Thesis green index

PROJECT SUMMARY

Project Title:

Master Thesis , Green Performance Index (Pharma)

Context:

The thesis addresses the absence of a standardized framework to measure and compare environmental sustainability across pharmaceutical supply chains. While sustainability has become a strategic priority in the industry, corporate environmental disclosures remain fragmented and inconsistent. This study develops a composite index that enables benchmarking of sustainability performance in a transparent and comparable way.

Objectives:

- Design a quantitative model to measure environmental performance in the pharmaceutical sector.
- Integrate Stakeholder Theory and the Resource-Based View (RBV) to capture both external pressures and internal capabilities.
- Construct a standardized index based on four key environmental pillars: climate, water, energy, and waste.

Methodology & Tasks:

- Adopted a quantitative, indicator-based approach following OECD (2008) and GRI/ISSB/CDP standards.
- Collected and harmonized data from public sustainability disclosures of major pharmaceutical companies.
- Applied a pillar-weighting scheme prioritizing climate (50%), water (20%), energy (15%), and waste (15%).
- Performed statistical validation using correlation and principal component analyses (PCA).

Key Results:

- Development of the first sector-specific Composite Environmental Sustainability Index (CESI) for the pharmaceutical industry.
- Provided a framework for companies, investors, and regulators to benchmark and monitor environmental performance.
- Contributed to bridging the gap between sustainability theory and its quantitative application in business strategy.

Skills Developed:

Quantitative research • Sustainability analytics • Index design • ESG reporting • Data harmonization • Application of Stakeholder Theory and RBV