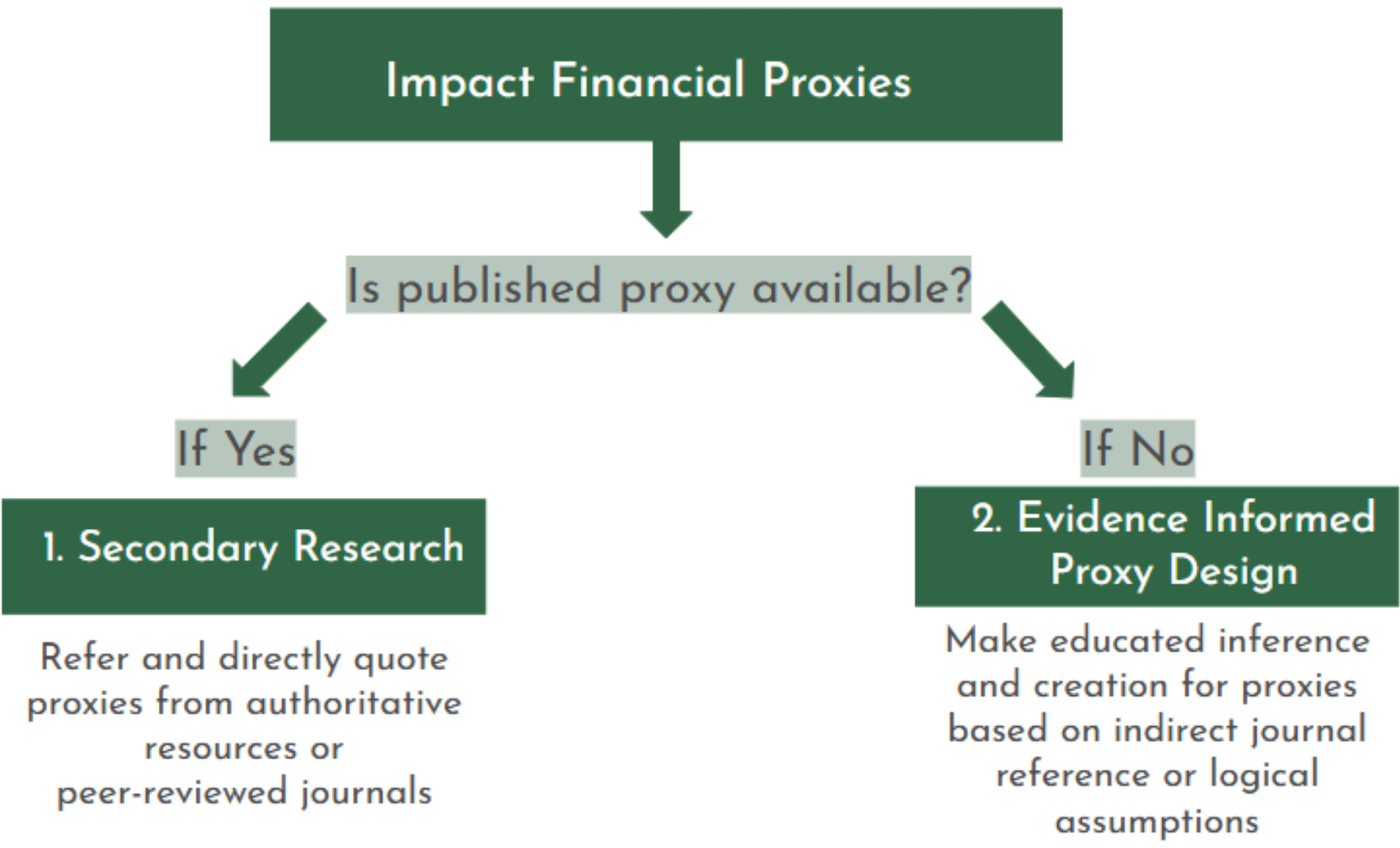


Literature Review

The impact investing market is evolving from qualitative ESG screening toward rigorous, quantitative outcome measurement driven by institutional capital demanding strict accountability (Islam, 2021; ILPA, 2026). To navigate these demands and address complex Sustainable Development Goal (SDG) targets, stakeholders rely on the Theory of Change (ToC) to establish the rigid causal links connecting capital inputs to long-term societal impacts (Maniatakou et al., 2024; Verrinder et al., 2018; Brown, 2025). Because the mathematical tools required to price these outcomes remain highly subjective and universally standardized financial proxies are often missing, the ToC & Logic Chain Model provide the vital structural integrity required to responsibly apply inferred values (Basset, 2023; Warren et al., 2024). Consequently, calculating a precise "impact per dollar" is heavily context-dependent; however, missing market data makes it an academically accepted necessity to infer or explicitly design financial proxies based on documented assumptions (Crane et al., 2025; Watson & Whitley, 2016). Ultimately, combining the rigid causal mapping of the ToC & Logic Chain Model with inferred proxy modeling establishes the necessary methodological foundation for holistic financial impact models, ensuring accountability despite inherent valuation complexities (Basset, 2023).

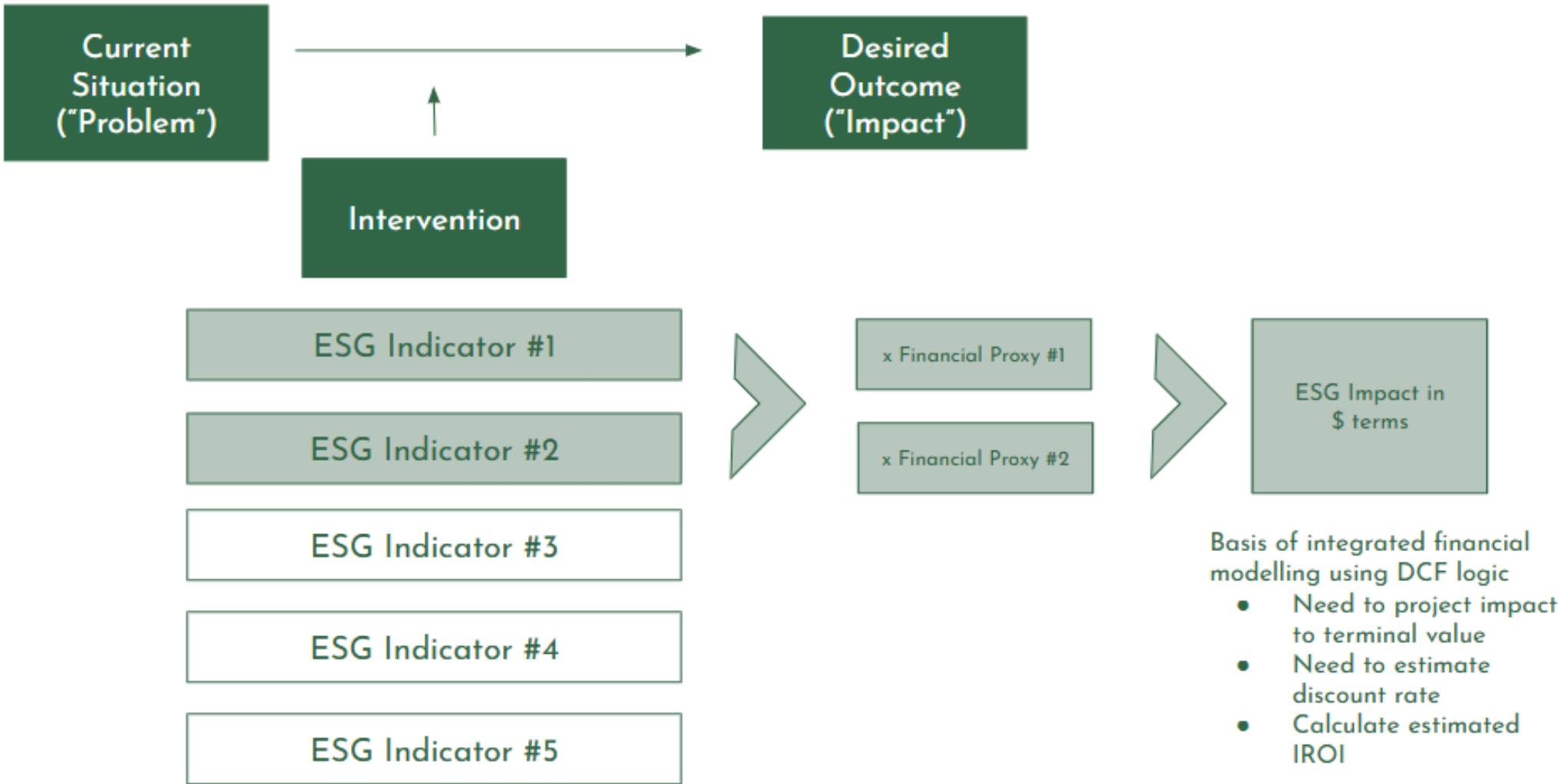
Methodology



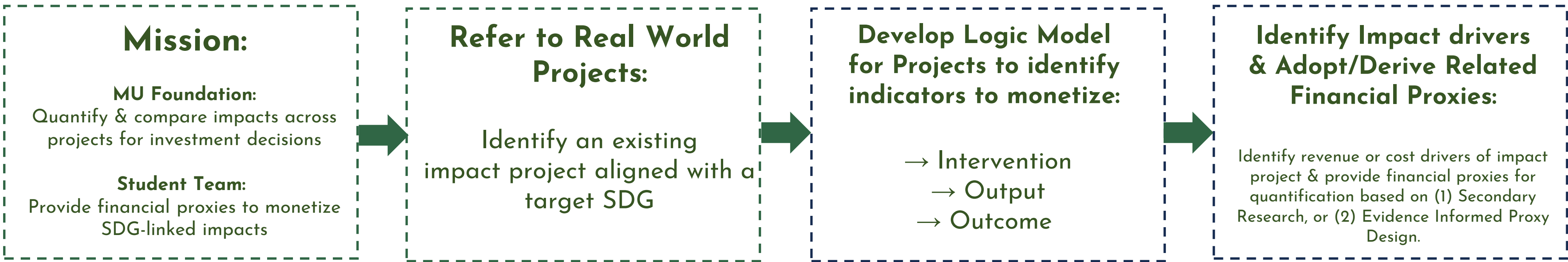
Research Objective

- **Problem:** ESG-linked Impact Return on Investment (IROI) methodology is not yet standardized in the impact investing industry.
- **Objective:** To research and document **ESG-linked financial proxies** based on actual impact projects led by impact investors (e.g., DFIs, foundation, PE firms), so MU Foundation can compare impact-per-dollar across similar or various SDG-focused projects.
- **Scope:** Identify financial proxies grounded in real impact investment cases and academic literature applicable to MU Foundation.

Turning Financial Proxies Into IROI



Thought Process



Case Studies

Project Reference: Sanergy/Fresh Life Project in Nairobi, Kenya

- **Investment Amount & Type:** USD \$38 Million (Blended Finance)
- **Focal Issue:** Sanitation
- **Target Community:** Schools & communities
- **Intervention:** Building toilet and other sanitation facilities
- **Key Result:** Improve sanitation services



Financial Proxy Example:

- **Outcome reported** → Reduction in open defecation rate (%)
- **Financial Proxy** = (Estimated reduction in cholera/typhoid incidence directly linked to septic containment × Average public healthcare cost per treatment)

Project Reference: From a Waste Dumpsite into a Food Basket in Malawi

- **Investment Amount & Type:** Undisclosed amount (100% grant)
- **Focal Issue:** Improve waste systems
- **Target Community:** Bembeke market area and communities in Dedza district
- **Intervention:** Waste segregation training and local fertilizer production
- **Key Result:** Most informal dumpsites cleared



Financial Proxy Example:

- **Outcome reported** → Reduced environmental damage from waste
- **Financial Proxy** = (Reduction in Municipal Solid Waste) × (Methane emitted/ton of waste) × (environmental price/ton of methane)

Project Reference: Investment on Africa Jobs Network in Ethiopia and Kenya

- **Investment Amount & Type:** USD \$1.2 Million (Equity Investment)
- **Focal Issue:** Employment (direct to the firm, indirectly to communities)
- **Target Community:** Local village residents
- **Intervention:** Investment in building regional online recruitment platform
- **Key Result:** Increased direct project and promotion of fair labor market



Financial Proxy Example:

- **Outcome generated** → Economic impact of gender diverse workforce
- **Financial Proxy** = [Estimated cost of training new employees] × [Average number of people in the workforce] × [Turnover Rate × (1-5.9%*)]

*gender diverse companies have est. 5.9% reduction in turnover

Project Reference: ADB (2020), Agricultural Value Chain Project, Cambodia.

- **Focal Issue:** Low agricultural productivity and food insecurity in rural Cambodia. Smallholderfarmers lack market access and processing capacity.
- **Target Community:** Fishermen, farmers, local residents
- **Intervention:** Investments in Redcliffe Labs and omni-channel diagnostics
- **Key Result:** Increase local food sourcing



Financial Proxy Example:

- **Outcome reported** → Increase in DALY averted
- **Financial Proxy** = GDP per capita × healthy life-years gained; net economic gain per customer ≈ \$180 (10× individual ROI)

Key Takeaways

- Theory of Change and Logic Chain framework should be developed at pre-investment stage to identify impact drivers, select appropriate indicators, and support consistent ESG-linked IROI model.
- Financial proxies enable diverse SDG outcomes to be translated into a common monetary language, but proxy selection remains highly context-dependent and requires transparent assumptions and stakeholder validation.
- The lack of industry-wide standardization in ESG impact valuation presents both a challenge and an opportunity: investing in financial proxy development can improve impact-per-dollar comparisons and generate broader benefits for the impact investing ecosystem.

NUS Capstone Project
MSC in Sustainable and Green Finance

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