Quality Financial Analysis of Para-Rubber on Google-Maps Prototype System

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Abstract - Traditional financial analysis methods do not take into consideration feedbacks received when the current analysis is performed, and neither do allow for continuous improvements of the process. This causes difficulty and time consuming. To ensure that the right investment decision about Para-rubber plantation, which is an important economic plant in the ASEAN Economic Community (AEC), is made before the project commencement is what of investors’ requirements. Therefore, the Quality Financial Analysis of Para-Rubber on google-Maps prototype system (QFARM) is proposed and developed as a tool to resolve these problems. This paper presents the QFARM as a decision-making tool by integrating the Deming’s Cycle, the financial analysis techniques and the data visualization techniques, in order to assist the investors in making decisions about investment in Para-rubber plantation, based on 3 indicators, including the Net Present Value (NPV), the Benefits-Cost Ratio (BCR), and the Internal Rate of Return (IRR). Moreover, the QFARM compares the financial data of each group of Para-rubber plant’s species in case of the same conditions, recommends the best species for the investment, and displays the sensitivity analysis results in graphical forms for each condition. A usability test was conducted to prove the QFARM applicability and usefulness. The questionnaire with a reliability value of 0.84 was used to collect the data from 5 Para rubber expert users from Office of the Rubber Replanting Aid Fund, Thailand. Overall, they accepted the QFARM prototype system at $\bar{x} = 4.25$, $S.D. = 0.68$, accounted for 91%.