

2 Financial Communication in the Context of Information Economics

Chapter 2 is the theoretical section of this work. Based on the problems described in Chapter 1, Chapter 2 stresses the theoretical background of the mentioned problems. Therefore, the chapter starts with a complete overview of the New Institutional Economics. Following this, there is a closer look at the principal-agent approach for analyzing the information asymmetry between management and shareholders.

2.1 Introduction to New Institutional Economics

New Institutional Economics (NIE) deals with institutional and organizational issues in economics. The way to deal with these problems distinguishes in style, methodology, and contents in the available literature. The literature started concentrating on these problems after World War II. Researchers recognized that institutions have an important and critical role in economic performance. Prior to World War II, the focus was on mathematical development of neoclassical theory. Researchers tried to develop more and more abstract economic models. Today, there are different approaches to the NIE: transaction-cost economics, property rights analysis, legal economics, constitutional economics, public choice theory, the principal-agent approach, relational contracts, comparative economic systems, etc.²

In contrast to the neoclassical theory, the NIE analyzes company's role in the economy. The neoclassical theory only touches on different institutions but not their role in the general economy. The NIE is a modified theory of the existing neoclassical theory. There are differences in several ways. However, there are also similarities because the NIE uses standard economic theory for analyzing the functioning of institutions. The analysis is important to evaluate institutions' role in economic operations.³

The technological development in economy has an important role in institutional research. Institutional research does not focus on historical-deductive studies, the object of research is on institutional framework, and the implica-

² Cp. Furubotn, E., Richter, R. (2008), p. 15.

³ Cp. Coase, R. (1984), p. 230.

tions of given institutional arrangements for economic behavior. Less focus is paid on spontaneous social organizations; more attention is on constructed organization developed with technological support.⁴

One main part of research in the context of the NIE lies in transaction costs. Transaction costs are a consequence of all doings of the protagonists involved in an economic system. Operational economic systems produce a lot of transactions costs for all participants.⁵

The NIE is based on the idea that economic activity takes place in neoinstitutional system. There are positive transaction costs in this system and the decision-makers are rationally bounded. Furthermore, all exchanges of goods and other things generate transaction costs. All market participants changing goods and other things are forestalled by this. They are not trustworthy and engage in opportunistic behavior.⁶

There are two researchers who give their approaches concerning the NIE. On the one hand, there is Williamson and on the other there is North. Williamson focuses on the institutional arrangements. These arrangements are, for example, a firm's organization or its contracts. In contrast to Williamson, North concentrates on the institutional environment of a social system. The environment can be the institutional framework. Williamson assumes an institutional environment.⁷

The researchers have different opinions regarding transaction costs and the design of institutions. Williamson mentions that institutions are designed to reduce transaction costs. Only formed institutions are able to survive in competitive markets. According to North, institutions exist to reduce transaction costs. In turn, they make the economy efficient. Inefficient markets exist because of a plethora of policy in the markets.⁸

In summary, the NIE has different forms which are driven by their issuers. In general, the NIE is a theory with a lack of formalism. However, the deep level

⁴ Cp. Hayek, F. (1973), w/o p.

⁵ Cp. Arrow, K. (1969), p. 48.

⁶ Cp. Coase, R. (1984), p. 231; North, D. (1995), pp. 18-19; Williamson, O. (1975), p. 4.

⁷ Cp. Davis, L., North, D. (1971), p. 133; Williamson, O. (2000), p. 597.

⁸ Cp. Ensminger, J. (1992), pp. 21-22; Furubotn, E., Richter, R. (2005), pp. 108-110; North, D. (1986), p. 236; North, D. (1990), p. 8 and 52; Williamson, O. (1981), pp. 1537-1568.

of formalism forces its role in literature. The NIE makes valuable contributions to several problems and it is suitable for different issues.⁹

While Williamson has further developed the transaction cost theory (1967 and 1975), Coase (1960), Furubotn and Pejovich (1972), as well as Alchian and Demsetz (1972 and 1973) focus on the idea of property rights. The definition and the way of distribution are interesting in this context. The transaction cost theory concentrates on a single transaction and the property rights theory considers the transfer of a bundle of rights attached to the physical commodity or service, since it is the value of the rights (and obligations) that determine the value of what is exchanged.¹⁰

Jensen and Meckling (1976), Fama and Jensen (1983a, 1983b), as well as Holmström (1979 and 1982) look from a third person's point of view at the form and function of an economic institution. For these researchers, the role of information is an object of research. In this context, they look closer at the relationship between the principal (i.e. the shareholder) and the agent (i.e. the management). Normally, the agent should act on behalf of the principal but often they are opponents with different information levels. Both are human beings with self-interest and the desire to maximize their self-interest. There is a conflict owing to their target function. This problem refers to the agency theory which is discussed in the next chapter.¹¹

Firms, markets, and institutions have different low-rationality agents. The agents seek to reach their decisions with their own ways for decision-making. Everybody tries to optimize their own procedures. Focus lies on quick and cheap transactions between the opponents. The NIE explains limitations of time, resources, cognitive abilities, and possibilities to solve opponents' problems.¹²

The following illustration gives an overview of the NIE and its related theories:

⁹ Cp. Furubotn, E., Richter, R. (2008), p. 18.

¹⁰ Cp. Alchian, A., Demsetz, H. (1972), pp. 777-795; Alchian, A., Demsetz, H. (1973), pp. 16-27; Coase, R. (1960), pp. 1-44; Demsetz, H. (1967), p. 347; Furubotn, E., Pejovich, P. (1972), pp. 1137-1162; Williamson, O. (1967), pp. 123-138; Williamson, O. (1975), w/o p.

¹¹ Cp. Fama, E., Jensen, M. (1983a), pp. 301-325; Fama, E., Jensen, M. (1983b), pp. 327-349; Holmström, B. (1979), pp. 74-91; Holmström, B. (1982), pp. 324-340; Jensen, M., Meckling, W. (1976), pp. 305-360; Kim, J., Mahony, J. (2005), p. 224.

¹² Cp. Conlisk, J. (1996), pp. 675-676; Furubotn, E., Richter, R. (2008), pp. 20-21; Gigerenzer, G., Selten, R. (2001), p. 14.

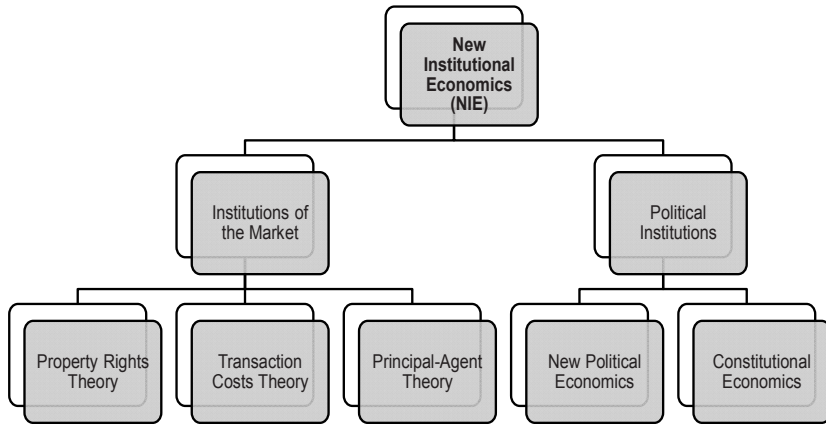


Figure 2: New Institutional Economics (NIE)

Own graphic according to: Coase, R. (1984), pp. 229-231; Demsetz, H. (1967), pp. 347-359 and Kim, J., Mahony, J. (2005), pp. 223-242.

2.2 Introduction in the Principal-Agent Problem

Basically, the principal-agent model has two different parties. These parties are the principal and the agent. Principal and agent have a contract. The agent performs some service on behalf of the principal. Therefore, the agent receives remuneration. Furthermore, the principal delegates some decision-making authority to the agent.¹³

In reality, there are a lot of principal-agent relationships. Both the principal and the agent have the choice to get into contract with other partners, which is why the principal has to offer an attractive compensation package for all tasks the agent does. On the other hand, the agent is limited in relation to their capabilities regarding the total remuneration.¹⁴

The following graphic shows the typical relationship between principal and agent:

¹³ Cp. Besley, T., Ghatak, M. (2005), p. 151; Jensen, M., Meckling, W. (1976), p. 308.

¹⁴ Cp. Besley, T., Ghatak, M. (2005), p. 151.

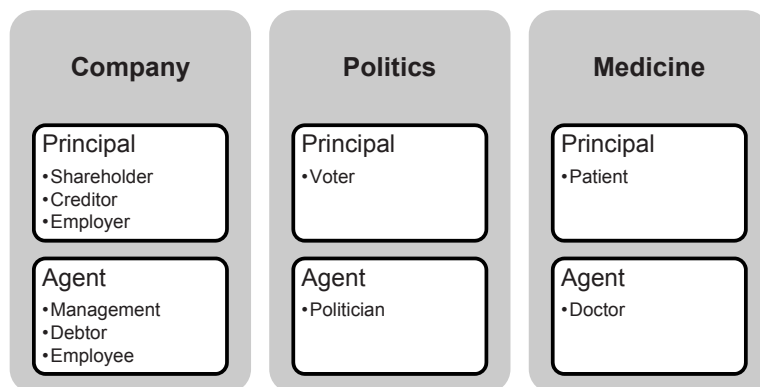


Figure 3: Principal-Agent Relationships

Own graphic according to: Besley, T., Ghatak, M. (2005), p.151; Erlei, M. et al. (2007), p.75; Picot, A. et al. (2008), p.72.

In a company there are several relationships between principal and agent. In general, there is a network between individuals. These individuals can be a principal in one relationship and in another they are agent. The changing roles can be characterized as a chain of command and control. These functions change with regard to each role of the individual.¹⁵

The principal-agent theory focuses on tasks which the principal delegates to the agent. The reason for this is the principal who cannot execute these tasks on their own. These happen when a task requires some special expertise or the principal has limited amount of time.¹⁶

Delegation is important in the context of productivity and returns. As early as 1776, Adam Smith described the way firms raise productivity and returns with delegation of several tasks. These tasks can be in the nature of things the agent has to do or in the nature of reporting some piece of information that the principal needs for decision-making. Generally, all delegated tasks impact the principal's money. In this situation, the principal tries to push the agent in their work for maximizing the principal's welfare.¹⁷

¹⁵ Cp. Besley, T., Ghatak, M. (2005), p. 151.

¹⁶ Cp. Laffont, J., Martimort, D. (2002), p. 28.

¹⁷ Cp. Besley, T., Ghatak, M. (2005), p. 151; Jensen, M., Meckling, W. (1976), p. 309; Smith, A. (1776), pp. 2-6.

The agent profits always from better level of information. They know what action they take and what information they possess. This fact describes the information asymmetry between principal and agent. The information advantage is usually with the agent. Considering this, the agent can undertake action or report information which is fitting to their personal view. The personal view of the agent must not be analogous to the principal's point of view. The principal-agent model assumes in this case:¹⁸

1. The principal and the agent have different objectives which conflict in the worst cases,
2. Agent's actions cannot be fully monitored by the principal.

The agent always has private information. These pieces of information are not verifiable for the principal. The principal has no idea whether the agent acts in the principal's or in their own way. This situation is the starting point in the pursuit to increase the advantageousness of the principal-agent relationship.¹⁹

In theory, a world where all information is accessible free of charge, all economic actors are on the same level of information. In such a world, delegation increases company's structures for more productivity and more returns. All actions would be specifiable *ex ante* (in advance) and no one had the leeway in behavior to deviate from contractual agreements because the counterpart would know how to inhibit this behavior. Structures leading to a maximum of economic wealth under these conditions are called first-best solutions.²⁰

In reality, companies are not able to get all information. If a company gets all information, it would be possible to allocate all resources in the best way. That is theory because the costs for gathering all information are high and they are not in relation to possible earnings. So, in reality, knowledge of economic actors remains incompletely and unevenly distributed. This situation creates an advantage for the agent. They get the possibility to act in their own interest because of less supervision by the principal. This could lead to negative repercussions for the principal. In practice, the principal reacts to this situation with limitation on the agent's leeway. For this purpose, the principal uses several additional means such as monitoring, control mechanisms, and appropriate incentives. Depending on how many means the principal uses, the advantage

¹⁸ Cp. Besley, T., Ghatak, M. (2005), p. 151; Laffont, J., Martimort, D. (2002), p. 28; Picot, A. et al. (2008), p. 72-73.

¹⁹ Cp. Besley, T., Ghatak, M. (2005), p. 152; Picot, A. et al. (2008), p. 72.

²⁰ Cp. Laffont, J., Martimort, D. (2002), p. 3; Picot, A. et al. (2008), p. 72.

of delegation including the earnings due to specialized knowledge of the agent could be minimized. In summary, the first-best solution cannot be reached in practice. Incomplete and asymmetric information lead always to the second-best solution. The difference in costs between the first-best and the second-best solutions lie in the agency costs.²¹

According to Jensen and Meckling, the agency costs are the sum of the following:²²

1. **Monitoring expenditures:** Principal's costs for measuring and observing the agent's behavior. These include costs for efforts to control agent's behavior through budget restrictions, compensation policies, operating rules, etc.,
2. **Bonding expenditures:** Agent's costs to demonstrate that they will not injure the principal's interests,
3. **Residual loss:** The principal loses welfare despite monitoring and bonding expenditures. The agent does not get all relevant information for productivity-maximization (coordination problem) and this leads to opportunistic undermining of the structure (motivation problem). Residual loss is equivalent to the principal's reduction of welfare.

The agency costs include a trade-off. Increasing monitoring and bonding expenditures can reduce the residual loss. Generally, the agency costs are related to selected institutional design and a number of general institutional conditions. These, for example, include valid rules and norms that limit individuals' behavior. The normative approach of the principal-agent problem concentrates on finding a situational minimization of agency costs. Within this situational minimization, the second-best solution is closely connected to the first-best solution. For this, the agent needs appropriate monetary and non-monetary incentives. For measuring the institutional design or the contractual design as one part of the institutional design, the agency costs are the efficiency criteria for resource allocation.²³

Besides the normative question, there is a positive question about the consequence of institutional arrangements. This one is less mathematical but more empirical. In the 1970s and 1980s, research focused on a special case of prin-

²¹ Cp. Erlei, M. et al. (2007), p. 75; Picot et al. 2008, pp. 72-73.

²² Cp. Jensen, M., Meckling, W. (1976), p. 309.

²³ Cp. Jensen, M., Meckling, W. (1976), p. 309; Picot, A. et al. (2008), pp. 28, 36 and 72-73.

principal-agent problem between owners and managers of large companies. Researchers and positive theorists concentrated on identifying conflicting situations between principal and agent. Based on these situations, they described governance mechanisms limiting the agent's self-serving behavior. Jensen and Meckling analyzed the relation between equity owners of a listed company and the confronting interests of employed managers. In this context, Fama focused on the varying interests of employees and employers. Both Fama and Jensen extended their research and concentrate on the different roles of shareholders, managers, and other employees within a corporate setup. In total, there is different research to solve existing agency problems within companies and within capital markets.²⁴

Normative research and positive research differ in focus and style. But there is consensus in common assumptions about people, organizations, and information as well as a common unit of analysis. Research is based on institutional arrangements between principal and agent. Because of these commonalities, both approaches complement each other. The positive approach identifies various contract alternatives. The normative approach indicates the most efficient contract under certain conditions.²⁵

Analyzing the conflict between principal and agent, the agent is prepared to take more risks than the principal. This risk deviation is important for further discussion within this work. The principal's and agent's behavior is related to their respective level of risk. They act according to their risks. Considering this, the principal-agent theory seeks to solve two problems that occur in an agency relationship—the agency problem (conflicting objective and monitoring difficulties/costs) and the problem of sharing risk. Therefore, economics of information and choice under uncertainty lead to the main variables worked within the principal-agent model: information, outcome uncertainty, and risk behavior.²⁶ Possibilities to react to these problems in financial context are discussed in the next chapter.

²⁴ Cp. Eisenhardt, K. (1989), pp. 59-60; Fama, E. (1980), pp. 208-307; Fama, E., Jensen, M. (1983a), pp. 301-325; Jensen, M. (1983), p. 334; Jensen, M., Meckling, W. (1976), p. 309.

²⁵ Cp. Eisenhardt, K. (1989), pp. 59-60; Jensen, M. (1983), p. 334.

²⁶ Cp. Eisenhardt, K. (1989), pp. 58-60.

2.3 Financial Communication as Consequence of Information Asymmetry

For decision-making, actors need information. Information is important to act in favor or against it. In the preceding chapter, the relationship between principal and agent is described. Both are on another level of information. One of them has more information than the other party. This difference in the level of information is called information asymmetry.²⁷

The better informed party is the agent. There are different types of informational advantages:²⁸

1. **Hidden characteristics:** The agent has private knowledge which is unknown to the principal before getting into a contractual relationship (ex ante). This knowledge mostly affects agent's costs and capabilities,
2. **Hidden information:** If principal and agent are in an existing agency relationship (ex post), the principal will have no knowledge about the amount of information available to the agent,
3. **Hidden action:** The principal does not know all actions taken by the agent in an existing agency relationship (ex post),
4. **Hidden intention:** The agent acts opportunistically. The principal does not know the agent's aims (ex ante and ex post).

In the financial sector, hidden characteristics often appear when a company initially uses the capital market for refinancing. The company has private information unknown to the market and its participants. This information can be related for further development of the company's business. The intensity of existing business practices with suppliers and customers is not assessable. Moreover, the unique selling proposition of the company is not analyzable because there is no comparison.

By investing money in a company, an investor enters into a contractual relationship with the company. An investor is normally not engaged in the company and therefore information is hidden. They just have a close look at the company and its processes as well as the whole business. In this role, the

²⁷ Cp. Besley, T., Ghatak, M. (2005), p. 151; Frank, R. (1994), p. 203; Laffont, J., Martimort, D. (2002), p. 2-5.

²⁸ Cp. Laffont, J., Martimort, D. (2002), p. 3; Picot, A. et al. (2008), p. 75.

company's management is the agent and it is well-informed to all points affecting the company.²⁹

With regard to hidden information, there are hidden actions by the company's management. The investor does not know about all actions taken by the management. Furthermore, they cannot evaluate the actions which are closely related to hidden intention. Concretely, the investor cannot evaluate, for example, the benefit of a new service contract. They do not know the influences of new contracts on their dividend payout. There are a lot of processes and decisions made by management, which the investor does not get to know. All this information can be important for them but at the end, they have to trust the management.³⁰

In connection with the information asymmetries, three different types of agency problems can be differentiated-adverse selection, moral hazard, and hold-up. These types exist in several principal-agent relationships.

Adverse selection

Adverse selection emerges *ex ante*. There, the principal does not know the hidden characteristics of the agent. At the same time, the agent does not know which characteristics they have to offer to the principal to get into contract. The principal decides for or against one agent with a limited amount of information. Primarily, if the agent is into a contract, the principal will get a wider view into the agent's real characteristics. *Ex post* the principal has more information to evaluate their decision. Agents with below-average or disadvantageous attributes can take this situation to get into contract although they have less capabilities for the task. Conversely, agents do not get into a contract although they have fitting attributes for the task. These agents hide their good attributes for the task during getting into contract with the principal. The principal decides against them because they do not gain an insight into agent's real characteristics.³¹

In the financial context, adverse selection emerges often. Especially big companies invest a lot of money into investor relations to beam attention toward the company. Smaller firms often do not pay attention to financial communica-

²⁹ Cp. Ueda, M. (2004), pp. 601-621.

³⁰ Cp. Kester, W. (1992), pp. 25-26.

³¹ Cp. Picot, A. et al. (2008), p. 74.

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