Aalto University
School of Business

Capital budgeting (22E12000)

Strategic analysis

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Strategic analysis

Why should we analyse investments from a strategic perspective?

What analytic methods can we use?

What challenges relate to their use?

Do companies use them in practice?

Strategic analysis – Why?

Investments are critical to the development of competitive advantage

Available resources (capital, expertise) are limited

Financial analysis often fail to capture strategic implications

- Risk of loosing growth opportunities
- Risk of neglecting competitive moves
- Risk of neglecting negative implications of investment proposals (e.g., weakening position in the value chain)

Sources of competitive advantage

Economies of scale

- Cost advantages brought by volume
- Related to e.g., sourcing, production, marketing, R&D

Economies of scope

- Cost advantages brought by variety, not volume
- Related to e.g., common technology, set of production facilities, distribution network, brand

How can investments contribute to competitive advantage?

Investments related to cost advantages	Investments related to differentiation advantages
• E.g., investments in efficient production technology, access to low-cost raw materials, labor and distribution channels	• E.g., investments in R&D, quality, brand, distribution, service, developing more complete packages/solutions

The importance of non-financial factors related to strategic investment projects
(survey among largest UK companies)

	% of respondents selecting each category of importance					Mean Score (out of 5)
	(1) Not Important	(2) Below Average Importance	(3) Average Importance	(4) Important	(5) Very Important	
Consistency with corporate strategy	0.0%	0.0%	7.2%	41.0%	51.8%	4.4458
Improved company image	7.2%	36.1%	38.6%	14.5%	3.6%	2.7108
Requirements of customers	4.8%	1.2%	12.1%	50.6%	31.3%	4.0241
Keeping up with competition	6.0%	3.6%	22.9%	51.8%	15.7%	3.6747
Obtaining greater manufacturing flexibility	9.6%	8.4%	26.5%	49.4%	6.1%	3.3373
The ability to expand inthe future	1.2%	12.1%	30.1%	49.4%	7.2%	3.4940
Quality and reliability of outputs	3.6%	2.4%	28.9%	50.6%	14.5%	3.6988
Reduced lead-times	10.8%	12.1%	47.0%	21.7%	8.4%	3.0482
Reduced inventory levels	12.0%	16.9%	41.0%	25.3%	4.8%	2.9398
Experience with new technology	13.3%	27.7%	36.1%	21.7%	1.2%	2.6988

Source: Alkaraan and Northcott (2006). British Accounting Review

Strategic analysis – How?

- Benchmarking
- Company specific strategic criterion/BSC
- Investment appraisal checklist/matrix
- Strategic portfolio techniques
- Strategic cost management analysis
- Technology road mapping
- Real options
- Qualitative scenario analysis
- Case-based decision analysis, analogies
- Information aggregation tools, e.g. web-based questionnaires

Company Specific Strategic Criteria/Examples

- Growth
- Market leadership
- Technological leadership
- Brand awareness
- Quality
- Efficiency
- Utilization of resources

Investment Appraisal Checklists
(Bromwich and Bhimani, 1991)

Benefits	Items expressed directly in monetary units	Items converted into monetary units	Scored items not expressed in monetary units
Improved product quality		X	
Lower cost	X		
Longer produce use from higher reliability			
Better supply response			
Products better tailored to customer requirements			
Complementarity with other products			
Better service and less product failures			
New skills allow new products to be offered			X

Monetising Strategic Rationales of M&A in Investment Appraisal Process; Six Large Finnish Companies (Kallioniemi, 2023)

- Strategic rationales are typically synergies in M&A. Cost synergies easier to monetise, revenue synergies often more problematic
- Reasons for non-monetising: long-term synergies or relevant data not available, for example
- Intuitive expertise plays a significant role in the production and quantification of rationales into financial form (in line with Grant & Nilsson, 2020)
- Intuition was perceived as superior in certain monetising tasks compared to analytical thinking, but intuitive estimates were often found to include a significant amount of uncertainty
- Findings suggest that the use of intuition requires an extensive amount of relevant experience
- The business managers may have selfish interests in M&A cases which can lead to unrealistic assumptions, for example
- See Appendix for company-wise information

Strategic Portfolio Techniques: Boston Consulting Group Matrix

Annual market growth rate		Low	High
	High	QUESTION MARK	STAR
	Low	DOG	CASH COW

Relative competitive position/market share

Strategic Portfolio Techniques: Directional Policy Matrix

Company's Competitive Capabilities (e.g. market position, production capability, R&D)

Business Sector Prospects (potential for growth and profitability)

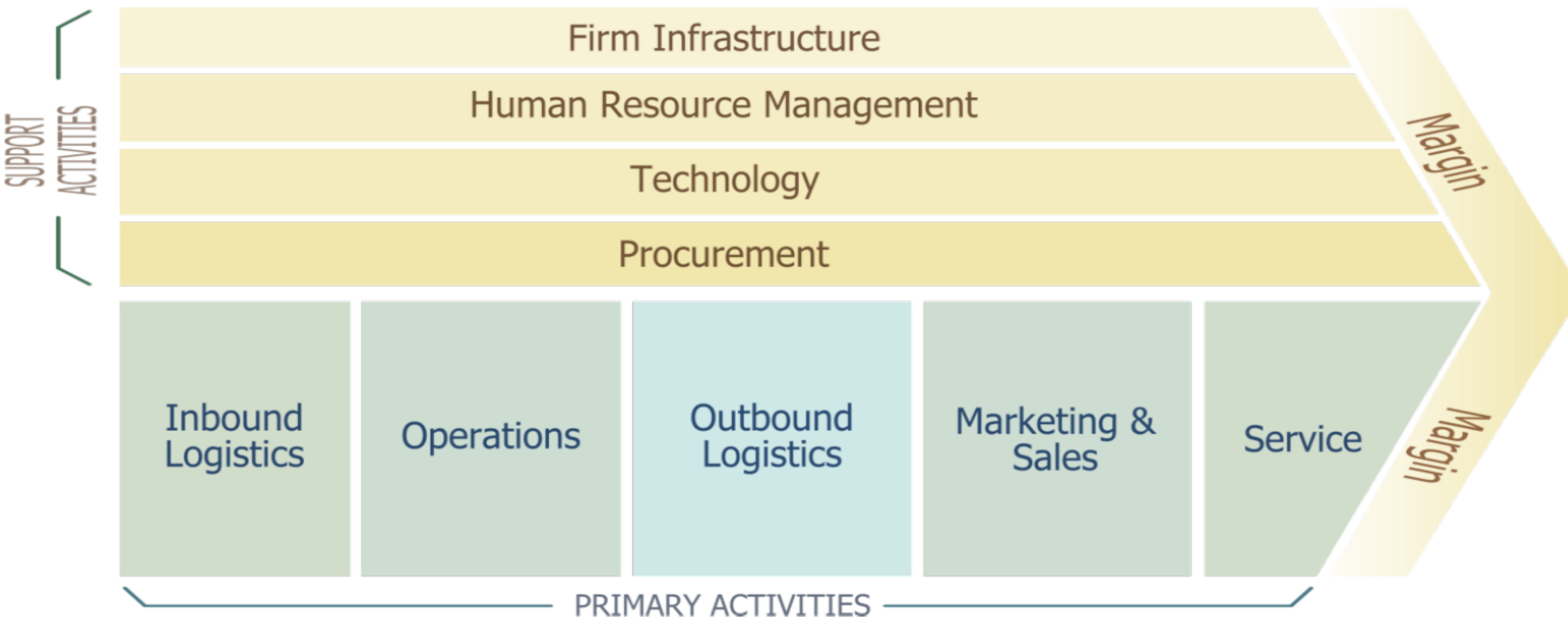
	Unattractive	Average	Attractive
Strong	Cash generation	Growth	Leader
Average	Phased withdrawal	Custodial	Try harder
Weak	Disinvest	Phased withdrawal	Double or quit

Strategic Cost Management (SCM)

- Competitive advantage analysis
- Value chain analysis
- Cost driver analysis
  - Structural cost drivers: determined by the company's strategic choices (e.g., scope of operations (vertical integration), product-line complexity)
  - Executional cost drivers: depend on operational efficiency (e.g., production layout)

Shank (1996). Management Accounting Research

Strategic Cost Management (SCM)/ Value chain analysis



Michael Porter's Value chain analysis, 1985

Qualitative scenario analysis

- Like scenario analysis, but without exact (or any) quantification
- Involves developing scenarios of how the present may evolve into the future and identifying the likely consequences of the decision under consideration

Courtney et al. (2013). HBR.

Case-based decision analysis

- Involves a systematic aggregation and synthesizating of information from analogous past experiences and examples
- Analogies may be driven from the company’s own experience or from, for example, industries having gone through similar development

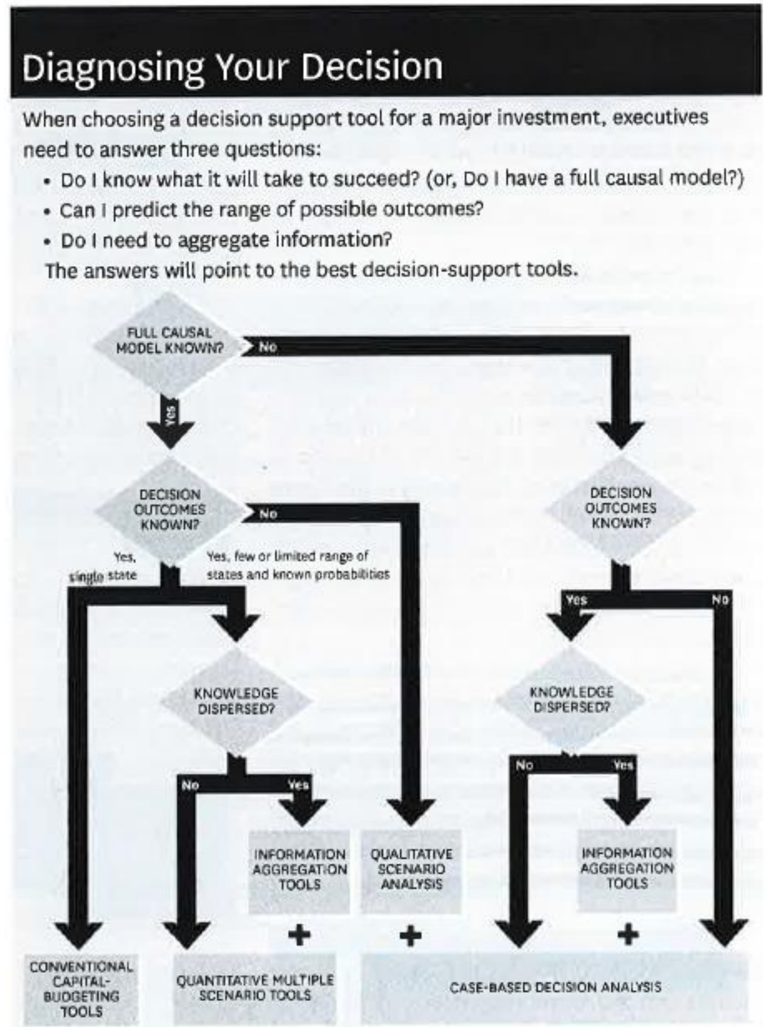
Courtney et al. (2013). HBR.

Information aggregation tools

- Tools used to collect information from diverse sources e.g., by round tables, web-based questionnaires etc.
- May involve applying
  - “incentivized estimates” - individuals with estimates closest to the actual number getting a payoff
  - “similarity based forecasting” – individuals asked to rate how similar a particular decision or asset is to past decisions or assets

Courtney et al. (2013). HBR.

Which decision-making tools to use depends on the level of uncertainty and ambiguity in the decision-making



Courtney et al. (2013). HBR.

What challenges relate to strategic analysis?

Relevant information may not be readily available

Analysis often subjective by nature

Various analyses may favor different investment alternatives

Cognitive, organizational and cultural challenges

Do companies use formal strategic analysis methods in practice?

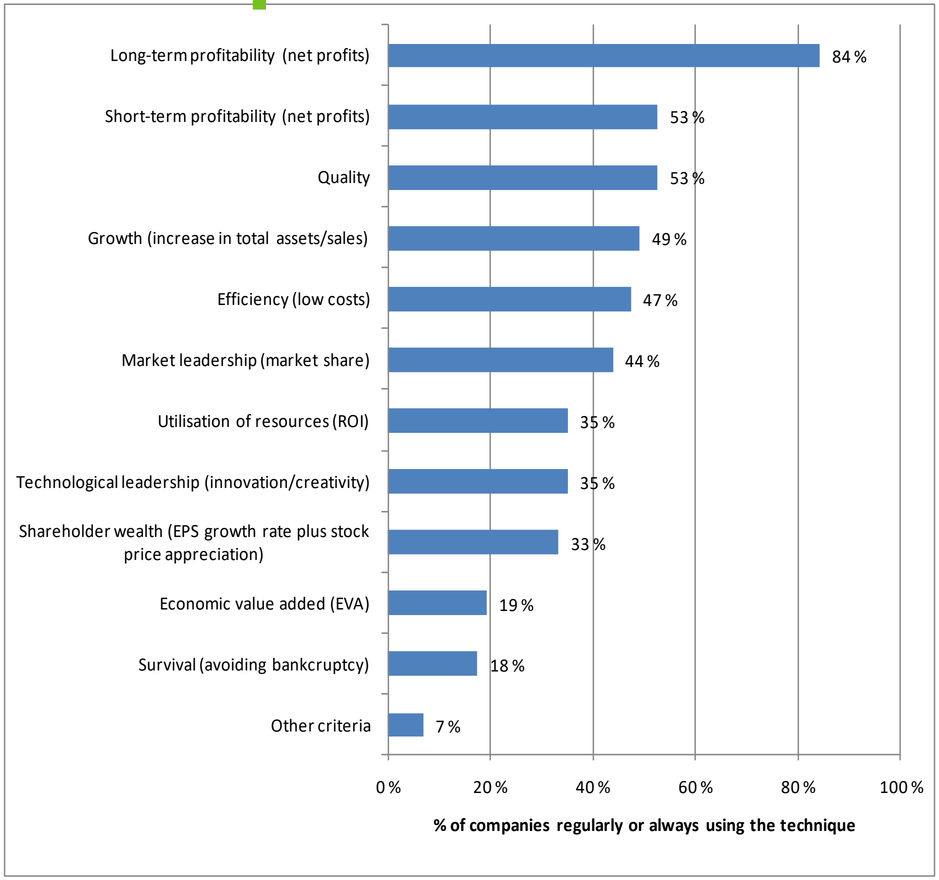
- Benchmarking widely used
- Formal text-book analysis techniques, such as portfolio techniques, not widely used
- Cross-cultural differences in the extent to which strategic considerations emphasized
- Performance associated with devoting attention to competitive advantage and value chain analysis (Carr and Tomkins, 1996)

Perceived importance of strategic investment analysis approaches (survey among UK companies)

Strategic Investment Analysis Approach	(1) Not Important	(2) Below Average Importance	(3) Average Importance	(4) Important	(5) Very Important	Mean Score (out of 5)
Coordination with investment decisions of other firms (i.e. using technology roadmaps)	54.2%	25.3%	13.3%	3.6%	3.6%	1.77
Real options approach	56.6%	22.9%	16.9%	3.6%	-	1.67
Balanced scorecard	12.0%	49.4%	20.5%	13.3%	4.8%	2.49
Benchmarking	4.8%	7.2%	49.4%	27.7%	10.8%	3.32
Value chain analysis	9.6%	48.2%	22.9%	15.7%	3.6%	2.55

Source: Alkaraan and Northcott (2006). British Accounting Review

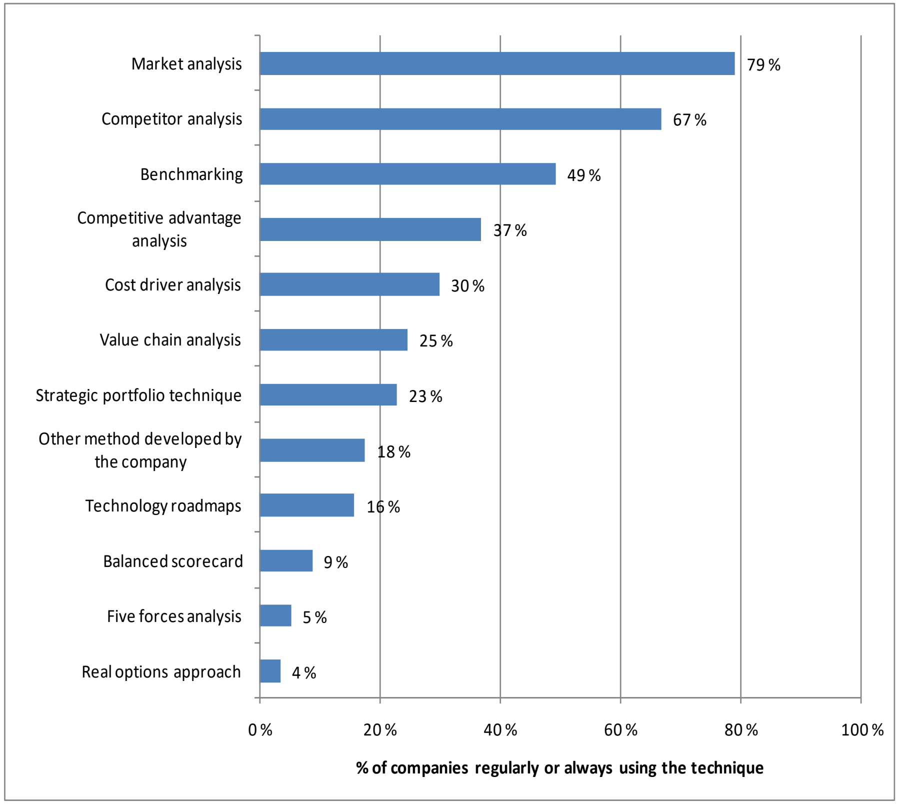
Use of strategic criteria among companies listed in Nordic countries



- Nordic companies use on average 4.6 criteria regularly or always
- Long-term profitability the most frequently applied criterion
- Short-term profitability, quality, growth, efficiency and market leadership also widely used
- EVA and criterion related to survival rarely used

Source: Kolehmainen et al. (2010) Internet survey on SID making practices in companies listed in Nordic countries

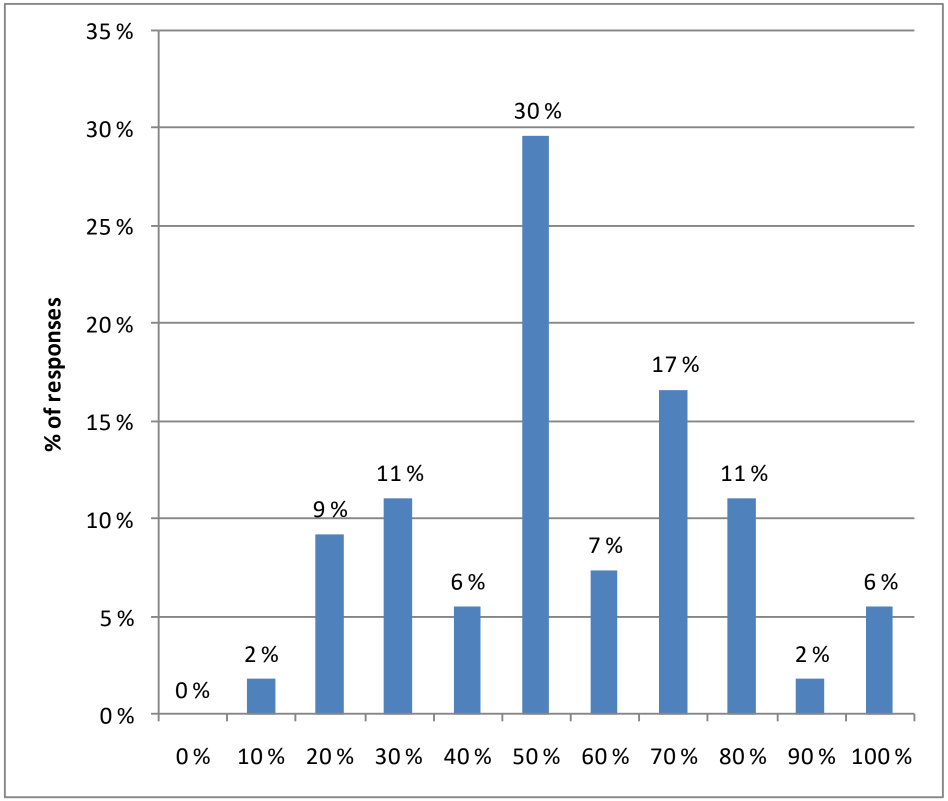
Strategic Analysis Techniques



Source: Kolehmainen et al. (2010) Internet survey on SID making practices in companies listed in Nordic countries, unpublished

- Nordic companies use on average 3.6 strategic analysis techniques regularly or always when evaluating investment projects
- Market analysis, competitor analysis and benchmarking the most frequently utilized techniques
- Real options, five forces analysis and balanced scorecard are used only rarely for analyzing investment projects

Emphasis on Financial versus Strategic Analysis in the Evaluation

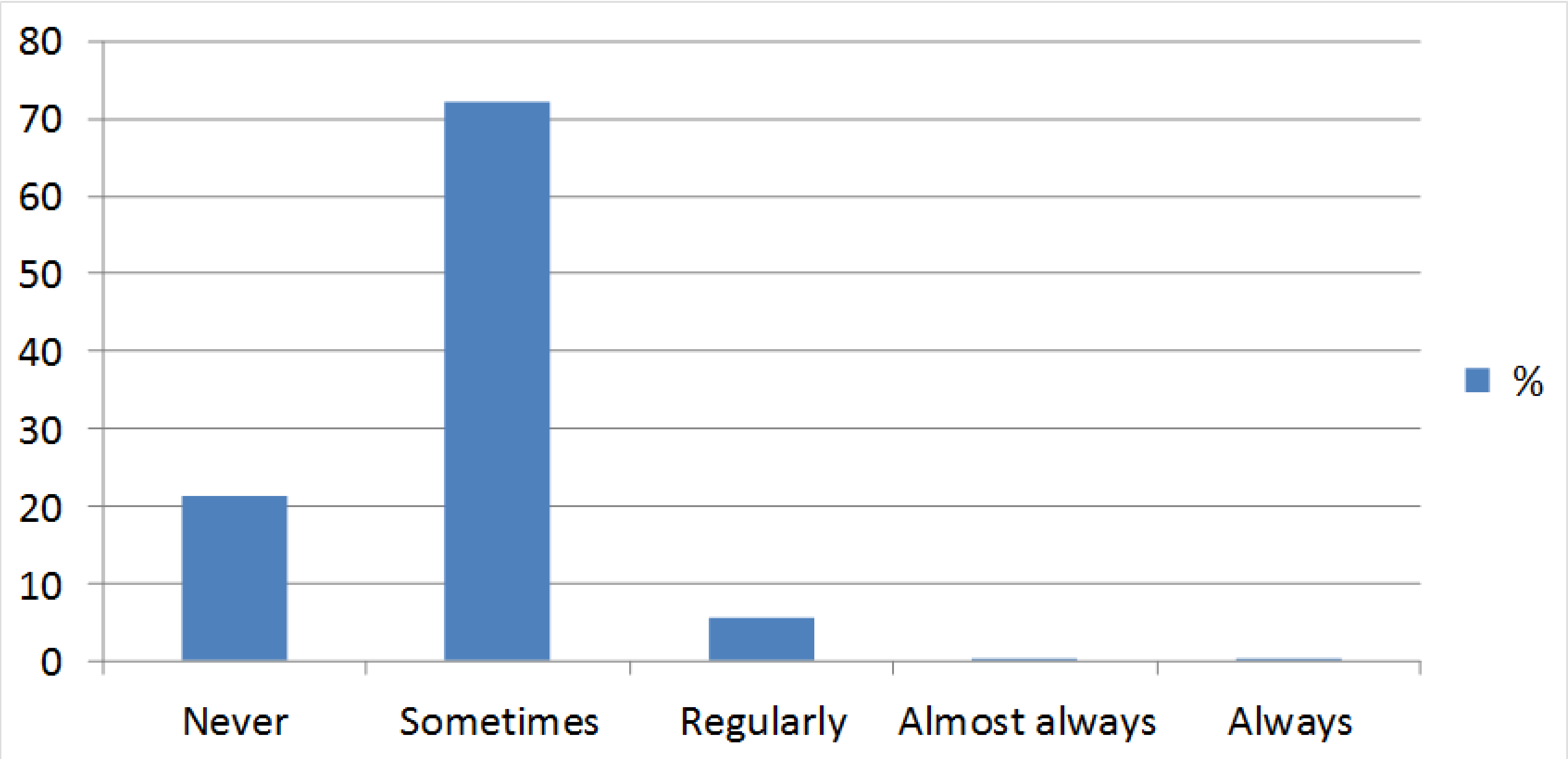


- Wide variety in the emphasis on strategic versus financial analysis in the evaluation
- 30% of companies put equal weight on financial and strategic analysis
- 43% of companies put more weight on financial analysis
- 6% of companies ignore strategic analysis

Source: Kolehmainen et al. (2010) Internet survey on SID making practices in companies listed in Nordic countries, unpublished

”We accept an SMI proposal whose expected financial return falls below the minimum financial requirements”

Study among 150 largest Finnish manufacturing companies (J. Huikku, J. Karjalainen & T. Seppälä; The British Accounting Review , 2018)



When accepted (sometimes or more often; financial return falls below the minimum financial requirements)

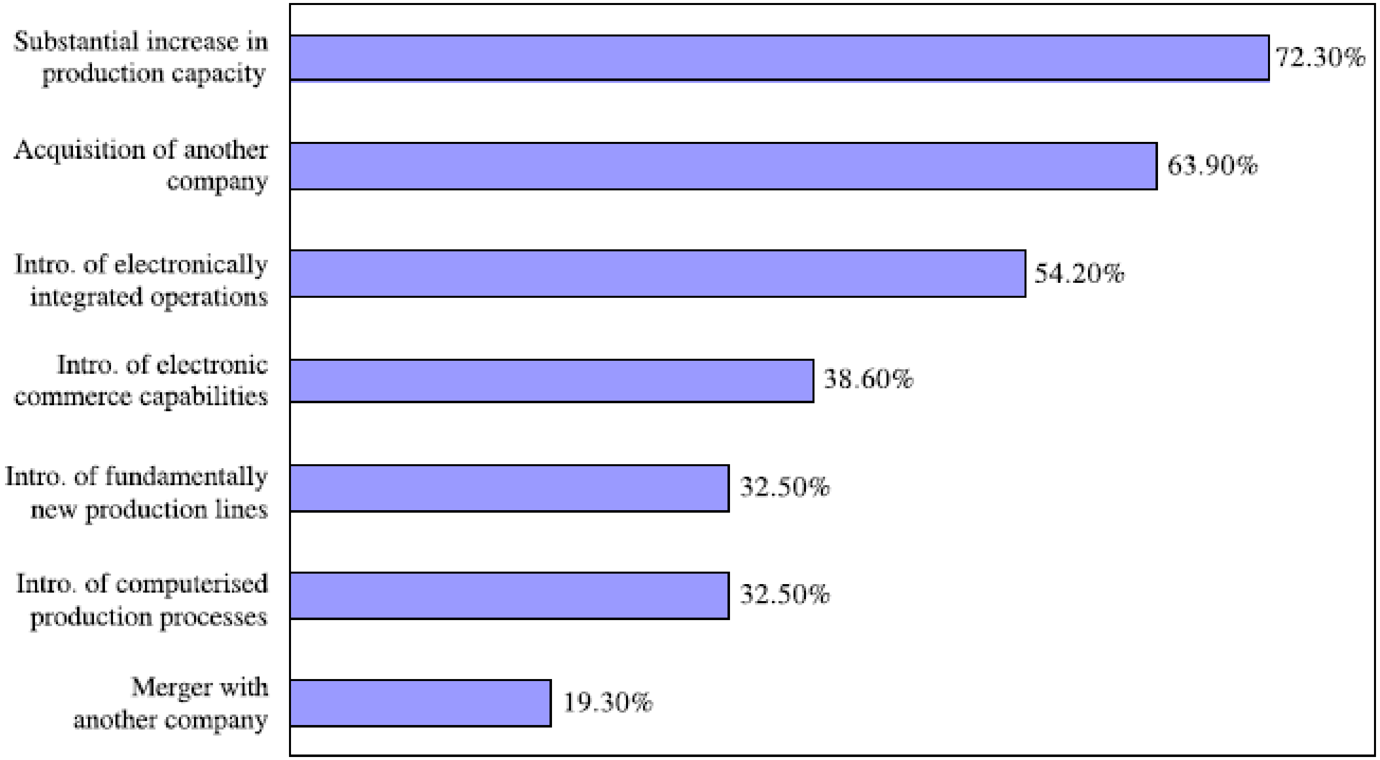
- "Yes, if we want to enter a new market, e.g., India. During the coming nearest years the cash flows are not sufficient, but on a longer run… It is a strategic investment."
  - → Strategic investments with a great potential in the future
- "Often top management has a strong gut feeling what we should do. We can enter new product areas and take certain risks even though the calculations may appear lousy."
  - → New product areas; managerial intuition and judgment
- "If we require an ex-ante profitability calculation, the minimum financial requirements must be achieved. Nevertheless, sometimes we do not require calculations: e.g., for major replacement investments and environmental investments."
  - → Definition of "strategic" unclear and varies between the companies

Agents' context-specific conduct in making strategic investment decision (Huikku, Harris, Elmassri & Northcott, 2024, JAOC)

Active agency and strategic conduct analysis

	Case A – Food	Case B – Food	Case C – Medical supplies	Case D – Security products
Who gets involved in SIDM (internally)?	'In this project we did have a dedicated team that worked about 3 years on planning and analysis' — COO	'The BOD cannot approve projects without the [Investment] Forum's recommendation' — Investment Director	'The Financial Director has the major responsibility… he has a crucial role in such decisions' — CFO	'In addition to the Financial Director, employees are highly considered in making such a decision' — CEO
External stakeholder influences	'Raw material producers of this meat are major players … we conduct often colourful discussions with these producers. The Chairman of the Board is a meat producer too', 'then we have municipalities' – COO	'Customers have influenced our strategy' – CFO 'The actions of our competitors to invest in the same business have confirmed our understanding that there is demand for the new products' – Investment Director	'The government regulation related to health and safety are so important. Also, the degree of competitors' technological facilities is an important key driver' – Production Director	'The governance regulations, all the board consider this issue in making such a decision. Also, the government rules and regulations are considered' – Financial Director 'Considering the market conditions and the customers' demand, competitors have a dominant role in this decision' – CFO
Power positions	'The roles of CEO, CFO, COO and Divisional Director were dominant within the company to drive the investment planning and get the project proposal approved' – COO	'You have to persuade the CEO. He has close contacts with the chairman of the BOD' and 'the role of the BOD is dominant in these strategic issues. They set the strategy and give guidelines for the actions' – Investment Director	'For this type of project, my department always has the upper hand … we support it, the board approve it' – Production Director	'For this decision the CEO has the upper hand' – CFO 'I control the investment appraisal processes, but for specific projects some directors have power over my authoritative position and I have to listen to them' – CEO
Independent or irresistible causal forces	'The investment calculations looked very good. Nevertheless, the risk was enormous because this was one of the largest production facilities in Europe' – COO 'We did not have the option not to invest' – CFO	'In our case the brand plays a major role as a non-financial criterion' – Investment Director 'It has been clear that we want to grow in this business and in order to grow we have to invest, no choice' – CFO	'International customers in Gulf and European countries are the drivers for this decision, they put us under pressure to develop our products on a regular basis' – Production Director	'In this type of project customers and competitors are the key drivers to make a decision, in addition to other financial factors' – Financial Director

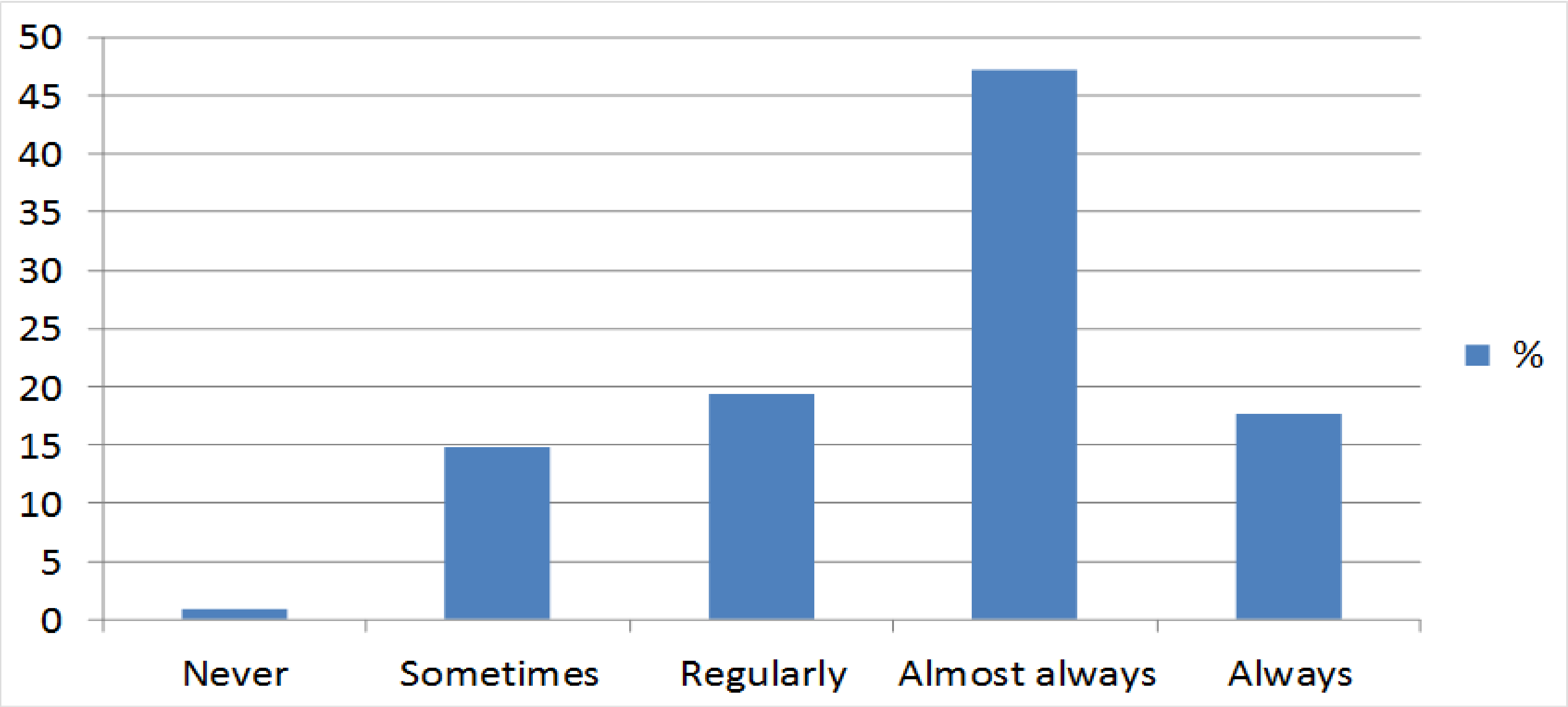
Appendix 1: Examples of strategic investments: Survey among largest UK manufacturing companies



Source: Alkaraan and Northcott (2006). British Accounting Review

Appendix 2: ”Initiatives on SMIs are derived from an explicit strategy”

Study among 150 largest Finnish manufacturing companies (J. Huikku, J. Karjalainen & T. Seppälä; The British Accounting Review , 2018)



Appendix 3: Technology Roadmapping

A framework for organizing and presenting information related to technology investments

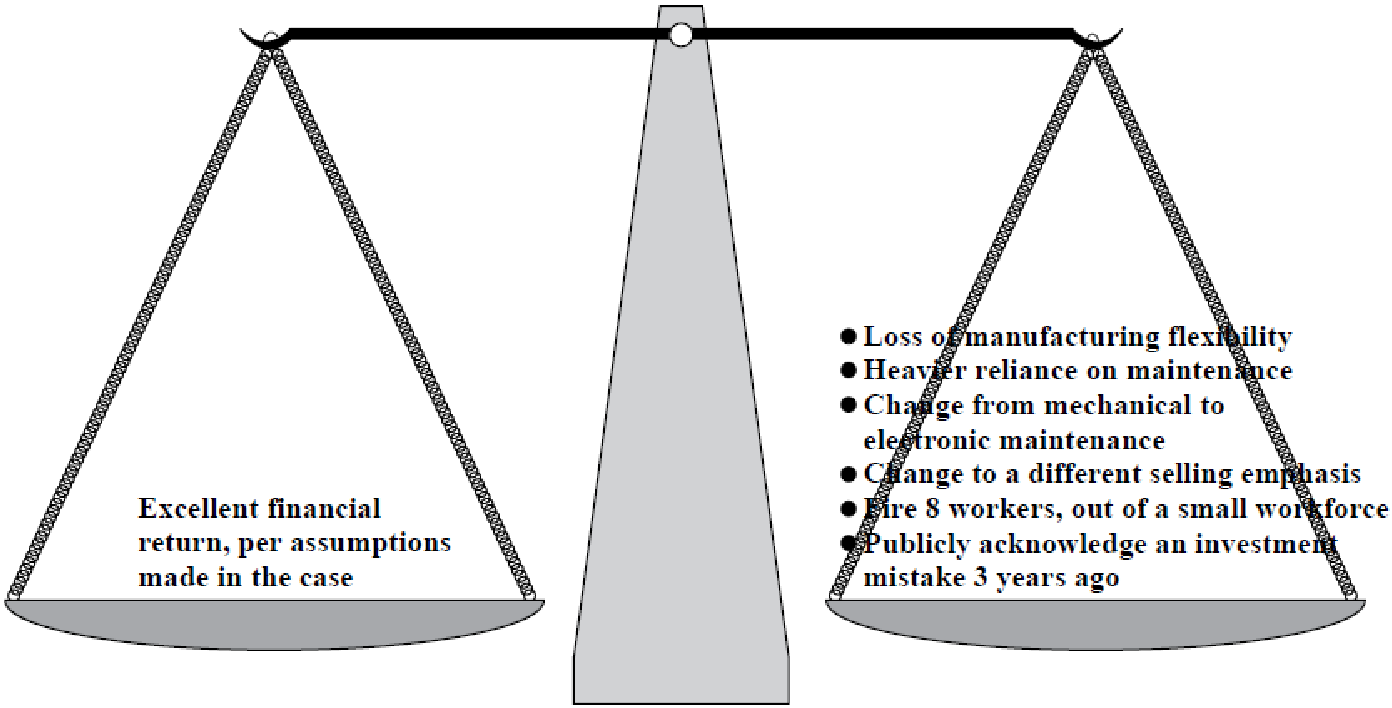
Involves projecting the needs of tomorrow's markets, and developing charts and graphs that **link** technology to business needs

Can be used to coordinate capital investment intra-company and inter-company (See Miller and O'Leary, 2005)

Appendix 4: Monetising Strategic Rationales of M&As in Investment Appraisal Process; Six Large Finnish Companies
(Kallioniemi, 2023)

	A	B	C	D	E	F
Reasons why M&A synergies may not be monetised	Revenue synergies and synergies realising in over a year are not often monetised	Revenue synergies and long-term synergies might not be monetised	Deals are complicated. Revenue synergies are uncertain and hard to quantify/monetise	Long-term (over 5 years) synergies are very speculative	Long-term (over 4 years) synergies. Business must be able to commit to realizing the monetised synergies	Not any certain reasons, usually synergies are monetised
Use of intuition in monetising synergy estimates	Can be used to monetising cost synergies	Can be used for monetising sales synergies	Generally not used	Might be used if necessary	Can be used for monetising sales synergies	Can be used for monetising sales synergies
Attitude toward using intuition	Hard data priority, but intuition necessary sometimes	Hard data should always be combined with intuition	Intuition useful in some tasks, but a lot of risks involved	Intuition necessary, but analytical thinking priority	Experienced managers can provide surprisingly accurate rough estimates	Hard data priority, but intuition necessary sometimes
Problems in production of synergy estimates	Lack of data Game-playing by business managers	Monetising future synergies always risky	Intuitive estimates not convincing	Potential over-optimism by business	Potential over-optimism by business Bonus-driven reasons	Potential over-optimism by business about growth assumptions

Appendix 5: Strategic analysis may expose negative implications of investment proposals



Shank (1996). Management Accounting Research

Appendix 6: Scenario analysis: Case European manufacturer of fast-moving consumer goods

Stable political/economic environment

Environmental crisis | **Environmental Issues contained**

NEW WORLD ORDER • Strong international transnational government • Global framework in place to control CO_2 emissions • High regulatory and inspection burden on manufacturers/retailers • Rise of 'responsible consumerism' – move away from global brands • High cost and price inflation	**MORE OF THE SAME** • 'Laissez faire' government • Stable customer base, compete on service/range • Consolidation/rationalization of supplier base, focus on economy of scale and other efficiency saving • Price inflation slightly below (predictable) cost inflation • Large scale innovations supported by large marketing budgets and int. brands
FRAGMANTED WORLD • Competition between economic power blocks for scarce commodities • Different carbon control waste/recycling regulations adopted in different regimes • Volatile energy prices/exchange rates • Emergence of new retailing power blocks and supplier networks • Erosion in consumer brand loyalty	**DOG EATS DOG** • Collapse of euro zone, volatile currencies • Rise of protectionism – trade barriers • Rise of hard discounters and unbranded label manufacturers • Narrowing of product ranges • Price deflation and hig level of promotional discounting

Unstable political/economic environment

Source: Mourlidge and Player. 2010. Future Ready: How to Master Business Forecasting.

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CFO's and Controllers' Roles in Strategic Investment

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The Role of CFOs in Strategic Investments; A Large Finnish Company (Martikainen, 2023)

Active participation in all strategic investment phases

CFOs need to ensure that strategic investments are targeted and that they have strategic fit

Role to produce financial information, review financial figures and see if it is logical from a finance point of view

CFOs do not much prepare business case calculations as such by themselves. They must offer sufficient support and expertise for these

CFO’s role is changing to more of a ‘selling’ role. They need to ensure that investment goes through, and the business case will be forwarded in the organization to a sufficient level that it will be accepted

In smaller investments, typically the role of CFOs moves more to ‘approver’ role

In large strategic investments the role is to comment and spar in valuations and business cases

In M&A the most important role is to challenge the key promises

The Role of Business Controllers in Strategic Investments; A Large Finnish Company (Martikainen, 2023)

- Typically, Business controller role includes investment evaluation, various calculations, sensitive analysis, and some specific division controllers are responsible for cost monitoring
- Support a variety of leaders from different divisions and working with the division CFOs to make correct decisions. Also, actively brainstorming and discussing with division CFO
- Involved in all phases of capital investment process (excl. ideation)
- Business case sparring strongly highlighted as one of the key tasks for business controllers. They do sparring work to get accurate investment calculations.
- Business controllers need to ensure that business cases are dealt with sufficiently extensively, materials are prepared and discussed in the right forums