Profitability Ratio Analysis in The Aquaponics Business Model Canvas (BMC) Based Business Model As A Business Strategy For Economic Sustainability

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ABSTRACT

This study aims to analyze the application of the aquaponic system as an efficient cultivation solution, develop a business model based on the Business Model Canvas (BMC), measure financial performance through profitability ratios, and formulate economic sustainability strategies. The method used is descriptive quantitative by utilizing the developed aquaponic business analysis website system to process financial data input, calculate Net Profit Margin (NPM) and Return on Equity (ROE), and map the results into 9 BMC elements based on simulations of small, medium, and large business scales. The results show that profitability increases with increasing business scale, where small scale produces 28% NPM and 13% ROE, medium scale produces 49% NPM and 42% ROE, and large scale reaches 86% NPM and 132% ROE. It can be concluded that the integration of profitability ratios and BMC is able to provide a comprehensive business overview to determine effective strategies, so that this website-based system is proven valid as a supporting solution for financial technology-based aquaponic business decision-making.

Keywords *: aquaponics, Net Profit Margin, Return on Equity, Business Model Canvas, business strategy, economic sustainability.*