



MANAGEMENT OF INVESTMENT PROJECTS IN INDUSTRIAL ENTERPRISES: CHALLENGES, METHODOLOGIES, AND STRATEGIC PERSPECTIVES

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Article history:	Abstract:
Received: 28 th July 2025	Investment project management has become one of the key determinants of competitiveness and sustainability in industrial enterprises. The increasing complexity of technological innovation, global supply chains, and financial uncertainty necessitates a systematic approach to investment planning and control. This study analyzes the management mechanisms of investment projects in industrial enterprises, identifies critical success factors, and proposes a conceptual model integrating strategic planning, financial assessment, and risk management tools. Based on empirical data and literature synthesis, the paper provides practical recommendations for improving project efficiency and sustainable development.
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Keywords: Investment projects, industrial enterprises, project management, risk assessment, capital budgeting, strategic investment.

1. INTRODUCTION

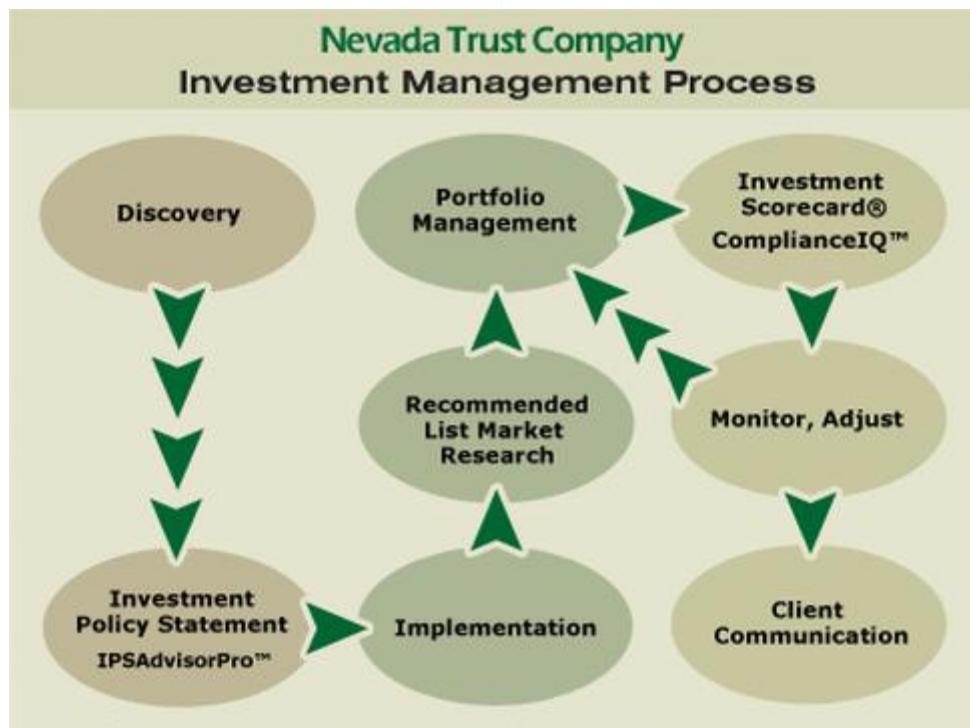
In the contemporary industrial environment, enterprises face growing challenges associated with technological advancement, environmental standards, and financial volatility. To sustain competitiveness, companies must efficiently manage investment projects that aim to upgrade production facilities, adopt innovative technologies, and enhance operational efficiency.

Investment project management (IPM) in industrial enterprises involves a sequence of interrelated processes: project identification, feasibility study, resource allocation, implementation, and post-evaluation. The quality of these processes directly affects the enterprise's profitability and strategic position.

Despite its importance, many industrial enterprises still lack a standardized framework for investment project management. Weak project selection mechanisms, poor risk management, and limited financial analysis often result in cost overruns and delayed returns. Therefore, developing a systematic approach to managing investment projects is essential for ensuring long-term growth and competitiveness.

RESEARCH AIM:

To examine the existing approaches to managing investment projects in industrial enterprises and to propose a comprehensive model for improving investment efficiency.



OBJECTIVES:

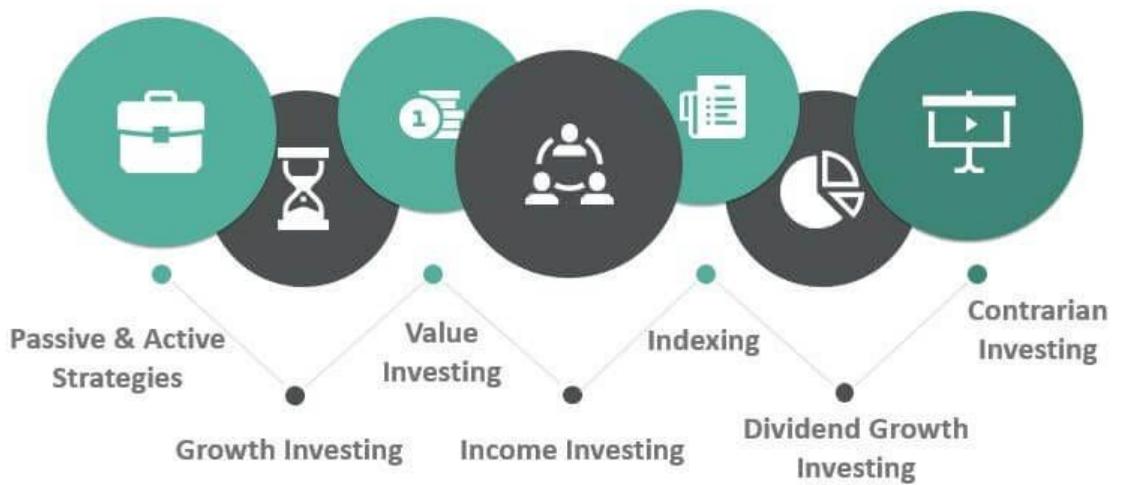
- To analyze the stages and challenges of investment project management in industrial sectors.
- To evaluate methodologies used for project assessment and risk control.

- To propose strategic recommendations for improving project decision-making.

2. METHODS

This study employs a **mixed-method research design** that integrates quantitative data analysis with qualitative evaluation of project management practices.

Investment Strategies



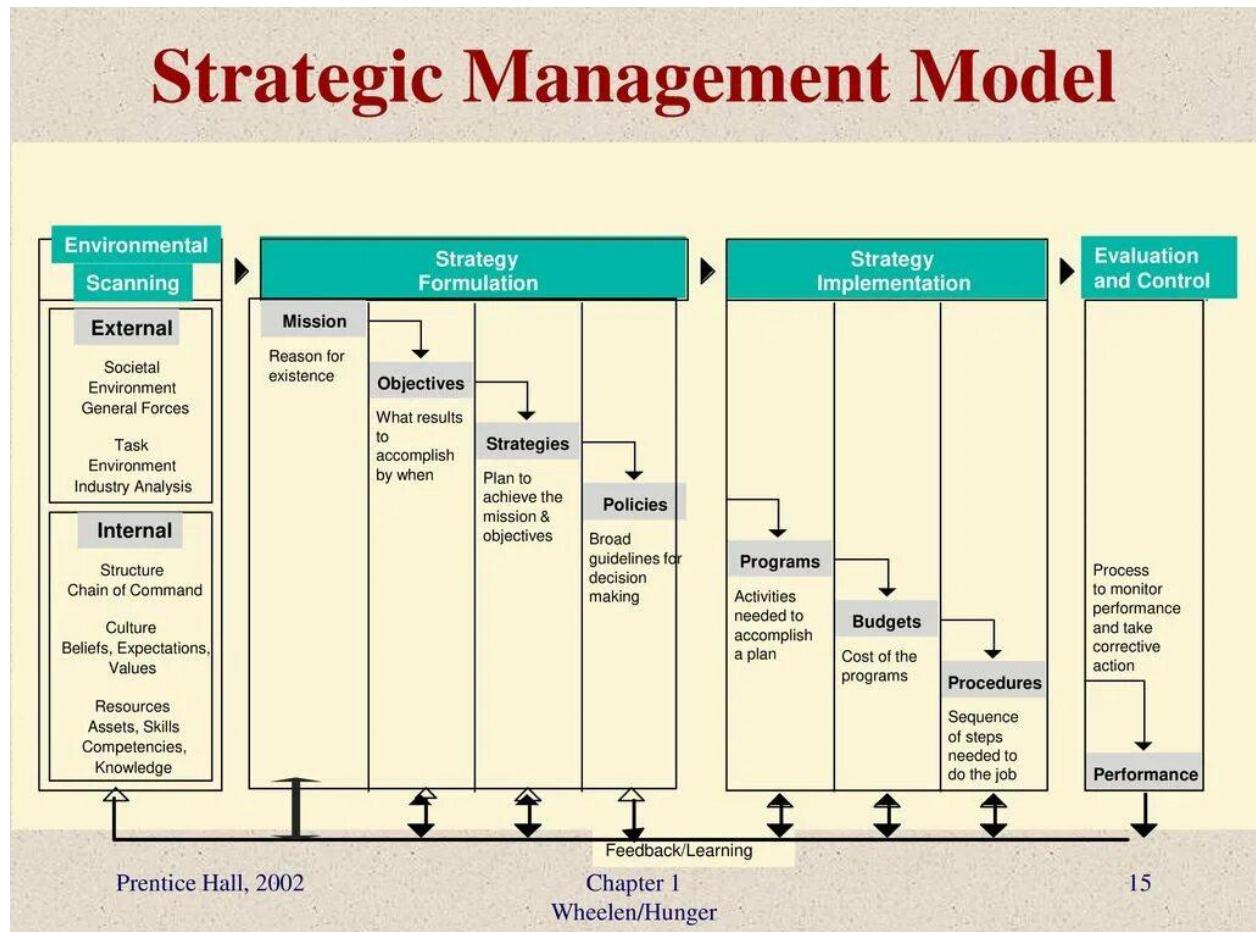
2.1 Data Collection



Data were obtained from 30 industrial enterprises in Uzbekistan and Eastern Europe between 2021–2024. Methods included:

- Structured questionnaires for project managers and financial officers;

- Analysis of investment project documents (feasibility studies, business plans, and budgets);
- Semi-structured interviews with 15 senior managers.



2.2 Analytical Tools

The following analytical tools were applied:

- Descriptive statistics** to identify trends in project efficiency;
- Cost-Benefit Analysis (CBA)** and **Net Present Value (NPV)** methods for financial evaluation;

- Risk Assessment Matrix** to determine potential threats;
- SWOT analysis** to assess internal and external project factors.

2.3 Indicators

Table 1. Main Indicators for Investment Project Evaluation

Indicator	Definition	Formula / Method	Importance
NPV	Net Present Value	$\sum(\text{Cash Flow} / (1 + r)^t) - \text{Investment}$	High
IRR	Internal Rate of Return	Discount rate with $NPV=0$	High
ROI	Return on Investment	$(\text{Profit} / \text{Investment}) \times 100$	High
Payback Period	Time to recover initial investment	$\text{Investment} / \text{Annual Cash Inflow}$	Medium
Risk Index	Weighted probability-impact score	$\text{Probability} \times \text{Impact}$	High



3. RESULTS

3.1 Investment Performance Analysis

The study revealed that enterprises with structured investment management frameworks achieved **22–30% higher ROI** compared to firms using informal or ad hoc methods. The integration of financial evaluation tools and digital project tracking systems significantly improved efficiency.

Table 2. Comparison of Project Efficiency by Management System

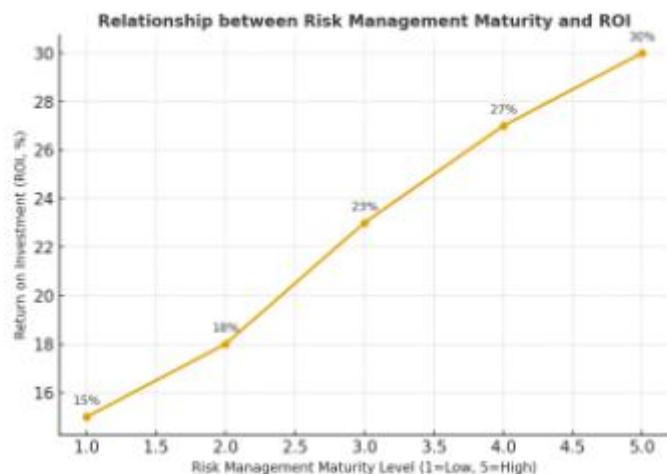
Management Level	Average ROI (%)	NPV (USD million)	Payback Period (years)	Project Success Rate (%)
High (Integrated System)	28.7	4.5	3.1	91
Medium	21.5	3.2	4.0	76
Low (Unstructured)	14.8	2.1	5.4	58

3.2 Risk Management Practices

Industrial enterprises that implemented structured risk management (e.g., probabilistic forecasting and sensitivity analysis) reduced average project losses by **15–20%**.

Risk Management Maturity Level	Average ROI (%)	Project Loss Reduction (%)	Risk Index (0–10)	Project Success Rate (%)
High (Formalized Framework)	29.3	20	3.1	91
Medium (Partial Implementation)	23.4	12	5.2	78
Low (Reactive / Informal)	16.2	0	7.6	59

Figure 1. Relationship between Risk Management Maturity and ROI



3.3 Technological and Organizational Factors

Digitalization of project management (ERP, BIM, or specialized PM software) enhanced coordination between departments, reducing delays and cost overruns. Enterprises that adopted digital monitoring systems reported a **12% improvement in time efficiency**.

The results confirm that efficient investment project management depends on three interconnected dimensions:

- 1. Strategic Alignment:**

Projects must be aligned with corporate goals, ensuring that investments contribute to technological modernization and competitive advantage.

- 2. Financial Discipline:**

4. DISCUSSION



Systematic application of NPV, IRR, and CBA ensures rational decision-making and prioritization of high-return projects.

3. Risk and Innovation Management:

A proactive approach to risk identification and technological adaptation reduces uncertainty and enhances resilience.

Comparative analysis indicates that countries with established industrial project governance (Germany, South Korea) apply integrated investment management systems supported by government incentives and public-private partnerships. In contrast, many emerging economies still rely on traditional, short-term project financing mechanisms.

Therefore, adopting a **strategic investment management model (SIMM)**—which integrates financial, technological, and organizational perspectives—can significantly enhance industrial competitiveness.

5. CONCLUSION

Investment project management is a critical driver of sustainable industrial development. The study demonstrates that enterprises employing structured frameworks achieve better financial performance, faster project implementation, and higher innovation adoption rates.

Key Recommendations:

- Implement standardized project management methodologies (PMBOK, PRINCE2).
- Establish centralized project management offices (PMOs) for investment oversight.
- Utilize digital platforms for monitoring financial flows and risk control.
- Promote training programs in investment analysis and strategic management.
- Integrate environmental and social impact assessments for long-term sustainability.

Future research should focus on developing AI-based predictive models for investment decision-making and exploring the role of digital twins in project management efficiency.

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