

**Independent Study Title** Feasibility Study of Red Brick Manufacturing  
In Chiang Rai Province

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**Degree** Master of Economics

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**ABSTRACT**

This study aimed to explore the feasibility of a brick making investment project in Chiang Rai Province involving the use of local raw materials, unskilled labor, and machinery and production tools available in local market to turn out construction bricks of durable and good quality to satisfy market needs, It was reckoned that this business would be highly profitable and could generate local labor employment.

The specific objectives were to determine the range of feasibility of this investment project and to identify the break-even point of the investment given the project life of five years covering 2006-2010 and discount rate at 10%.

The findings indicated that this investment project is suitable and worth investing because its Net Present Value (NPV) equals 2,032,302 baht, with Internal Rate of Return (IRR) at 40.15%, Benefit-Cost (B/C) ratio of 1.36, and one year and eight months payback period, The break-even point will be achieved when 4,333,475 pieces of brick have been produced and 5,616,000 pieces can be produced within the project life.

Sensitivity analysis was performed under three hypothetical conditions, in the first scenario, when costs increase by 5% and other things remain unchanged including the 10% discount rate, the decision to invest is still reasonable because the project's NPV is 1,803,748 baht, IRR is 35.78%, B/C Ratio equals 1.31, with one year and 10 months payback period and break-even point at 4,652,607 pieces of brick production.

In the second scenario, when costs go up by 10% and other things being equal including the 10% discount rate, the project is still worth investing for its NPV of 1,575,195 baht, IRR at 31.38%, B/C Ratio of 1.26, one year payback period, and break-even point at 4,986,558 pieces of brick production.

In the third scenario, when costs are assumed to rise by 15% and other things remain constant including the 10% discount rate, the project still deserves the decision to invest due to its NPV of 1,346,641 baht, IRR at 26.96%, B/C Ratio of 1.21, two years and two months payback period, and break-even point at 5,336,441 pieces of brick production.