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**Analysis of Potential Economic Returns from the Establishment of
Commercial Teak Plantation under Myanmar Reforestation and
Rehabilitation Program in Oak-twin Township**



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Abstract

This thesis examines the financial return of Teak plantations investment under the Myanmar Reforestation and Rehabilitation Programme (MRRP) in Oak-twin Township, Myanmar. Through a combination of qualitative and quantitative research methods, including interviews, surveys, and financial analysis and Standard Operating Procedure, the study assesses the economic benefits of Teak plantation establishment for the government. Additionally, these investments offer attractive financial returns for the Myanmar government, making them an attractive investment option within the country's economic landscape. However, the success is contingent on factors such as tree species quality, site quality, management practices, and market price for Teak products. The study also highlights challenges and risks associated with these investments, including maintenance and management practices, and market fluctuations. In summary, this thesis provides valuable insights into the potential benefits of Teak plantation investments for government. By addressing challenges associated with Teak plantation investments, stakeholders can make informed decisions to achieve both financial returns and environmental sustainability in the context of Myanmar.

Key words: *Economic Return, Site Quality, Maintenance and Management practices, Market Price*

**အုတ်တွင်းမြို့နယ်အတွင်း မြန်မာနိုင်ငံသစ်တောများပြန်လည်တည်ထောင်ရေးစီမံကိန်းဖြင့်
တည်ထောင်ခဲ့သော စီးပွားရေးကျွန်းစိုက်ခင်းများ၏ အလားအလာရှိသော စီးပွားရေး
အကျိုးအမြတ်များ ပြန်လည်ရရှိနိုင်မှုကို သုံးသပ်ဆန်းစစ်ခြင်း**

ချမ်းငြိမ်းကျော်၊ ဦးစီးအရာရှိ

စာတမ်းအကျဉ်း

ဤစာတမ်းသည် မြန်မာနိုင်ငံ၏ပဲခူးရိုးမအတွင်းရှိ အုတ်တွင်းမြို့နယ်၌ မြန်မာနိုင်ငံသစ်တောများ ပြန်လည်တည်ထောင်ရေးစီမံကိန်းဖြင့် ဆောင်ရွက်ခဲ့သည့် ကျွန်းစိုက်ခင်း တည်ထောင် ရင်းနှီးမြှုပ်နှံမှု များ၏ ငွေကြေးပြန်လည်ရရှိမှုအလားအလာများကို လေ့လာခဲ့ပါသည်။ ပြန်လည်ရင်းနှီးမြှုပ်နှံမှုများ၊ စစ်တမ်းများနှင့် လုပ်ထုံးလုပ်နည်းများကို ပေါင်းစပ်ထား၍ ရင်းနှီးမြှုပ်နှံမှုမှ ရရှိလာသည့် စီးပွားရေး ဆိုင်ရာ ထည့်သွင်းစဉ်းစားမှုများကို သုံးသပ်ထားပါသည်။ အဆိုပါရင်းနှီးမြှုပ်နှံမှုများသည် ငွေကြေးအကျိုးအမြတ်များရရှိစေပြီး နိုင်ငံ၏စီးပွားရေး တိုးတက်စေရန် ရင်းနှီးမြှုပ်နှံမှု ရွေးချယ်မှုတစ်ခုဖြစ်စေကြောင်း ဖော်ပြထားပါသည်။ ကျွန်းစိုက်ခင်းတည်ထောင်ရင်းနှီးမြှုပ်နှံမှုများမှ ပြန်လည်ရရှိမှုများသည် သစ်မျိုးအရည်အသွေး၊ မြေနေရာအရည်အသွေး၊ စီမံခန့်ခွဲမှုလုပ်ငန်းစဉ်များနှင့် ဈေးကွက်ဈေးနှုန်းစသည့် အချက်များအပေါ် မူတည်နေကြောင်းနှင့် ပြုစုထိန်းသိမ်းခြင်းနှင့် စီမံခန့်ခွဲမှု အလေ့အထများနှင့် ဈေးကွက်အတက်အကျများအပါအဝင် ဆက်စပ်နေသော စိန်ခေါ်မှုများနှင့်အန္တရာယ်များကိုလည်း ဖော်ထုတ်တင်ပြထားပါသည်။ အကျဉ်းချုပ်အားဖြင့် ကျွန်းစိုက်ခင်းတည်ထောင် ရင်းနှီးမြှုပ်နှံမှုသည် အစိုးရအတွက်အလားအလာရှိသော စီးပွားရေးရင်းနှီးမြှုပ်နှံမှု တစ်ခုဖြစ်ကြောင်း နိဂုံးချုပ်တွင် ဖော်ပြထားပါသည်။ ကျွန်းစိုက်ခင်းတည်ထောင်ရင်းနှီးမြှုပ်နှံမှုများနှင့် ဆက်စပ်နေသောစိန်ခေါ်မှုများကို ဖြေရှင်းခြင်းဖြင့် အကျိုးဆက်စပ်ပတ်သက်သူများသည် မြန်မာနိုင်ငံတွင် ငွေကြေးအကျိုးအမြတ်များနှင့် ပတ်ဝန်းကျင်ရေရှည်တည်တံ့မှု နှစ်မျိုးစလုံးရရှိစေရန် အတွက် အကျိုးရှိသောဆုံးဖြတ်ချက်များ ချမှတ်နိုင်ရန် သတင်းအချက်အလက်များ မျှဝေဖော်ပြထားကြောင်း တင်ပြအပ်ပါသည်။

Analysis of Potential Economic Returns from the Establishment of Commercial Teak Plantation under Myanmar Reforestation and Rehabilitation Program in Oak-twin Township

1. Introduction

According to the Forest Resource Assessment of Myanmar from FAO, the forest area in Myanmar is being declined from 46.95% in 2010 to 42.92% in 2015, due to natural and human-made disturbances (Global Forest Resources Assessment 2015: Country Report - Myanmar, 2014). Deforestation and forest degradations are now known as one of the most major conservational difficulties facing the human society with thoughtful long-term commercial, social and ecological consequences. In 2017, Myanmar's forestry sector has been improved in terms of policy, regulations and procedures. After that Ministry of Natural Resources and Environmental Conservation (MONREC) has mainly carried out 10-years restoration program (2017-18 to 2026-27) called Myanmar Reforestation and Rehabilitation Programme (MRRP) for rehabilitation and restoration of degraded and deforested areas, and to be in agreement with the international arrangements related to climate change, mitigation and adaptation. The program is being mainly implemented by the Forest Department and Dry Zone Greening Department with their own national and regional budget. The MRRP includes a wide range of restoration activities such as establishing commercial plantations, restoring old commercial plantations, upscaling community forestry and promoting agroforestry.

Forest Department and Dry Zone Greening Department have applied nineteen forestry operations including rehabilitation and restoration activities in MRRP. Among these nineteen forestry operations, establishment of forest plantation is the primary means of combating deforestation, climate change, energy crises, supporting livelihood needs, and improving the standard of countries' infrastructure through a rural development strategy. According to the Forest Law of Myanmar in 1992 and 2018, Government can establish five types of plantations; commercial, industrial, watershed, mangroves, village firewood and other plantations based on the various purposes of economic return, conservation, local supply, and research (Forest Law of Myanmar, 2018) (Forest Law of Myanmar, 1992).

Under the MRRP, commercial forest plantations with valuable species like teak (*Tectona grandis*), pyinkado (*Xylia xylocarpa*) and padauk (*Pterocarpus macrocarpus*) are being established by the Forest Department to decrease timber demand pressure on natural forests and to assure sustainable supply of teak and other hardwoods to international and domestic markets. At that point, financial, social and physical returns of the forest plantations are an important alarm around the Myanmar. During the year of 2014 to 2020, timber exploitation contributed to 0.2% of GDP in Myanmar (Myanmar Country Environmental Resources Sector, 2019).

Investment in forest plantations is one of the most important business decisions for reliable future returns in many forestry areas around the world. (Frederick Cabbage, 2010) (Frederick Cabbage, 2010). The productive functions of the forest plantations refer to those stands established primarily for the production of wood or non-wood forest products. Such products may include timber, panel products, pulp and paper, fuelwood or a very wide range of non-wood forest products. In plantations, the costs include expenditures on the plantation operations at the interval of beginning to final harvesting. The return primarily includes sale revenues from intermediate yields such as poles, posts of different sizes and timber in the form of log at the final felling. The most popular measures of defining the financial criterion of forest plantation are the Net Present Value (NPV), Internal Rate of Return (IRR) and the cost-benefit analysis (CBA).

Myanmar Teak is one of the best timbers around the world and it makes Nation Brand and support for Country Economic Development. At that Point, Teak commercial plantation Project is being systematically introduced and implemented in Myanmar since 1981. ((National Forest Master Plan-NFMP, 2001-02 to 2030-31)., 2001, June). Even though establishing commercial teak plantation, it is still lack of analysis on the potential economic return of commercial teak plantation. It is hence essential to study potential economic return of commercial teak plantation in Myanmar.

2. Objectives

The main intention of the thesis is to develop a sustainable and participatory forest management system which is applicable in creating forest productive sectors. The research program will be conducted to fulfil the following objectives:

- a) to conduct cost-benefit analysis of Commercial Teak Plantation;
- b) to suggest solutions for Government to improve efficiency and expansion of Commercial Teak Plantation;
- c) to analyze thinning method to implement plantation economic returns;
- d) to formulate policies that would encourage commercial plantation;

3. Materials and Methods

3.1 Study Area

The Bago Yoma is located in the central part of lower Myanmar, have renowned natural Teak bearing forest. The Bago Yoma is commonly comprised with mixed deciduous forests which is the major forest type contributing to commercial timber production in Myanmar. The intensive area for this research study, it will be conducted in the Oak-twin Township from the Taungoo District of the Bago Region and it is characterized as a plain and mountain topography with an area of about 1,383 km². Oak-twin Township is located between 18°49'47.71"N and 96°24'36.12"E. According to the township profile of the Oak-twin General Administration Department (GAD), agricultural lands occupy about 25% of the total township area; the average annual rainfall is about 1,800 mm and seasonal temperature varies from 12°C in cold season and 44°C in hot season; the principal agricultural crops are rice, sesame, sunflower, groundnut, sugarcane, corn, turmeric and various kinds of peas and beans; about 61% of the total township area is constituted as forest lands.

In degraded natural forests, it is needed to conserve the functionality of the ecosystems. Teak is the home species that is commonly planted species in the township to conserve those forested areas where they had once existed. Pure teak plantations have been established by the Forest Department and private firms not only in the township but also in the Bago Region. Bago Yoma and Oak-twin Township are well known as for the plenty of forest plantation and it is used for extraction of timber since a long time ago.

In Oaktwin Township, Reserved Forest of Kha-baung, Kha-baung Extension, Bon-taung Phyu-kun, Mya-yar-bin-kyaw and Protected Public Forest of Kha-baung XVI, XVII, XVIII are located and these possess the great history of forest conservation like Artificial Regeneration called plantation establishment, Assisted Natural Regeneration and timber exploitation. In the Project time of the MRRP, teak plantations are implemented in the area of Kha-baung XVI Protected Public Forest. Oak-twin Township was selected as the most appropriate area to study for these reasons.

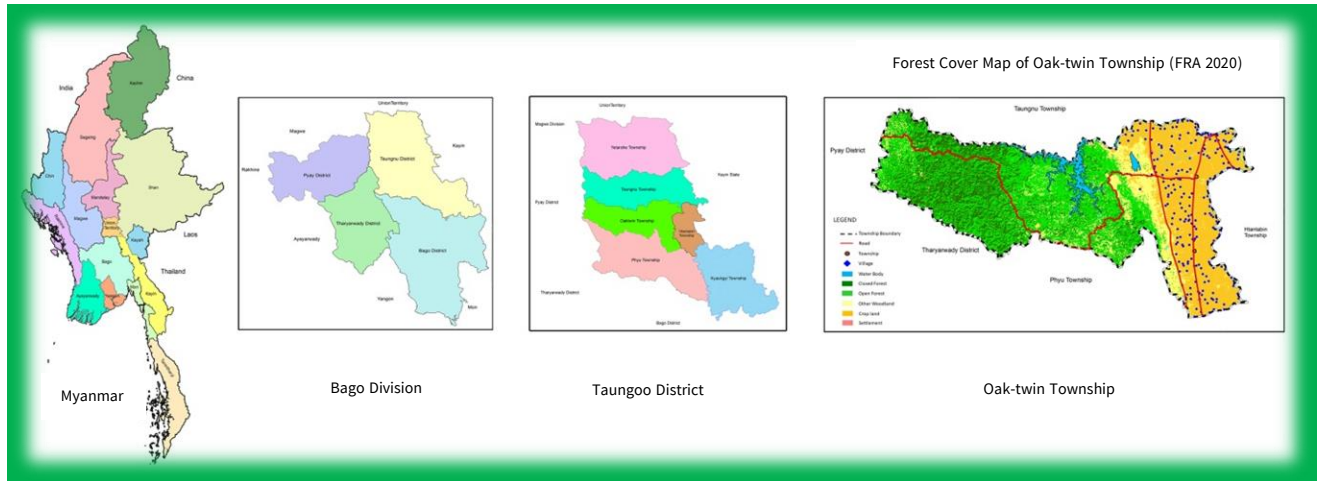


Figure 1. The location of Oak-twin Township in Myanmar

3.2 Methods of Data collection

This research presents a cost-benefit analysis of Commercial Teak Plantations within a framework of Myanmar Reforestation and Rehabilitation Program in Oak-twin Township, Bago Region. These Commercial Teak plantations are fixed for a period of 40 years rotation according to Myanmar Forestry Master Plan. The primary data on costs and benefits were collected through discussions with the government officials from the township and head office levels from the Forest Department and Myanmar Timber Enterprise under Ministry of Natural Resources and Environmental Conservation.

The forest plantation data were collected to assess the various factors including the initial implementation cost, types of conservation or maintenance activities conducted before final harvesting, types of intermediate yield achieved, and the estimation of site quality or growth rate of Commercial forest plantation. The plantation data were composed as the followings;

- i) Point out initial cost and annual maintenances or conservation costs of Teak plantation from Budget Allocation Norms of Forest Department;
- ii) Supposing survival percentage according to experiencing risks baseline data from discussion interview.
- iii) Analyzing Volume of intermediate and final products from Thinning Report and Exploitation Data from Myanmar Timber Enterprise and Private Plantation.
- iv) Price of timber, posts and poles from Myanmar Timber Enterprise;

For the plantation data establishment in Oak-twin Township, statistical data and policy documents were obtained by interviewing the officers at both the township and head office levels, thereby gaining access to annual reports and Standard Operating Procedures published by the Forest Department.

To identify Survival percentage, considering on the potential threats such as pest, disease and suppressed tree and ignore illegal logging and other environmental factors, the survival percentage of forest plantation will be calculating 90 percent at the first age and it will be decreased to 75 percent at the age of between five to ten years, will be reduced to 65 percent based on the left tree after thinning at ten to fifteen years. After Fifteen years, the remaining trees can be alive without any disturbances and survival tree will be shown as follows;

Table 1; Survival Percentage of Forest Plantation

No.	Age	Survival Percentage
1	1	90%
2	5-10	75%
3	10-15	65%
4	15-40	65%

For the thinning schedule, the first mechanical thinning will be performed between the ages of five and ten years old, and the second time will be completed between the ages of ten and fifteen years old. The third thinning will be done between the ages of fifteen and twenty-five years old.

To find volume of intermediate and yield, we collected from the thinning report From Oaktwin Township and Exploitation data from Planning and Statistics division of Head Office. From this collection and calculation on the base of survival percentage, thinning schedule and yield data the following data will be obtained in the following table 2;

Table 2; Volume production of Forest plantation (1 acre)

No.	Age or Thinning Schedule	Initial Left Trees	Survival		Thinning Process		Average Volume of Yield From one unit				Total Tons from yield	Data Source
			Rate (%)	No. of Trees	Thinned Trees	Left Trees	Mid Girth		Length (Feet)	Ton		
							Feet	Inches				
1	1	540	90	486								
2	5-10	486	75	405	135	270	1	2	20	0.0340	4.5938	Thinning Report
3	10-15	270	65	175	40	135	1	6	20	0.0563	2.2500	Thinning Report
4	15-25	135	100	135	90	45	2	8	36	0.3200	28.8000	Exploitation Data
5	40	45	100	45	45		3	6	45	0.6891	31.0078	Exploitation data
	Total				310						66.6516	

3.3 Material Studied

Based on these data, the economic return of Commercial forest plantation was evaluated using calculations such as Net Cash Flow, Present Value (PV), Net Present Value (NPV), Internal Rate of Return (IRR), and Benefit Cost ratio (BCR) and assumption for discount rate (DR).

A critical analysis of the financial impact was performed using mathematical formulas enabling the creation of an accurate picture of the current situation and future predictions. The net present value (NPV), internal rate of return (IRR), and Benefit Cost Ratio (BCR) were used as key indicators for assessing economic returns of the Commercial Teak Plantations. These metrics are widely recognized to determine financial viability of restoration interventions and the analysis has been applied to Teak growing, and uses three indicators:

$$i) \text{ Net Present Value (NPV)} = \sum (B_t - C_t) / (1 + r)^t$$

Net Present Value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows at a selected discount rate and over a period of time. The obvious advantage of the net present value method is that it takes into account the basic idea that a future dollar is worth less than a dollar today.

Where B represents the benefits in year t; C represents the costs in year t; and r represents the discount rate chosen. (C_t = cost in t year, B_t = benefit in t year, r = discount rate, t = time in years).

ii) Internal Rate of Return (IRR) calculated as $0 = r_a + \left(\frac{NPV_a}{NPV_a - NPV_b} \right) \times (r_b - r_a)$

The internal rate of return (IRR) is a metric used in financial analysis to estimate the profitability of potential investments for investors, business managers and real estate professionals over a specified period. By considering the time value of money, the IRR measures the effectiveness and performance of a project, capital expenditure, or investment over time. It helps organizations to compare multiple investments, assess their relative merits, and make informed decisions about the viability of specific projects. The IRR plays a vital role in financial analysis, offering a comprehensive perspective on the financial attractiveness and potential returns of various ventures.

Where r_a is lower discount rate chosen; r_b is higher discount rate chosen; NPV_a represent Net Present Value at r_a and NPV_b represent Net Present Value at r_b .

iii) Benefit Cost Ratio (BCR) = $\frac{TDB}{TDC}$

Where, TDB is the total discounted benefits; and TDC is the total discounted costs.

The benefit-cost ratio (BCR) is a ratio used in a cost-benefit analysis to summarize the overall relationship between the relative costs and benefits of a proposed project. BCR can be expressed in monetary or qualitative terms. This would also help in evaluating the ability of the project to meet its financial obligations and to assess the incentives to the investors. If a project has a BCR greater than 1.0, the project is expected to deliver a positive net present value to a firm and its investors.

The costs include various expenses such as stand establishment, management activities and harvesting operations, while revenues include income from firewood sales, revenues obtained through thinning operations and income derived from the sale of timber or poles at the final harvest. To evaluate the economic feasibility of the project, the net benefits for each year were calculate by deduction the costs from the revenues. These net benefits were then discounted at discount rates of 4% and 10% to account for the time value of money. By summing up the discounted net benefits, the net present value, NPV, of the project was determined, providing a valuable measure of its economic viability and potential profitability.

The indicators used in the analysis serve as crucial decision-making tools in the conclusion of the study. The assessment is conducted based on three key criterial: the net present value (NPV), the internal rate of return (IRR), and the benefit-cost ratio (BCR). A positive NPV indicates that the investment is cost-effective while an IRR higher than the cost of capital (set at 10%) signifies the feasibility of the intervention. Furthermore, a BCR greater than 1 indicates that the intervention is financially viable. These indicators provide valuable insights and assist in evaluating the overall economic attractiveness and potential success of the investment or project under consideration.

The discount rate is a crucial factor in assessing the present value of future cash flows in a discounted cash flow analysis. It represents the interest rate used to determine whether the projected cash flows of a project or investment outweigh the initial capital outlay required at present. By discounting future cash flows, the analysis helps decide the relative value of these cash flows in the present. A discount rate is the rate of return used to discount future cash flows back to their present value.

The fluctuation of the money can affect the cost and benefit analysis of the operations, plus or minus 5% variation for the discount rate. In this analysis, Internal Rate of Return (IRR) of each intermediation is taken for a given cost of capital (15%) which refers to the maximum lending rate of the Central Bank of Myanmar per annum (Central Bank of Myanmar, 2025).

4. Results

The Costs and Benefits analysis of financial aspects for the Teak plantation project reveals promising (Table 3). Over a 40-year period, the total costs with the establishment and

maintenance of one acre of the plantation amount to MMK 714,214, considering a discount factor of 12%. When applying a discount factor of 18%, the total costs decrease to MMK 674,613. In contrast, the inflow for the project is significantly higher, with MMK 7,061,245 at a discount rate of 12% and MMK 1,915,199 at a discount factor of 18%. By utilizing the Net Present Value (NPV) formula, which factors in the discount rate and the difference between benefits and cost, the NPV is calculated as MMK 6,347,031 at the 12% discount factor and MMK 1,240,586 at the 18% discount factor per acre. These values indicate this intervention is profitability of the Teak plantation project.

Another financial metric used to assess the viability of the project the Benefit-Cost Ratio (BCR). With a discount factor of 12%, the BCR is 9.89, while at a discount factor of 18%, it is 2.84. The BCR of 6.46 falls between the two discount rates. This ratio, obtained by dividing the total discounted benefits (TDB) by the total discounted costs (TDC), further supports the financial viability of the Teak plantation.

Additionally, the Internal Rate of Return (IRR), which is calculated as 19%, surpasses the cost of capital 12% to 18%. This indicates that the project is a feasible investment. The IRR is derived from the formula that involves the NPV and the discount rates (Table 3).

The financial analysis in this study demonstrates that the Teak plantation project is financially viable and profitable. The NPV, BCR and IRR metrics all indicate positive outcomes, highlighting the potential for a successful investment. However, to maximize profitability, exploring avenues for better market access and higher prices for the harvested teak products would be beneficial.

Table 3; Costs and Benefits of Analysis Teak Plantation over 40 years

Age	Description	Nominal Value(MMK) at Discount rate		
		12 %	18 %	12% -18 %
	Costs or Cash Outflow			
0	Initial Implementation	406,496	406,496	406,496
1	Maintenance Operation	137,232	130,254	133,743
	- Weeding Two Times			
	- Carrying Seedling			
	- Patching			
	- Counting			
	- Fire Protection			
2	Maintenance Operation	85,698	77,205	81,452
	- Weeding Two Times			
	- Fire Protection			
3	- Maintenance Operation	40,927	34,996	37,962
	- Weeding One Time			
	- Fire Protection			
4	- Maintenance Operation	4,766	3,869	4,318
	- Fire Protection			
8	1 st Mechanical Thinning	23,728	15,630	19,679
15	2 nd Mechanical Thinning	10,733	4,907	7,820
25	3 rd Silvicultural Thinning	4,623	1,257	2,940
	Total Costs	714,214	674,613	694,414
	Benefits or Cash Inflow			
8	1 st Mechanical Thinning	834,911	488,850	661,881

Age	Description	Nominal Value(MMK) at Discount rate		
		12 %	18 %	12% -18 %
15	2 nd Mechanical Thinning	431,620	197,307	314,464
25	3 rd Silvicultural Thinning	3,388,222	919,120	2,153,671
40	Final yield	2,499,259	309,922	1,404,591
	Total Benefits	7,061,245	1,915,199	4,488,222
	NPV	6,347,031	1,240,586	
	BCR(ratio)	9.89	2.84	6.46
	IRR %			19 %

On the other hand, the Teak plantation intervention demonstrates a long payback period, with positive net cash flow commencing after 15 years (Figure 1). The investment initially incurs significant costs, resulting in negative net cash flow. However, from the eighth year onward, the project starts generating positive net cash flow, indicating a potential return on investment. This highlights the need for long-term planning and patience in reaping the financial benefits of the Teak plantation intervention.

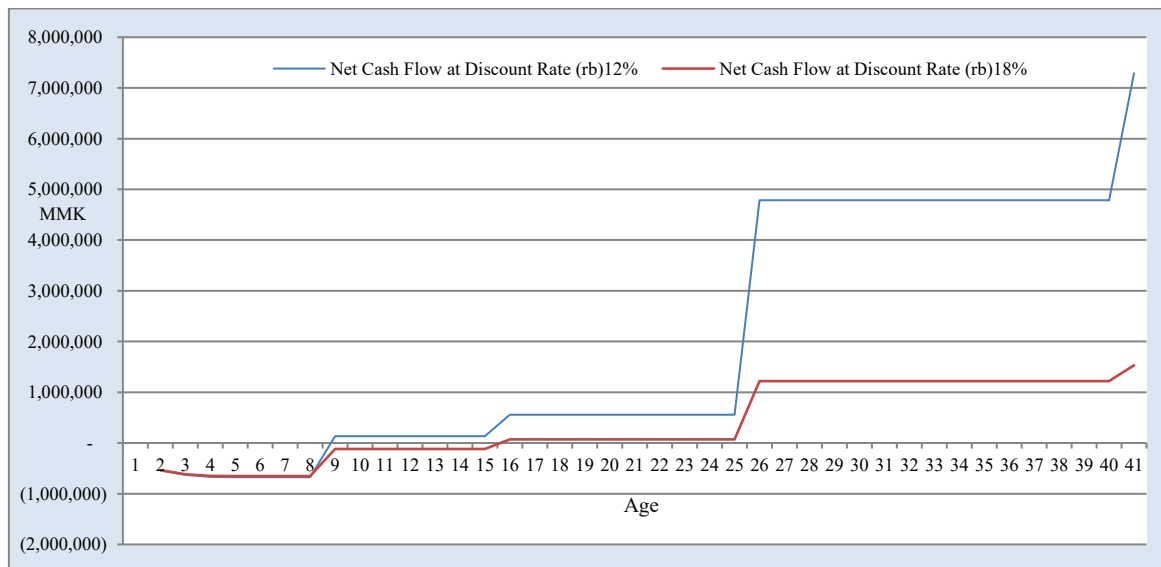


Figure2; Trend Pattern of Net Cash Flow in the Discount rate 12% and 18%

5. Discussion

Based on comprehensive data analysis and field observations, the financial metrics of Net Present Value (NPV), Internal Rate of Return (IRR) and Benefit and Cost Ratio (BCR) affirm the viability and profitability of Teak plantation establishments in the Oak-twin Township. The region's climate is highly suitably for Teak growth, making it an attractive investment opportunity.

Table 3 presents NPV, IRR and BCR values for a one-acre Teak plantation with a 40-year rotation at two discount rates of 12 % and 18%. According to the economic principle, the results indicate that NPV values Teak plantation are positive, indicating favourable financial outcomes, the IRR 19% means very high return for investment and the IRR exceeds the cost of capital 12% to 18%, further supporting the feasibility of the investment. Additionally, Benefit and Cost ratio 6.46 which is greater than one, specify that the benefits outweigh the costs. Notably the returns are more substantial at the lower discount rate of 12% compared to the higher rate of 18%.

Achieving these financial outcomes requires favourable conditions of site quality, sustainable conservation practices, and effective maintenance. With proper management, Teak plantations can be grown, maintained, and harvested to maximize financial efficiency. This venture benefits not only the government and private sectors but also provides income generation opportunities for employees and Taung-ya farmers.

From the perspective of the thinning schedule of the plantation, the benefit or inflow amount at the third thinning is greater than the final yield, indicating that the thinning schedule needs to be considered for economic return. However, from a forester's point of view, forest cover is necessary to reflect on environmental sustainability. It will be useful for driving to private plantation instruction for upcoming time.

Achieving these financial outcomes requires favourable conditions of site quality, sustainable conservation practices, and effective maintenance. With proper management, Teak plantations can be grown, maintained, and harvested to maximize financial efficiency. This venture benefits not only for the government but also for the private sector who is interested in forest planation investment.

Yield and market price are mostly affected by the economic return of forest plantations. If a 20% of low production and low market price is considered for sensitivity analysis, teak plantations are the best investment for environmental sustainability and economic growth, as shown below.

Description	Discount rate 12 %		Discount rate 18 %	
	NPV(MMK)	BCR	NPV(MMK)	BCR
Low(20%) yield	5,686,630	8.96	1,090,250	2.62
Low(20%) Price	5,686,641	8.96	1,090,256	2.62
Low (20%) yield and Price	4,406,461	7.17	737,278	2.09

This study offers valuable insights for forest plantation management, assessing the government in their Teak-growing initiatives. The financial data generated can also guide private investors in making informed decisions about sustainable forest plantation management on their woodlands, thereby stimulating Teak plantations establishment.

Therefore, the financial analysis strongly supports the economic feasibility and profitability of Teak plantation ventures in the Oak-twin Township. The study provides essential information for government agencies and private investors, facilitating sustainable forest plantation practices and contributing to the growth of Teak plantations.

6. Conclusion

The cost-benefit analysis of Commercial Teak plantations has provided valuable insights into the financial aspects of the program. The findings demonstrate promising economic returns along with a strong demand for Teak, favorable prices, and export potential, with potential revenue generation and profitability. However, it is important to be addressed to ensure sustained economic benefits.

The assessment of the financial performance of Commercial Teak plantations has highlighted the importance of responsible and sustainable forestry practices. Measures such as genetic seed selection for tree growth, site quality and pest management for survival percentage are essential to ensure the long-term productivity and environmental sustainability of Teak plantations. The findings underscore the need for continuous monitoring, evaluation, and adaptive management to optimize financial performance and minimize negative environmental

impacts. In fact, the economic potential would be better by launching saw mill industry, relatively than basically trading raw timber from the forest plantation.

In conclusion, this study provides a comprehensive analysis of financial performance and management strategies of Commercial Teak plantations under the Myanmar Reforestation and Rehabilitation Programme in Oak-twin Township of Bago Yoma. The findings and recommendations contribute to the development of environmental sustainability, and improved livelihoods for local communities. The successful implementation of these recommendations will require the active involvement of collaboration of all stakeholders, creating a pathway towards a more inclusive, prosperous and sustainable future for Commercial Teak plantations in Myanmar.

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