted by all levels of society (Dr. Ana Srikaningsih, 2020).

As payment systems developed, checks, giro accounts, debit notes, credit notes, and other paper-based payment instruments became common. In addition, card-based systems, sometimes referred to as electronic money, used instruments such as debit cards, credit cards, and chip-based electronic money. Over time, payment systems expanded to include web platforms, SMS services, mobile phones, and other channels. In the modern era, virtual currencies have emerged as alternatives to traditional forms of money and payment (Dr. Ana Srikaningsih, 2020). As a form of digitalization, virtual currency payment systems aim to make transactions less dependent on physical currency and more efficient, transparent, and accessible by replacing cash with electronic or digital cashless payment mechanisms. Furthermore, business owners can easily monitor all transactions through cashless systems, thereby improving efficiency (Dr. Ana Srikaningsih, 2020). In line with the rapid growth of fintech companies, Bank Indonesia (BI) has issued regulations regarding the use of the Quick Response Code Indonesian Standard (QRIS), with a transaction limit of IDR 2,000,000, through Board of Governors Regulation No. 21 of 2019 concerning the Implementation of QRIS for Payments. As a follow-up to the rapid growth of fintech companies, all Payment System

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Service Providers (PJSPs) are restricted to using only one type of QR Code in accordance with the regulation (Ana Sriekaningsih, 2020). By using QRIS for digital payments, both the public and regulators can benefit from an efficient payment process that uses a single standard for various payment methods. Businesses affiliated with PJSPs, including OVO, LinkAja, GoPay, DANA, and Bukalapak, accept QRIS payments (Interactive QRIS, 2021). When merchants conduct transactions using QRIS, Payment Service Providers charge a service fee known as the QRIS Merchant Discount Rate (MDR). Bank Indonesia, as the industry regulator, regulates this MDR fee and does not constitute direct participation in transactions. Institutions such as the National Electronic Transaction Operator (PTEN), the Indonesian Payment Systems Association (ASPI), and entities involved in issuing and collecting funds are part of this ecosystem (BI Communications Department, 2023). Small business owners in Indonesia began to be charged a QRIS MDR fee of 0.3% by Bank Indonesia starting on July 1, 2023. Previously, business actors were exempt from QRIS fees set by the central bank. Subsequently, BI introduced a progressive fee structure. For transactions of up to IDR 100,000, the QRIS fee is 0%; however, corporate businesses are required to pay a 0.3% fee for transactions above IDR 100,000 (BI Communications Department, 2023). The following table presents the MDR rate categories for conducting business through QRIS. This policy took effect on March 15, 2025. MDR fees may not be charged to customers and remain the responsibility of merchants. MDR fees are determined by Bank Indonesia and applied based on merchant type and transaction value.

Table 1. Procedure for Distributing QRIS MDR tCtero Merchant

Merchant Type	Category	%MDR
Reguler	Micro business. (Nominal transaction business Rp. 500.000,00	0%
	Transaction Amout Rp. 500.000,00 (more than five hundred thousand rupiah)	0.3%
Special	Education	0.6%
	Public Fuel Felling Station	0.4%
	Public Service Agency	0%

Digital small and medium-sized enterprises (SMEs) represent the transformation of conventional SMEs into the digital sphere. Business owners can use digital technology to operate, manage, and market their businesses. This process involves the internet, digital platforms, social media, e-commerce, digital marketing, and digital payment systems. These tools are used to promote and sell products, optimize business processes, reach a wider customer base, and improve operational efficiency (Tini Utami et al., 2024). E-commerce has become the primary sales channel for many SMEs, especially during the COVID-19 pandemic, when physical interaction was restricted. E-commerce has changed the way SMEs operate by expanding businesses from local markets to global markets, with access no longer limited by geographic boundaries. This demonstrates how e-commerce facilitates significant market expansion for SMEs (Susanto, 2023).

The convenience of digital transactions through QRIS can affect product sales in SMEs. Therefore, this study examines the impact of QRIS implementation on sales volume at Heiho Healthy Food Catering, a food-sector business. Currently, diet food products are increasingly popular, making market competition more intense. In addition to following consumer trends, diet food products help support nutrition and healthy eating habits. Therefore, maintaining a healthy diet and selecting nutritious food are important for overall health. Moreover, purchasing has become increasingly convenient in the current era, as transactions can be completed online through digital payment systems. Consumers can conveniently purchase diet food products from anywhere via e-commerce platforms and make payments quickly through QRIS. The QRIS payment method at Heiho Healthy Food Catering has been implemented for one year, beginning at the end of 2023. However, the data used in this study are data from 2024, when the business had begun using the QRIS payment system consistently. Therefore, a calculation method based on the Break-Even Analysis concept was applied to analyze the relationship among fixed costs, variable costs, sales volume, and profit (Harahap, 2022, p. 150). The objective is to determine the break-even sales point after the implementation of the new payment system, QRIS, by calculating sales volume and simulating product price increases to offset the additional cost of 0.3% per unit (MDR).

However, since the implementation of QRIS, which imposes MDR fees, business operating costs have changed. This raises questions about the extent to which QRIS affects business profitability, particularly cost per unit, profit margin, and break-even point (BEP). In addition, can raising selling prices help cover these additional costs and maintain the business's financial stability? Therefore, it is important to analyze how the use of QRIS affects business costs and sales, and whether price adjustments can help maintain profitability and operational efficiency.

LITERATURE REVIEW

The Quick Response Code Indonesian Standard (QRIS) is a national QR code standard developed by Bank Indonesia to facilitate digital payment transactions in Indonesia. QRIS enables various payment system service providers to use a single standardized QR code, thereby simplifying transactions for both consumers and business owners. The use of QRIS offers several benefits, such as improving transaction efficiency, accelerating the payment process, and reducing cash use. However, in its implementation, QRIS also imposes a Merchant Discount Rate (MDR) fee on businesses, which becomes an additional component of variable costs and may affect a business's cost structure and profitability (Dr. Ana Srikaningsih, 2020).

In the context of financial management, Break-Even Point (BEP) analysis is used to evaluate a business's ability to reach the break-even point, namely the condition in which total revenue equals total costs, meaning that the company neither earns a profit nor incurs a loss. This analysis is important for profit planning and managerial decision-making, particularly in determining selling prices, production volume, and cost control (Kasmir, 2020). Therefore, BEP is a relevant indicator for analyzing the impact of cost changes on business financial performance.

In addition, the contribution margin is closely related to the break-even point because it represents the difference between the selling price per unit and the variable cost per unit, which is used to cover fixed costs and generate profit. The larger the contribution margin, the faster the company reaches the break-even point. Changes in variable costs or selling prices will directly affect the contribution margin and, consequently, the number of units required to achieve the BEP (Jogiyanto H.M., 2012).

Several previous studies have shown that the use of digital payment systems provides convenience and efficiency in transactions and can improve business competitiveness. However, the implementation of digital payment systems also creates additional costs that may affect a business's cost structure and profitability. Therefore, appropriate strategies, such as adjusting selling prices or improving cost efficiency, are necessary to ensure that the use of digital technology continues to provide benefits for businesses without reducing the profits earned (Sugiyono, 2010).

METHOD

This study was conducted at Heiho Healthy Food Catering in Depok on May 4, 2025. This business was selected because it met the criteria for analysis using the Break-Even Point (BEP) method. Data were collected through in-depth interviews with relevant informants to obtain the information required for the study. The data collected included sales figures, fixed costs, variable costs, and selling prices. The data were obtained directly from the business owner. The research variables were determined based on the operationalization of the concepts used (Jogiyanto H.M., 2012).

The analytical method used in this study was descriptive analysis to describe and compare business conditions before and after the implementation of QRIS. The analysis was conducted using the Break-Even Point (BEP) approach to determine the break-even point in units (Kasmir, 2010; Sugiyono, 2010), as follows:

$$BEP (Units) = \frac{Total\ Fixed\ Cost}{Selling\ Price\ per\ Unit - Variable\ Cost\ per\ Unit}$$

The Break-Even Point (BEP) is a tool used to support decision-making in profit planning (Mulyadi, 2023, p. 112).

RESULTS AND DISCUSSION

The use of the Quick Response Code Indonesian Standard (QRIS), issued by Bank Indonesia and subject to a Merchant Discount Rate (MDR) of 0.3% of the transaction value, represents one form of digital technology adoption in the SME sector. This study was conducted at Heiho Healthy Food Catering in Depok to analyze the impact of QRIS implementation on cost structure, profitability, and the Break-Even Point (BEP). The data analyzed were derived from the income statement and cost structure for the year 2024.

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Table 2. The following presents the 2024 income statement of Heiho Healthy Food Catering.

Income Statement January 1, 2024, d 31 December 2024 Catering Heiho Food		
Sale		Rp. 248,000,000
Catering sales	Rp 248,000,000	
Cost		Rp. 141,600,000
sold cost of goods		
Initial inventory	Rp. 3,000,000	
Purchases	Rp. 120,000,000	
Transportation costs	RP. 9,200,000	
Direct labor costs	Rp. 12,400,000	
Ending inventory	Rp. 3,000,000	
Lab Kotor		Rp 106,400,000
Cost		Rp. 67,400,000
Employee costs	Rp. 42,000,000	
Rent costs	Rp. -	
Electricity, water, and telephone costs	Rp 9,850,000	
Internet costs	Rp 1,852,500	
Office supplies costs	Rp 2,500,000	
Equipment depreciation costs	Rp 11,000,000	
Profit and loss/Net loss		Rp. 39,197,500
Income tax 0.5 percent		Rp. 1,240,000
Total profit and loss		Rp. 40,437,500

The following table shows a price simulation for determining profit before and after the use of QRIS transactions:

Table 1. Income Statement Data (*Catering Heiho Healthy Food, 2024*)

Simulation	Selling Price	VAriabel Cost /Unit	Margin/Unit	Total Margin	Fixed Cost	Profit
Before QRIS	Rp50.000	Rp28.548,39	Rp21.451,61	Rp106.400.000	Rp67.202.500	Rp39.197.500
After QRIS (without increasing prices)	Rp50.000	Rp28.703,23	Rp21.296,77	Rp105.636.000	Rp67.202.500	Rp38.433.500
After QRIS (prices increased to Rp50.150)	Rp50.150	Rp28.703,23	Rp21.446,77	Rp106.394.000	Rp67.202.500	Rp39.191.500

Condotions Before the Implementations of QRIS

In 2024, Heiho Healthy Food Catering demonstrated strong and profitable financial performance. During the period from January 1 to December 31, 2024, the business recorded total revenue of IDR 248,000,000, with direct costs (cost of goods sold) amounting to IDR 141,600,000. After deducting the cost of goods sold, the business generated a gross profit of IDR 106,400,000. Total operating expenses amounted to IDR 67,202,500, resulting in a pre-tax net profit of IDR 39,197,500. After deducting taxes of IDR 1,240,000, the net profit amounted to IDR 37,957,500. With a contribution margin of IDR 21,451.61 and fixed costs of IDR 67,202,500, the Break-Even Point (BEP) was calculated at 3,131 units. With actual sales of 4,960 units, the business operated well above the break-even point and therefore generated optimal profit.

Conditions After the Implementation of QRIS Without Price Adjustment

Following the implementation of QRIS, variable costs increased due to the Merchant Discount Rate (MDR) fee of 0.3% of total transaction value. From a total revenue of IDR 248,000,000, MDR expense totaled IDR 744,000, increasing the cost of goods sold to IDR 142,344,000. Variable cost per unit increased to IDR 28,703.23, causing the contribution margin to decline to IDR 21,296.77. This decrease in contribution margin reduced the total margin to IDR 105,636,000. With fixed costs of IDR 67,202,500, the break-even point increased to 3,155 units. However, with sales of 4,960 units, the business remained above the break-even point and continued to generate profit, although at a lower level than before the implementation of QRIS

Conditions After QRIS with Price Adjustment

To overcome the decline in contribution margin, the selling price was adjusted to IDR 50,150 per unit. With variable cost remaining at IDR 28,703.23, the contribution margin increased to IDR 21,446.77. The total contribution margin increased to IDR 106,394,000, resulting in an operating profit of IDR 39,191,500. Under these conditions, the break-even point decreased to 3,134 units. The analysis shows that the implementation of QRIS increased variable costs due to the 0.3% Merchant Discount Rate (MDR), which led to a decline in contribution margin and an increase in the Break-Even Point (BEP). This condition indicates that the company became more vulnerable to declining sales volume. However, the strategy of increasing the selling price by IDR 150 per unit proved effective in maintaining margin stability and profitability. The contribution margin per unit returned to a level close to that prior to QRIS implementation, and the BEP also declined to a level close to the original break-even point.

This indicates that the use of QRIS can still be beneficial when accompanied by an appropriate pricing strategy.

CONCLUSION

Based on the analysis of QRIS implementation in the operations of Heiho Healthy Food Catering, it can be concluded that the adoption of a digital payment system such as QRIS has a direct impact on the cost structure, particularly through an increase in variable cost per unit due to the Merchant Discount Rate (MDR) fee of 0.3%. If no price adjustment is made, the contribution margin declines from IDR 21,451.61 to IDR 21,296.77, resulting in lower company profit and an increase in the Break-Even Point (BEP) from 3,131 units to 3,155 units. This condition indicates that the company becomes more vulnerable to declining sales volume. However, the strategy of increasing the selling price by IDR 150 per unit (equivalent to the 0.3% MDR fee) proved effective in maintaining margin stability and profitability. The contribution margin per unit returned to a level close to that before the implementation of QRIS, and the BEP also declined to 3,134 units, approaching the initial break-even point. This shows that the use of QRIS can still be profitable when accompanied by an appropriate pricing strategy.

Heiho Healthy Food Catering demonstrated healthy and profitable business performance. Although QRIS provides convenience in transactions, its full implementation slightly reduces net profit and increases the Break-Even Point (BEP). However, since the difference is relatively small and sales volume remains far above the BEP, the impact of the MDR fee is considered operationally insignificant. Business owners need to be aware of hidden costs, such as MDR fees, when determining pricing strategies, particularly in businesses with thin profit margins. In the long term, a combined payment strategy that integrates cash and digital payments may be an effective way to maintain profitability while supporting digitalization.

RECOMMENDATIONS

1. Adjustment of Selling Prices. The company is advised to adjust its selling prices in proportion to the MDR to maintain profit margins despite higher transaction costs.

2. Periodic Evaluation of Cost Structure and BEP. Regular analysis of financial performance, fixed costs, and the Break-Even Point (BEP) is necessary for the company to respond proactively to changes in operational costs.
3. Communication with Customers. If price adjustments are implemented, it is important for the company to clearly communicate the reasons to customers to demonstrate business transparency.
4. Payment Methods To maintain operational flexibility, Heiho Healthy Food Catering is advised to continue offering a range of payment methods, both cash and digital (QRIS, bank transfer, and e-wallet). This strategy not only broadens the customer base but also helps control MDR-related costs.

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