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Institutional and Methodological Background for the Analysis of Investment Incentives

2.1 Investment Decision Making Within Divisionalized Firms

2.1.1 General Properties of Capital Investment Decisions

The analysis of incentive problems for capital investment decisions has to be specific of the types and properties of investment decisions under consideration, since the term investment can be defined quite broadly and its meaning is sometimes fairly diffuse. To define the scope of this work, the following classification of important characteristics of capital investment decisions, as illustrated in table 2.1, is helpful.

First, and most importantly, cash flows resulting from investment decisions can be uncertain or not. Real-life investment decisions have to deal virtually exclusively with uncertainty. It is difficult, if not impossible, to find an example for an investment decision with certain cash flows.[1] Uncertainty can affect both the initial investment outlay as well as cash flows from operations. Frequently, uncertainty is more important for cash flows that appear far in the future than cash flows that are promptly following the initial investment decision.

The second characteristic considers the question, if an initial investment decision comprises the possibility to make a subsequent decision. For example, building a factory allows for the subsequent decision of mothballing or abandoning operations. Clearly, if there is no uncertainty, there is no need for making a subsequent investment decision,

[1] The valuation literature on investments as well as whole companies has extensively analyzed problems under uncertainty. For textbook treatments see, e.g., Luenberger (1998), pp. 137-474; Copeland & Weston (1988), pp. 77-355; Brealey & Myers (1996), pp. 141-314; Franke & Hax (1999), pp. 287-354; Damodaran (2002).

since all necessary decisions can be made instantly. However, the arrival of new information can lead to a consecutive investment decision that is only available, if the initial investment decision has been made.[2]

Table 2.1. Important characteristics of capital investment decisions

Characteristic	**Specification**
Uncertainty of cash flows	yes | no
Consecutive decision possible	yes | no
Level of decision making	centrally | decentrally
Distribution of information	symmetrically | asymmetrically

A third facet of capital investment decisions is, whether they are made by a central headquarters or by decentral divisions, which are responsible only for part of the company's operations. In small companies, major investment decisions are usually made by the executive board, i.e. centrally. In contrast, large companies often delegate decision rights to the better informed divisions of the company and let them decide on investments decentrally.[3]

The last characteristic refers to the distribution of information among decision-makers. When at least two decision makers for capital investment decisions are present, which is true in the case of decentralized companies, two cases have to be distinguished. Both parties can either be symmetrically informed, meaning that they have the same decision-relevant information. The more realistic case, though, assumes, that one party is better informed than the other. This is the case of asymmetrically distributed information.

This work focuses on the case, when investment decisions are characterized by

- a high degree of cash flow uncertainty,
- the possibility to make subsequent decisions,
- decentral decision making or information gathering, and
- asymmetrically distributed information.

[2] For these and further examples of subsequent decision making see, e.g. Brealey & Myers (1996), pp. 255-264; Damodaran (2002), pp. 772-816.

[3] Of course, there is no general rule how the distribution of investment decision rights depends on the size of a company. Even in some very large divisionalized companies, approval of major investment decisions by the board of directors is required. This can be seen as a mixed system of a combined central and decentral decision-making, which is quite common in corporate practice. See Stanley & Block (1984); Petty, et al. (1975).