The Market Process

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1.1 Exchange

1.1.1 Simple Exchange

This chapter describes an elementary human activity—exchange. A basic model is introduced in which exchange is viewed as an activity involving two parties giving and taking from each other, thereby creating benefits and costs for each other. The parties engage in exchange in order to solve a problem. The nature and outcomes of exchange are affected by various factors including: the search for value, the limited rationality of the parties involved, and the need to deal with uncertainty and risk. These are introduced in the next section. The Brothers Grimm fairy tale "Lucky Hans" is used to illustrate the model.

1.1.1.1 A Basic Model of Exchange

We do not live in Shangri-La. Fried chickens or partridges do not fly directly onto our dinner plates, and milk and honey do not flow of their own volition to people who are hungry or thirsty. Instead, all people have to obtain goods and services to survive and to reach their goals. The same is true for firms and other organizations. In order to survive and to reach their goals, firms need resources such as tangible goods, services, people, rights and titles, information, and finance. Goods, services,

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and resources are means to solve problems[1]: people need goods and services to varying degrees in order to eat, drink, warm themselves, move about, decorate, defend themselves, to be respected, and so on. Firms need resources to produce, research, develop, transport, sell, buy, administer, and so on.

Both people and firms make arrangements to ensure access to resources critical for their survival, as well as for less important things. They create different types of organization and physical structures and undertake various kinds of activities such as purchasing, stockholding, and supply management. In addition, firms as well as people protect themselves from undesired elements in various ways. For example, human organisms resist the intrusion of germs or protect themselves from the weather, and firms fight with government over rules and regulations governing their business.

To survive and achieve their goals firms, not only procure and retain goods and resources, they also generate outputs for others. First, firms produce and supply goods and services to other people, firms, and organizations. Second, they produce things as by-products of their activities, which are not necessarily regarded as valuable by others, such as waste products, residues, waste heat, and pollutants. We term these things "bads" to contrast goods (Dyckhoff, 1994). The disposal of these by-products has to be managed and handled. Third, from time to time, firms must get rid of surplus resources including people, machinery, products, and land. Fourth, firms give financial resources to other firms in exchange for goods and services, and other resources. Finally, firms are required to use some of their financial resources to pay taxes, charges, and fees imposed on them by governments.

Households engage in similar types of activities in order to survive and achieve their goals. They supply labor to firms and other organizations in exchange for financial resources; they produce by-products such as waste and noise that have to be dealt with. Goods, services, and other resources are obtained in exchange for financial resources and, finally, financial resources are used to pay taxes and charges imposed by governments.

People as well as firms create material and organization structures and undertake many types of activities to secure their survival, to ensure access to needed goods, services, and other resources, and to dispose by-products.

People, households, and firms are open systems.[2] They obtain inputs in the form of goods, services, and resources from people, organizations, and the environment. On the one hand, they use, consume, and/or transform these inputs. On the other hand, they supply output in the form of goods, services, and other resources, including by-products, to others. They are not able to survive in the long run

[1] As Karl R. Popper (1999), the famous philosopher of the twentieth century, says: "all life is problem solving."

[2] A system is an "organized, unitary whole composed of two or more independent parts, components, or subsystem and delineated by identifiable boundaries from its environmental super system" (Kast & Rosenzweig, 1985).

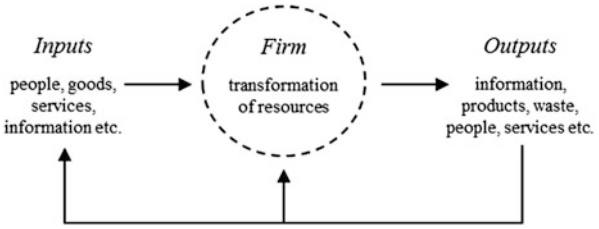

Fig. 1.1 The firm as an open system (*Source*: Kast & Rosenzweig, 1985)

without obtaining inputs and without generating outputs (Katz & Kahn, 1978; Pfeffer & Salancik, 1978; von Bertalanffy, 1953). These are the characteristics of an open system. Figure 1.1 illustrates this.

Open systems are involved in a struggle for survival. Various types of external forces threaten their survival, and arrangements have to be made to protect the system. These arrangements must cover access to goods, services, and resources as well as the supply and disposal of goods, services, resources, and by-products: The effective management of inputs and outputs is a prerequisite for the survival of a system.

The history of mankind provides many examples of different types of open systems, with different types of inputs, internal transformation processes, and outputs. There are many ways in which we can get something we do not have but would like to have, as well as ways of getting rid of something we rather would not have. Table 1.1 shows some possible options.[3]

We all know that there are various ways of obtaining and disposing of goods, services, and resources (hereafter the term goods is used to refer to all three types), apart from producing and consuming them ourselves (option 1). Other means of solving problems involve both legal (option 2.1) as well as illegal (option 2.2) means of obtaining and disposing of goods. The latter involves transfers of goods without the approval or against the will of the other party, be it another person or organization (e.g., robbery) or the natural environment (e.g., emission, exhaust air, sewage). Obtaining and disposing goods through fund raising and donations (option 3) as well as through exchange (option 4) are characterized by the transfer of property rights (including ownership and usage rights) from one party to another. This requires the agreement of the parties involved to the transfer (Alchian & Demsetz, 1973; Williamson, 1985).[4] Even though fund raising and donations appear to be unilateral transfers of property rights, they will not take place unless the receiver as well as the donator agrees to it.

[3] See also Dixon and Wilkinson (1982/1989, 1986) on the different ways of meeting our needs and the different types of exchange that exist to accomplish this.

[4] Property rights result from the rules that the state lays down to organize the society (laws). Property rights on goods and resources therefore regulate the potential conflict for the distribution of scarce resources and goods. In specific, property rights include the authority on use, the authority on acquisition of the profit, the authority on alteration of form and substance, as well as the authority on sale.

Table 1.1 Means of obtaining and disposing goods in an open social system

Means of obtaining goods	Means of disposing and using goods
1. Production	1. Consumption, use, destruction, processing
2. Taking from somebody: 2.1 Socially acceptable: e.g., consumption of goods from nature (berries, fish, air); social borrowing 2.2 Socially unacceptable, e.g., robbery, piracy, slavery	2. Giving to somebody: 2.1 Socially acceptable, e.g., legal disposal of domestic waste, automobile exhaust gas, gifts, social lending 2.2 Socially unacceptable, e.g., illegal garbage dumping, illegal burning
3. Fund raising, e.g., securing sponsors, begging	3. Donating, e.g., sponsoring, contributing to charities
4. Buying, leasing, renting	4. Selling, leasing, renting

Exchange is a special type of mechanism for obtaining and disposing of goods. Voluntary exchange involves reaching agreement between the parties to the transfer of goods. The buyer needs the agreement of the seller in order to receive the property rights to a good, and the seller needs the agreement of the buyer in order to sell a good.[5] Exchange always involves a reciprocal transfer of property rights between the parties.[6] Both parties undertake work—though probably to a different extent—in order to reach an agreement on the conditions for the reciprocal transfer of property rights. The development, design, and control of an agreement between two (or more) parties for the reciprocal transfer of rights make exchange a very specific category of social activity.

Definition 1: Exchange
The activities directed toward the development, design, and control of a mutually intended transfer of property rights between two or more parties.

"Mutually intended transfer of property rights" means that one side offers something, such as property rights for a tangible good, a service, or know-how expecting in turn to receive something from the other side ("do ut des"[7]). The giving and receiving of property rights are therefore inherently interrelated.[8]

In any case an economic actor, either an individual or a firm, makes a decision on how to obtain the goods in need. Options 1 and 4 represent the classic make or buy

[5] Exchange contracts cover more than purchase and sales agreements. They also include leasing arrangements, license agreements, credit contracts and employment contracts. In the following, for simplicity, we only refer to purchase and sale in terms of transfer of property rights.

[6] This condition can only be applied to the ordinary exchange. For further generalizations of this condition: see Sects. 1.2 and 1.3 and Dixon and Wilkinson (1982/1989).

[7] (Latin) = "I give so that you give" (Roman legal principle).

[8] "The central idea here is that when two or more people interact, each expects to get something from the interaction that is valuable to him, and is thereby motivated to give something up that is valuable to others" (Simon, 1978).

alternatives for solving problems in a modern economic system. People and firms decide whether to solve a problem by producing goods for themselves (i.e., make) or by obtaining those from others through exchange (i.e., buy). People and firms also decide whether to use or dispose of resources through internal activities such as consumption and processing or through exchange with others.

The purpose of exchange is to overcome the discrepancy between the goods available and the goods still needed to solve a problem (Alderson, 1957). Such a discrepancy is a state which an actor (person, household, organization, or firm) regards as unsatisfactory to some degree. For an exchange to take place, it is required that at least two actors, at the same time, perceive such a discrepancy between actual and desired goods, and that the parties involved are willing and able to transfer the goods required by the other. The exchange has to be a solution to the problems for the buyer and the seller. Buyers and sellers are involved in a joint search to solve their problems via the mutual transfer of goods. If they can reach an agreement, the parties involved will, simultaneously, make a contribution to solving each other's problems.

The dependence of a system on resources delivered by its environment leads to the need for continuous planning, organizing, and controlling of exchanges for it to survive. Firms engage in exchange with various owners of resources including employees, investors, sellers, customers, consultants, and researchers. In this book, we limit ourselves to the consideration of exchange as a way to handle these interdependences between resource owners and users.

Exchange has essentially the same basic characteristics no matter what type of exchange we consider, such as the market for goods or services, jobs, finance, or information. But here we will consider only exchanges taking place in markets for goods and services. From this perspective marketing activities may be seen to arise: (a) because a buyer needs goods (or wants to avoid bads) he cannot or does not want to produce on its own or deal with on its own and is prepared to give other goods to (or take away bads from) a seller in return and (b) because a seller is prepared to transfer goods it possesses currently against other goods.

The transfer of goods and bads through exchange is more than just a physical distribution process. While exchange involves carrying out various types of physical activities such as transportation, goods handling, display, and stockholding, it also involves reaching an agreement on affecting an exchange of tangible and intangible values. In this chapter, we adopt a more economic perspective, focusing on the valuation process involved in market exchange. We will examine transfers of goods and bads on the basis of the value added to or value taken away from a system. We concentrate on value, because human decision making is a central aspect of market exchange. Economic units make decisions on the types of goods they want and how to obtain them. They also decide which goods they are prepared to give away and how to do this. These decisions are made based on the evaluations of the parties involved.

The transfer of goods and bads is valuable if the following conditions are met. First, the goods or bads are provided to or reduced for an actor and, second, the

transfer contributes to the actor's goal achievement, i.e., the current state of affairs is improved compared to what it would be otherwise.

The transfer of goods and bads can be evaluated positively as well as negatively depending on the perceived effect on goal achievement. No matter whether an individual or an organization managed by individuals is affected, values are always assessed by humans with respect to goal achievement. It is for this reason that goods or bads do not have any intrinsic value. This is nicely captured in the words of the famous English political economist William Stanley Jevons (1911):

> In the first place, utility, though a quality of things, is *no inherent quality*. It is better described as a circumstance of things arising out of their relation to man's requirements. . .We can never, therefore, say absolutely that some objects have utility and others have not. . .Nor, when we consider the matter closely, can we say that all portions of the same commodity possess equal utility. Water, for instance, may be roughly described as the most useful of all substances. A quart of water per day has the high utility of saving a person from dying in a most distressing manner. Several gallons a day may possess much utility for such purposes as cooking and washing, but after an adequate supply is secured for these uses, any additional quantity is a matter of comparative indifference.

The value of something depends on its potential to make a positive or negative contribution to the solution of a particular actor's problems. Thus, value depends upon the relationship between the good and an actor and their problems. Theoretically, perceived value is defined as the difference between the situations of a person without the good compared to the situation of a person with the good. The amount of value depends on the perceived difference in goal achievement resulting from the acquisition or disposal of the good, service, or resource in question (see Fig. 1.2).

Exchange is a way of both acquiring and disposing of goods and bads. The central aspect of exchange is the assessment of value, not the physical flow of material. Furthermore, exchange involves a specific concept of value as illustrated in the following example.

Example

Alexander Selkirk is a frequently cited character in economic theory, because he lived in a simple world, at least from an economic perspective.[9] He lived

(continued)

	Good	Bad
Acquisition	positive value	negative value
Disposal	negative value	positive value

Fig. 1.2 Value creation

[9] Selkirk, a Scottish sailor lived for 5 years (1704–1709) on the Chilean island Màs a tierra (Juan-Fernández). He later became famous as the main character and hero in Daniel Defoe's (1719) novel "The Life and Strange Adventures of Robinson Crusoe".

completely isolated on an island, which offered him sufficient food and shelter to survive. His survival is based on his ability to obtain goods from nature by hunting, fishing, or gathering, by tilling the soil, raising cattle, as well as by using his own talent to erect shelters to protect him from the elements and potential enemies. His value creating activities consist in creating value for himself—as long as he is alone on his island. To him, any activity is valuable if on that day it creates more value than other activities. To set up an economic plan, he can list all activities according to their urgency and then work through the list in order. His world is a pure production world, in which all problems are solved by the "make" option. Selkirk never has to ask anybody else what might be good for him—he knows best.

If *Selkirk* wants to solve a problem by engaging in exchange with others, such as with residents of a neighboring island, he must direct his abilities toward creating value for others. For his exchange partners, any good is valuable if the exchange creates an advantage for them, i.e., a net increase in value. Suppose he wants to buy a boat from his neighbors on the next island. What must he offer that they would regard as more valuable than the boat? His economic plan now includes researching his neighbors' values. He would then have to adjust his production according to the value they see in different goods he can provide. His world turns into one in which a proportion of his problems is solved by the activities of buying and selling.

Exchange is considerably more complex than do-it-yourself or self-production activities, because divergent perceptions of the parties involved in the exchange have to be considered. Selkirk is well aware of what is good for him, but he does not necessarily know what is good for his exchange partners on the neighboring island.

Exchange is a process directed toward the creation of value. The activities (work, behavior) of the parties involved in the exchange, as well as the transfer of ownership and usage rights, result in the creation of positive and negative value for either side, based on their effect on either party's goal achievement (Dixon & Wilkinson, 1982/1989, 1986). See Fig. 1.3.

Positive and negative values can be defined as follows: Benefits, or positive values, comprise the sum of all effects a party perceives as putting it into an improved position, i.e., enhances its goal achievement. This includes increases in the availability of valued assets as well as the disposal of or relief from bads and harmful assets. The negative counterpart to benefits are costs, where costs (Homans, 1961)[10] comprise the sum all effects a party perceives as putting it in a

[10] Here, the term "costs" signifies a sacrifice or damage. For this reason, the use of this expression differs from the usual economic term.

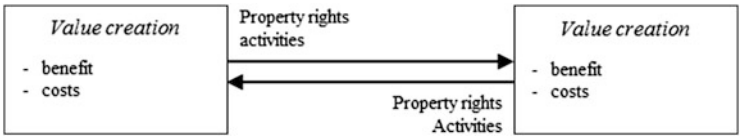

Fig. 1.3 Dyadic exchange

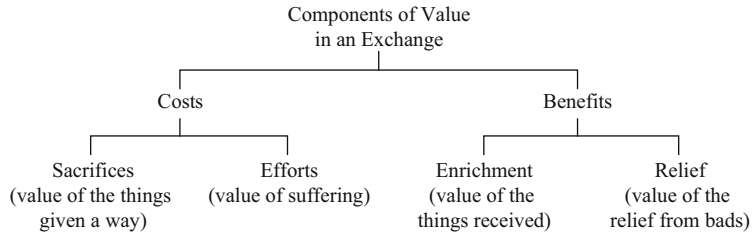

Fig. 1.4 Components of value in an exchange

worse position, i.e., diminishes its goal achievement. This includes: first, the value of any assets transferred to others as part of the exchange, i.e., the sacrifice made by no longer having the asset available for own use and second, the costs associated with developing and implementing the exchange agreement itself. The latter costs, referred to as transaction costs, include any negative effects not resulting directly from the assets provided to others in the exchange, including the efforts involved in reaching agreement and in monitoring and controlling the exchange. Figure 1.4 summarizes the different types of values involved in an exchange.

The value created on both sides of an exchange must be understood in a very broad sense in order to capture the process of exchange (Blau, 1964; Homans, 1961; Thibaut & Kelley, 1986).[11] In particular, we distinguish between two types of values:

1. Value emerging from the transfer of property rights[12] to material and nonmaterial assets, including tangible goods, services, energy, know-how, or money.
2. Value arising as side effects of the exchange. These include all the positive or negative effects on the other party, including any assistance provided and any good or bad effects on the relationships between the parties involved, such as their attitudes toward and perceptions of each other. An exchange may affect the power and influence each party is perceived to have, the degree of trust or mistrust they have in each other, their degree of cooperativeness toward each other, the respect and admiration accorded each other, and the level of risk and uncertainty perceived. Such effects may be valued positively or negatively by

[11] This perspective traces back to from the sociological exchange theory which interprets human group behavior as a system of reciprocal rewards and punishment (costs).

[12] By property rights we refer to both ownership and usership rights.

the parties involved, depending on the way these changes affect their goal achievement. In exchange between firms such effects include effects on the personal bonds or animosities that develop between the people involved in the exchange.

From the preceding discussion, we can see that the idea of exchange as "goods for money" is a gross simplification. The objects transferred in exchange cover a complex bundle of material as well as nonmaterial assets, including social symbols, services, favors, gestures, information, support, and guarantees. They also include any claims or threats made by either side, as well as failure to perform promised acts. All of these must be considered in terms of their positive and negative effects in order to understand an exchange. Value, in this sense, can result just as much from not doing something that is negatively valued by the other, as it can from doing something that is positively valued.

Example
Firm A agrees to supply firm B with a particular product and agrees to stop trading with another firm that competes with firm B. In this way, firm B receives exclusive rights to buy from A, which is a potential advantage to firm B.

Any exchange is based on subjective perceptions and decisions. An exchange will only take place if the two parties involved can reach an agreement whereby both parties perceive themselves better off as a result. To begin with, each party has its own objectives and expectations. If after some efforts by one or both parties these expectations and problem solutions match and both parties see each other as credible, an agreement can emerge. But such a match may not exist. And, if the exchange partners discover this is the case, one party will eventually withdraw from the exchange. Hence, not all interactions result in agreements with consequent transfers of assets. Exchange is a process that involves a sequence of activities over time in which each side participates. Part of this process can be referred to as *business mating* (Wilkinson, Freytag, & Young, 2005), which starts with initial efforts to attract the other side and ends when the parties regard the process as finished. It also involves ongoing interactions between the parties to reach agreement and to transfer goods and bads between them, which may be referred to a *business dancing* (Wilkinson & Young, 1994). Should any party not wish to continue the exchange at any time, it will discontinue its activities and stop the exchange, which is a type of business divorcing or separation. This can but need not necessarily be a signal for the other side to discontinue its activities as well, as happens when marriages and friendships break up.

The basic model of exchange considered up to now describes exchange in its simplest form as involving two parties, i.e., dyadic exchange. Actor A transfers something to Actor B and anticipates in turn something from B. From the

perspective of B the reverse situation applies. This simple form of exchange will be extended in Sects. 1.2 and 1.3.

Definition 2: Simple Exchange
Activity to prepare, organize, and control a mutually determined transfer of property rights between two parties.

1.1.1.2 Problems and Problem Solutions: The Motivation Behind Exchange

The nature of any exchange is determined by certain driving forces. These stem from the interests and motives of the parties involved, who, through exchange, try to solve their problems. But problems cannot be solved in any old way. Instead, a solution needs to be perceived as more favorable and better than alternatives.

From the point of view of one party, a surplus of expected benefits over expected costs (given an acceptable level of uncertainty) will be valued because it helps solve its problems. The extent to which expected benefits exceed costs makes the exchange more attractive, whereas perceived uncertainty can slow it down.

The following section develops a fuller understanding of the concept of problem solution by considering three elements: (1) In the search for problem solutions the parties are self-interested, and they seek advantages for themselves through exchange; (2) The pursuit of advantages is a particular feature of problem solving behavior; (3) When people search for solutions to their problems, they try to avoid or reduce risk and uncertainty.

Basically, the search for problem solutions is the major driving force behind exchange and the excess of benefits over costs, as well as the reduction of uncertainty, determine the extent of problem solution.

Problems and the Pressure for Problem Solutions

In general, the starting point for any exchange is a subjectively perceived actual or anticipated deficiency, a difference between the actual or expected state of affairs and target conditions. Exchange is a means of overcoming this deficiency (Dixon & Wilkinson, 1982, 1986).

Illustrations

- Due to unexpected growth in demand, existing manufacturing capacity turns out to be insufficient. Investment planning for expansion begins, which will eventually result in exchanges.
- Because of cost increases in the energy sector, a company starts to search for new energy-saving manufacturing processes. The company evaluates various alternative investments which will lead to exchanges.

(continued)

- The product range of a firm is incomplete and parts of it are not attractive to customers. One solution consists of asking a design studio to provide blueprints for new product variations. Exchange begins.
- The number of customer complaints recently increased significantly. A management consultant is employed to analyze the situation. Exchange begins.

Exchange is motivated by expectations that it will bring about an appropriate solution to a problem. Each exchange partner sees the exchange as means for the accomplishment of a particular task or the achievement of a particular goal. But what really is a 'problem'?

Each potential exchange partner is in a state they perceive as unsatisfactory or incomplete. It is their intention to change their state of affairs from a less to more preferred situation with the help of exchange. If this were not so they would not engage in exchange. The discrepancy between the current and less satisfactory state and the desired future state is referred to as the "problem" if the following condition applies: the transformation of an initial state into a desired final state requires a process of search, selection, and implementation of appropriate means promising a possible problem solution. Figure 1.5 depicts the structure of a problem.

A gap between starting and target conditions, with as yet unknown means of reaching the target, creates a condition of stress or disequilibrium. For example, a buyer sees the need to reduce costs in their firm, but does not know-how to solve the problem. The target condition is lower costs. The means for reducing costs, such as the rationalization of production processes, probably includes investment in new production technologies. In this case, a problem solution could consist in buying new machinery, equipment, and systems. The driving force behind the exchange, from the buyer's perspective, is the perceived need for cost reductions, which is in turn driven by the will to survive in the market under current competitive conditions.

In a similar way we can define the seller's problem solving process as the search for means to accomplish tasks such as the generation of income to cover costs, to secure employment, to obtain liquid resources (money) to balance outstanding payment obligations, to pay dividends, and to provide a return on investment to the shareholders of the company. The degree of stress created by a problem, and

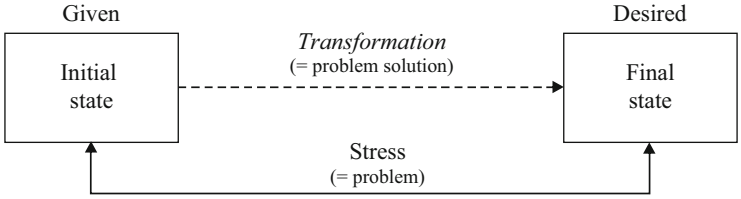

Fig. 1.5 The structure of a problem

hence the pressure to solve it, depends on the importance of the goal and the extent to which the means of solution are known and easily available.[13] In short we can describe a problem as a task combined with the perceived pressure to find a solution.[14]

Definition 3: Problem
The perceived pressure to find a solution to a task.

The strength of the motivation to engage in exchange equals the pressure to solve a problem. Three types of factors affect this pressure:

1. The consequence of success or failure
   The pressure to solve a problem will vary according to the perceived importance of fulfilling a task. If the execution of a task promises significant contributions to goal achievement, the exchange partner will try harder to solve the problem. Thus, adopting a new and promising technology will result in the input of significant amounts of energy and effort into the exchange. The more important are the anticipated consequences of failing to solve the problem, the greater is the pressure for solution.[15] For example, if the customer is threatened by significant penalties if it fails to supply a particular service on time, they will be more concerned about securing the needed resources.
2. Complexity of the task and the availability of means of solution
   The more complex the task is perceived to be, the greater the pressure and effort required to find a solution. A new task, such as the specification of a Computer Aided Design (CAD) system for the first time, creates more pressure and requires more effort to solve than a repeat purchase of a CAD system in an existing system configuration.
   Limits on the resources available, financial or human, also increase the difficulty and pressure involved in finding a problem solution. This is because compromises have to be made with respect to budgets or the quality of the problem solution. Thus, if a firm lacks skilled employees to prepare an invest-

[13] Regarding the term "problem" the degree of the perceived pressure to solve a problem is irrelevant. There may be different occurrences. The use of the word "problem" varies from everyday language. In everyday language, a "problem" describes a negatively evaluated state of stress that can hardly be overcome or not be managed at all.

[14] The perceived pressure to find a solution does not necessarily have to be reduced by the transformation from an initial to a final state. The state of stress can also be reduced by adjusting and subjective readjusting the final to the initial state. For example, in this context irreversible circumstances have to be accepted.

[15] Hereby, it is not a matter of lost consequences of the fulfillment but negative consequences that are anticipated by the decider in case of non-fulfillment.

ment decision, pressure will increase even when everything else remains unchanged.

3. Time pressure

   The shorter the time available to solve a problem, the greater the pressure to find a solution. Time pressure may mean some options are not available, as when the time to submit a tender expires due to unexpected technical problems in tender preparation, or when costs will increase significantly if overtime rates have to be paid to extend working hour to complete a job on time.

   Two other fundamental characteristics of people and organizations have an impact on the way they try to solve their problems. These are bounded rationality and the desire to avoid risks and uncertainty.

The Search for Problem Solutions: "Homo Oeconomicus" and "Administrative Man"

In economic theory, human behavior was, and to a large extent still is, assumed to be rational. By this we mean that economic theory assumes economic decision makers are rational people making free decisions and striving for individual advantages. "Homo oeconomicus," as the decision maker is termed, strives for a maximum level of net benefit, i.e., benefits minus costs. This image of man goes right back to the beginnings of economic science and is a central assumption in Adam Smith's major work 'The Wealth of Nations,' dating back to 1776 (Smith, 1976).

As a guide to thinking about human behavior, this perspective has frequently been criticized as too egotistic or self-centered. However, this model of behavior does not assume human beings are always and only egotistic and opportunistic (i.e., pursuing self-interest with guile to the disadvantaged exchange partners).[16] In this book, when we discuss the economic decision maker's search for advantages, we only imply that their behavior is directed toward the search for advantages for *their own side* in the exchange. In doing so, they can create advantages for themselves as well as for others, such as family members or the firm or organization they are a member of, as well as for their exchange partner. In this sense, exchanges can be purely motivated by altruism, the search for advantages for others (Giersch, 1993).

We do not assume that an exchange partner is altruistically motivated toward their exchange partner and in any exchange each party tries to reach the best outcome for its own side under the given circumstances. This does not exclude one side making concessions to the other that it does not necessarily need to do. But, behind these concessions, we expect some kind of indirect self-interest, such as creating better conditions for future exchanges with the same exchange partner or the achievement of noneconomic goals.

Another criticism of the assumptions of homo oeconomicus is the constant striving for maximum advantage. This criticism was developed mainly by those who developed the behavioral theory of the firm and, in particular, by American

[16] For the distinction of egoism and opportunism, see Sect. 1.1.1.2.

Nobel Prize winner Herbert A. Simon. According to them, any market participant's search for a problem solution is indeed rational. But this does not mean searching for a maximum advantage. It only says that a person acts with respect to their own ideas of advantage as far as evaluation is concerned. An advantage results if the difference between the benefits and costs (both broadly defined) of one alternative is superior to all known alternatives—including not acting at all.

The evaluation of advantage is subject to various kinds of uncertainty:

- Have all alternatives been considered sufficiently?
- Has the nature of the situation been fully taken into account?
- Will the expected consequences of an alternative really materialize?

If uncertainty is present, the individual must consider whether a higher level of goal achievement can be reached by obtaining additional information, which will involve additional costs. The individual will compare the estimated improvement in goal achievement to the costs of additional information search. In this way maximization of advantage and minimum uncertainty are incompatible.[17]

Imperfect information, uncertainty about the consequences of an action, as well as the limited ability of the decision maker to process all the information argues against maximization behavior. A market participant does not strive for a maximum but rather a satisfactory or favorable problem solution.

The concept of rationality draws on people's empirically revealed preferences, which imply that rationality is related to their subjective goals, desires, and norms. As a consequence, we cannot draw on an independent and objective rationality to explain market activities or a precise definition of what is "right," "reasonable," "logical," or "intelligent" behavior. Instead, rationality reflects the desire for favorable results regardless of their subjective explanation.

This concept of rationality is based on the decision maker having multiple goals and limited information processing capacity. Economic behavior is "intendedly rational, but only limitedly so" (Simon, 1945). For the purposes of decision making, a decision maker creates a simplified picture of the situation limited to the subjectively relevant and critical factors. This is termed bounded rationality.

This view of decision making is applicable to an individual making decisions purely on their own behalf, as well as for actors involved in collective decision making, such as we find in firms and households. Table 1.2 compares the two perspectives of classical "homo oeconomicus" with "administrative man." In this book, we follow the more realistic perspective of the behavioral theory of the firm because it helps us to understand market activities better than the strict classical model.

[17] Alchian (1950) already demonstrates that rational behavior in terms of the homo oeconomicus cannot be reconciled with the assumptions of imperfect information and uncertain predictions. For the signification of uncertainty: see the following section.

Table 1.2 Guiding principles of the economic and the behavioral theories of the firm

	Classical economic theory of the firm	Behavioral theory of the firm[a]
Guiding view of man	Homo oeconomicus: utilitarian image of man. Freedom of choice, a reasonable person strives for his/her individual advantage	Bounded rationality: a person is a problem solver who is intendedly rational, but has limited knowledge and information processing capabilities
Durability of goals	Goals are given and not subject to change	The individual is controllable and adaptive. Goals change over time ("organizational learning")
Goal content	The individual pursues an increase in benefit or utility. Benefit is one dimensional. In the case of multiple benefits, they can be ordered and are free of contradiction	The individual pursues different goals simultaneously. They are not simply ordered and are not free of contradiction. Goals are finalized afterwards
Goal motivation	Maximization behavior. The individual always chooses the best of all possible alternatives	The individual strives for satisfactory solutions
Autonomy	The individual makes free decisions independent from external influences	The individual is influenced by reference groups
Information on alternatives	The individual knows all hypothetically possible alternatives. The decision situation is completely and objectively defined	The individual does not know all alternatives. Individuals create a subjective picture of the decision situation and search for further information with respect to the problem ("problem formulation")
Information on consequences action	The individual knows all the outcomes of all possible activities	The individual acts under uncertainty about the consequences of his actions. Uncertainty is perceived as undesirable and the individual attempts to reduce it ("uncertainty avoidance")
Lead time for decisions	Nil. The individual has infinite information processing capacities	Decision making is a time consuming process, consisting of various phases and sometimes multiple loops
Information costs	Nil. All information needed is available	The search for information creates costs

[a]Cyert and March (1963)

The Search for Advantage: Managing Uncertainty

Definition of Uncertainty

Both the seller and the buyer are guided by previous experiences as well as by future expectations. The more limited are an exchange partner's experiences with the object of the exchange and his counterpart: (1) the more complex is the exchange; (2) the less precise are their expectations regarding courses of action and their consequences; and (3) the more uncertainty exists. Uncertainty is a state in which a decision maker perceives that an action has a number of possible outcomes. All exchange tends to take place under uncertainty and each party involved

perceives more or less uncertainty about the benefits and costs it expects from the exchange.

Sources of Uncertainty

Perceived uncertainty arises from three possible sources: (1) incomplete information about the behavior of the exchange partner; (2) external influences on the exchange; and (3) an actor's contribution to the exchange.

1. Incomplete Information About the Behavior of the Exchange Partner

The behavior of the exchange partner determines to a large extent, whether the exchange leads to the intended problem solution or not. A failure may occur because the exchange partner lacks the ability to provide the product or service agreed on. This is the case if the partner overestimates their capacity. Secondly, they may not want to provide the product or service.

Consider the situation in which the partner does not perform appropriately, in some way. Williamson (1985) refers to such behavior as opportunistic,[18] which is done for selfish reasons and disadvantages the other party. For example, a seller promises to keep a delivery deadline when the contract is agreed but expects that he will be unable to meet the deadline, or a seller promises a generous claim arrangement as part of the contract but, when a claim occurs, they refuse to cooperate.

Definition 4: Opportunism
A type of behavior involving self-interest seeking with guile, which disadvantages an exchange partner.

Opportunism should be distinguished from egoism, which comprises any form of selfishness in market behavior. Opportunism emerges in situations where there is some degree of freedom of action because contracts are incomplete—they do not cover every contingency. Opportunism becomes overt in the form of incomplete or distorted communication, such as willful attempts to mislead, distort, conceal, disguise, or in some other way confuse the other party (Williamson, 1985). The danger of opportunism is that it leads to behavioral uncertainty in exchanges, which in turn leads to costly preventive measures.

Opportunistic behavior can be observed before an agreement is reached, when someone hides their actual intentions or real characteristics. After the agreement is reached, opportunistic behavior may occur in attempts to exploit any opportunities to reduce costs or to increase benefits at the expense of the other party (Spremann, 1990). For example, the seller could secretly reduce the amount or quality of their

[18] Here, the use of the term "opportunism" differs from everyday language. In everyday language, opportunism signifies "an opportunity for self-advancement usually with no respect for right or wrong" (The Newbury House online dictionary). We are using this word as a theoretical term according to Williamson.

contribution in order to reduce their costs, or the buyer could refuse to pay or pays later than originally agreed.

Opportunism is assisted by the unequal knowledge of the exchange partners. At first opportunistic behavior may not be evident to the exchange partner. If one partner has reason to suspect the other may behave opportunistically, mistrust results. If such suspicions do not exist, trust exists. Obviously, a situation of mistrust will lead to increased costs of monitoring and controlling the partner's behavior, compared to a situation of trust.

2. Incomplete Information on External Influences

An additional source of uncertainty results from the effect of environmental factors. These can result in a problem solution not being carried out as originally planned. A seller might be affected by strikes, which cause delays in delivery, or prices may change due to increased costs of raw materials. Political or economic problems in the buyer's country may delay payments. Furthermore, changes in technology or developments in society may change the problem itself, making the original problem solution no longer appropriate.

3. Incomplete Information About One's Own Contribution to the Exchange

Finally, even one's own contribution is a possible source of uncertainty, such as an incorrect estimation of our resources and abilities. This type of uncertainty may relate to problem formulation as well as to problem solution. For the former, uncertainty refers to the danger of misunderstanding the problem or envisaging inappropriate solutions. This can lead to the provision of goods or services that may provide some kind of benefit but which do not solve the original problem.

For problem solution, mistaken estimates of one's own resources and capabilities may lead to a failure to serve the market partner in the agreed manner. In particular, unexpected problems in integrating a good or service into the buying firm's existing system can be quite costly and difficult to deal with. A buyer of a new production system may find out, for example, that in order to operate the system effectively, a major and expensive effort in staff training is required that was not anticipated.

Uncertainty impacts on the decision making of the buyer and seller. A buyer may regard the products of two sellers as equal, but favor the in-seller, a firm they already buy from, because of a higher degree of trust and familiarity. Uncertainty is a cost to be taken into account together with other costs involved in obtaining value. And activities to avoid or reduce uncertainty incur costs, which are yet another type of exchange cost. Uncertainty, if it cannot be reduced, may prevent agreement being reached, even if the terms of the exchange are otherwise favorable to both sides.

In sum, decision makers tend to avoid uncertainty, and this is a fundamental aspect of behavior (Cyert & March, 1963).

A distinction can be made between risk and uncertainty (Knight, 1921). Risk is when the outcomes of an action are not certain but the probability of different outcomes occurring is known. True uncertainty involves situations where we do not know the kinds of outcomes that may arise or their likelyhood of occurring. Decision theory may be used to provide a framework for analyzing the impact of

risk on decision making. The perceived risk that the exchange partner's contribution will not be satisfactory can be divided into two components (Cox, 1967): (a) the undesired consequences resulting from the exchange or the amount at stake and (b) the perceived probability of the negative consequences actually arising. Perceived risk is thus a function of the possible negative consequences perceived, weighted by the subjective probability of them occurring.

If an agreement turns out to be unfavorable, events must have occurred that reduced the anticipated value of the exchange. Assuming fixed perceived probabilities, the risk for one party increases the more important the problem solution is and the greater the damage resulting from not completing the originally agreed exchange. If a partner is completely certain about the outcomes of the exchange, the perceived risk is zero, even if the actual probability of a negative outcome is greater than zero.

Managing Uncertainty

Risk reduction strategies comprise measures to reduce the perceived probability of not completing the exchange as agreed and measures to reduce the damage resulting from not completing the exchange.

1. Reducing Perceived Risk

One way to reduce perceived risk is to collect additional information (Stigler, 1961), including information on the exchange partner and that available through third parties. The exchange partner's ability and willingness to contribute to the exchange in the agreed manner are of central concern. The services of third parties may also be used, such as technical laboratories, government agencies, consultants, and banks, who can provide information on the partner's capacity, willingness, and relevant legal status.

A further way of reducing perceived risk is by using legal institutions developed to enforce contract compliance. This requires that the promises each party makes with regard to the exchange are clearly defined in the contract, as this reduces the probability of subsequent conflicts over the content of the agreement. Contracts protect both sides by imposing sanctions on any violation of the agreement according to the relevant legal framework ("pacta sunt servanda"[19]).

Finally, a seller can reduce perceived risk by forcing the buyer to pay before the exchange is completed or by requiring bank guarantees from the buyer. This is common practice when doing business internationally with parties from areas affected by political or military crisis or that have weak currencies. In a similar way, a buyer can require financial guarantees from the seller, underwritten by banks.

2. Reducing the Damages from Exchange Failures

There are three ways to reduce the damage that occurs if an agreement is not fulfilled. First, each party may try to impose costs on the other party should they fail

[19] (Latin) = "contracts must be fulfilled" (Roman legal principle).

to meet its obligations. To do this contract agreements include clauses specifying exclusion of liability for "force majeure" or for price adjustment clauses. Second, various types of guarantees may be specified in the contract to deal with contingencies, such as accelerated access to bank guarantees if payment is delayed. Finally, financial compensation may be sought for damages incurred. These include penalty payments for late delivery, insurance contracts, such as those offered by many governments to protect international transactions in the capital investment sector, and the inclusion of surcharges in a seller's price calculation, which is a form of self-insurance.

Whatever methods are used, efforts to manage uncertainty incur costs in the form of the time and effort involved, the resources used, and any premiums paid for insurance. However, no method can eliminate risk and buyers, and therefore sellers and buyers have to cope with some uncertainty. In order to deal with this, they must develop some minimum degree of trust in each other. Hence, trust is an essential feature of exchange. Following Luhmann (2000), we define trust as a unilateral concession in an exchange that places a party at risk because it gives the other party some possibility to act in ways that adversely affect the trusting party, without the latter being able to prevent it. In addition, the damage resulting from exploiting a position of trust usually exceeds the benefits resulting from the exchange if the other party behaves in a trustworthy manner. This means that trust is not really a mechanism for reducing risk and uncertainty, but rather a feeling or attitude that allows those involved to cope with risk and uncertainty.[20] In this sense it is similar to hope and we can say that trusting is a way of removing uncertainty from our minds.

All activities to reduce risk and uncertainty incur costs and the acceptance of any remaining amount of uncertainty that cannot be further reduced is itself one of the costs of exchange. The more trust there is the smaller these costs are perceived to be.

A Digression

It is possible to illustrate the theoretical framework we have just developed with a fairy tale some of us may remember from childhood: "Lucky Hans".[21] In this fairy tale Hans appears to engage in a sequence of unfavorable exchanges with others. Let us first recall the story.

[20] "In the end, trust never can be justified; it is generated by overstressing the available information. It is a mixture of knowledge and ignorance" (Luhmann, 2000).

[21] Erich and Monika Streissler (1983) had the brilliant idea to explain the economic exchange theory by means of this exemplary tale.

Lucky Hans

Hans spoke to his master, whom he had served for 7 years: "Master, my time is up, now I want to return home to my mother. Therefore I ask you politely to give me my wages." His master answered: "You have served me faithfully and fair, and as the service was so shall be the remuneration," and he gave him a piece of gold that was as big as Hans' head. Hans pulled out a blanket from his bag, wrapped the gold in it, loaded it on his shoulder and started on his way back home. After walking on the road for some time he met a horseman totting quickly and merrily on a lively horse. "Oh," Hans said quite loud, "how wonderful it must be to ride! The rider is sitting like on a chair, never stumbling over stones on the road, never damaging his shoes, and, you cover the ground you know not how." The horseman heard Hans', stopped and said to Hans: "Hans, why do you travel by foot on this road?" "I do not have a choice since I have to carry home my load. It is true that it is gold, but I cannot keep my head straight because of it and it hurts my shoulder." "Well, I'll tell you what," said the horseman, "we will exchange. I will give you my horse and you will give me your gold." "I shall be delighted to agree," Hans responded, "but let me tell you this, you will have to crawl along with it." The horseman climbed down from his horse, took the gold, helped Hans to climb on and told him: "If want you to make the horse go faster, click your tongue and shout: ho ho!"

Hans was delighted sitting on his horse and enjoyed his new comfort. But after a little while, he felt like riding his horse a little bit faster, so he started to click his tongue and shouted "ho, ho!" The horse started a sharp trot, and before Hans knew where he was, he was thrown off and was lying in a ditch, which separated the country road from the nearby fields. The horse would have bolted had it not been for a farmer walking by the road leading his cow, who stopped it. Hans recovered slowly from his fall and finally managed to get back to his feet. He was however still grumpy and spoke to the farmer: "Riding a horse is not much fun, and even worse, if you come across a nag like this one, which kicks and throws you off, you can break your neck. I will never climb back on this horse. Let your cow be praised, you can walk quietly behind her and beyond that she provides you with milk, butter and cheese every day. What would I not give to have such a cow." "Well," said the farmer, "if it really means so much to you, I will trade my cow for your horse." Hans agreed with the greatest delight. The farmer quickly mounted the horse and rode away. Hans drove his cow quietly before him and thought about his lucky bargain. "If only I have a morsel of bread, and that can hardly fail me—I can eat butter and cheese with it as often as I like, if I am thirsty, I can milk my cow and drink the milk. My goodness, what more can I want?"

Later on, he stopped at a country inn, ate all the food he had with him, lunch as well as dinner, and ordered from what was left of his money half a

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mug of beer. After that he traveled on with his cow towards the village of his mother. But when noon came closer the heat got oppressive and Hans found himself on an open plain that would take him about an hour to cross. Hans started to get hot and his mouth started to get dry from thirst. "I know how to help myself," he thought, "the time has come to milk my cow and refresh myself with milk." He tied the cow to a branch of a tree and, since he had no bucket, he placed his leather hat underneath the cow. But, despite his efforts, not a single drop of milk appeared. And, because of his clumsy attempts to milk the cow the poor and impatient animal eventually kicked him in the head with its hind foot and he fell over and for a long time did not know where he was. But fortunately, just then a butcher passed by pushing a wheelbarrow loaded with a young pig. "What has happened to you, my friend?" he said and helped Hans to get back on his feet. Hans told him his story and, after hearing it, the friendly butcher offered Hans a drink from his bottle and said: "Have a good drink from my bottle, it will refresh you. Your cow does not want to give milk, but to tell you the truth, your cow is an old animal, only good for the plough or for the butcher." "My goodness," Hans responded, while brushing down his clothes, "who would have thought it. With a cow like mine I will certainly end up with a lot of meat. However, I don't care much for beef as it is not juicy enough for me. But look at that beautiful pig you have! It tastes different and then think of all the sausages." "Listen, Hans" the butcher responded, "for you, I will exchange my pig for your cow." "God bless your friendliness," Hans responded and happily handed over the cow for the pig.

Hans continued on his way and reflected again on his good fortune: Whenever he encountered a problem or any inconvenience, he was given instantly an opportunity to fix his misfortune and solve the problem. Very soon he was joined by a young fellow who carried a beautiful white goose under his arm. After a while they introduced themselves and Hans started to tell him about all his good luck and how he always made such good bargains for himself. The fellow told him that he was taking the goose to a christening feast for a newly born child. "Just lift her to feel the heavy weight" the fellow continued and grabbed the goose by its wings, "it has been fattened for 8 weeks. Whoever eats a bit of her when she is roasted will be delighted by the meat and fat." "You are right," said Hans as he felt her weight in one hand, "this is a good weight. However, as you can see, so is my pig." At that moment the fellow turned his head from side to side suspiciously. "Listen, my friend, it may not be alright with your pig. In the village I just passed, a pig was stolen from the village teacher's barn. I fear, it was the one you have with you. They sent out people to look for the thief and it would not be good for you to be caught with this pig. They would throw you into the gloomy hole of the village jail." Poor Hans was terrified. "Oh my God! Please help me to get

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out of this terrible situation. You probably know how to hide away in this place, please take my pig and leave your goose with me." "As a matter of fact, the deal you are proposing will leave me in a risky situation," the fellow answered. "However, I want to save you from your misery." He took the rope from Hans and quickly disappeared with the pig at the next crossroads. Good Hans, without any cares, continued on his way home carrying the goose under his arm. "When I think about it, even my latest exchange was good for me. First, there is the tasty roast, then all the fat that will drip from the goose will make delicious dripping for my bread that will last me for at least 3 months, and finally there are these fine white feathers. I can stuff my pillow with them to make me sleep very comfortably. How delighted my mother will be!"

When passing the last village before his home, he met a scissor grinder with his barrow, singing to its turning wheel. Hans stopped and watched him for a while. Finally he spoke to him: "You seem to be a happy man turning the wheel and grinding the scissors." "Oh yes," answered the grinder, "the trade is a safe haven. A good grinder is a man who always finds money in his pockets. Can you tell me where you bought your beautiful goose?" "I did not buy it but traded it for my pig." "And the pig?" "I received it in exchange for a cow." "And the cow?" "I received it in exchange for a horse." "And the horse?" "I gave a nugget of gold as big as my head." "And the gold?" "Well, that was my wages for 7 years of service to my master." "It seems, you always knew how to help yourself," the grinder said. "Now, wouldn't you be a really happy man if you felt coins jingle in your pocket whenever you got to your feet?" "But, how shall I do that?" Hans replied. "You must become a grinder, like me. It does not take more than a grindstone, everything else will come in time. As a matter of fact, I have a spare one here, which is a little worn but, because of this, I won't ask more than your goose for it. Will you agree to that deal?" "Of course I will, how can you ask!" Hans answered, "I will be the luckiest person on earth. What should I worry if I find money whenever I reach into my pocket." So he handed over the goose and took the grindstone in exchange. "Now," the grinder continued, while picking up ordinary stone that lay nearby, "take this stone as well, it will help you straighten old nails. Take good care of it."

Hans took the stone and happily went back on his way, his eyes glowing from delight: "I must be born under a lucky star," he called out loud, "everything I wish comes true." By that time, because he had been on his feet since dawn, Hans became tired. Also, he was getting hungry. But all of his food was already eaten. Eventually, he could not go on without a rest. The weight of his stones hurt him. Hans started to imagine how good he would feel without this load. Walking at snail pace he arrived at a small well in the fields where he could take a rest and refresh himself. To protect his stones he

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put them very carefully by his side on the edge of the well. He stooped down to drink and as he did so he slipped and bumped his stones. Both stones fell into the water. When Hans saw his stones sinking to the bottom he jumped for joy, kneeled down and, with tears in his eyes, thanked god for his good grace. Hans was released from his heavy load without having to blame himself for losing them. "No man under this sun can be as fortunate as I am," he cried out. Lightheartedly and free from any cares he jumped up and ran to his mother's home.

The story of 'Lucky Hans' illustrates many of the characteristics of exchange described above.

- In the different phases of his journey, Hans faces various problems. Let us look closer at the horse episode. He wants to travel faster, but lacks a means of transportation. Since he is tired and carries a heavy load, he has a strong compulsion to solve his problem. The means available is the exchange of the golden nugget for the horse. All other episodes follow the same pattern.
- At the same time he creates a simplified picture of his decision-making situation by not considering all available alternatives and not looking at all possible consequences. Thus, we can classify his behavior as "boundedly rational."
- The fact that his satisfaction at the time of an exchange is transformed into dissatisfaction later on reflects uncertainty: "Lucky Hans" attracts our attention by ignoring the risks associated with his exchange activities. He is vulnerable because he cannot recognize the fraudulent intentions (opportunistic behavior) of his exchange partners and the different types of outcomes that may arise from an exchange. In addition, he seems to be prepared to naively trust his exchange partners to his detriment. Probably, every one of us would like to urge Hans to develop more risk awareness and replaces trust by other means of uncertainty reduction.

We will return to the fairytale of "Lucky Hans" in subsequent sections of this chapter.

1.1.2 Extended Exchange

So far we have analyzed a basic model of exchange, focusing on an isolated dyadic exchange ratio between a seller and buyer, which is not representative of market exchange. What is lacking most is competition. The buyer and/or the seller compete against others to bring about an exchange with each other. In this section we add competition to our model of exchange.

"Competition is the rivalry between individuals (or groups or nations), and it emerges whenever two or more subjects strive for something only one or some of

them can finally have" (Stigler, 1987). This simple definition, from the American Nobel Prize winner George Stigler, makes clear what competition is all about. Scarcity creates rivalry and, thus, competition. Sellers and buyers cannot pursue their interests through exchange without considering other market participants.

In a free market economy, competition occurs as a result of three conditions that exist for decision making and because of the institution of private property.[22]

- *Free market access*: Every interested party has the right to participate in the market process in pursuit of their own ideas of benefit. There is no prohibition to market access.
- *Free market exit*: Market participants can exit from the market process in pursuit of their own ideas of benefit. There is no compulsion to buy or sell.
- *Freedom to design the terms of an exchange*: An agreement between the parties to an exchange is found according to their respective comparison of perceived value. Both parties have complete freedom.
- *Private property*: Private property is protected. An owner of goods and resources may freely decide how they are to be used and bears the corresponding risk. Of course, there are some limits set by society as to how goods and resources may be used.

In a free market, those with the most attractive offerings are rewarded and those with less attractive offerings are punished. Any participant's fate is repeatedly decided by the judgment of market counterparts. The destiny of each market participant is decided again and again by the judgment of market partner—sellers must survive the buyers' judgment and buyers must survive the sellers' judgment.

Let us extend the dyadic situation depicted in Fig. 1.3 to include a second buyer BC (competitor). This is shown in Fig. 1.6. B and BC compete for an agreement with S (seller), and only one of them can be successful. Because of this excess demand for his offering, S is in a favorable position to choose between B and BC, and S can exploit this to reach a favorable agreement for itself. The seller in this case is in the position of an arbitrator, deciding which offering is superior and which is inferior. S compares the exchange conditions offered by B and BC in terms of how well they solve S's problems. Unlike dyadic exchange, where only benefits and costs are compared, S's decision is guided by his perception of the difference between competing offerings.

This situation is called buyer or customer competition and a seller's market. Buyer competition is typical in centrally planned economies; however, it can also be found in free market situations. For example, if a seller provides a superior product and lacks sufficient manufacturing capacity, buying firms may compete for

[22] In the following, we will assume ideal conditions which in reality can be more or less restricted. The framework of conditions of the market economy is more or less ensured by the authority of laws: These laws do not only protect property and freedom of contracting but do also prevent violence and fraud.

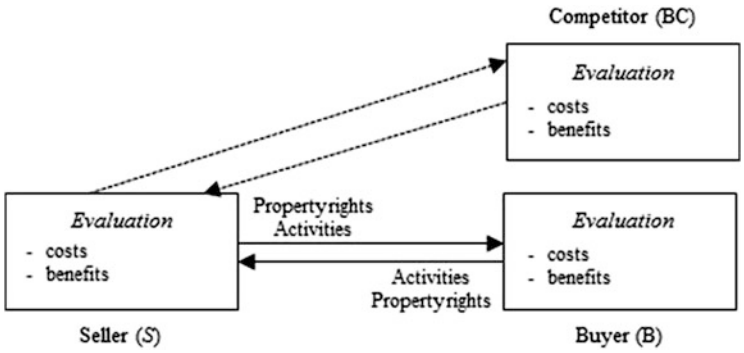

Fig. 1.6 Exchange and buyer competition

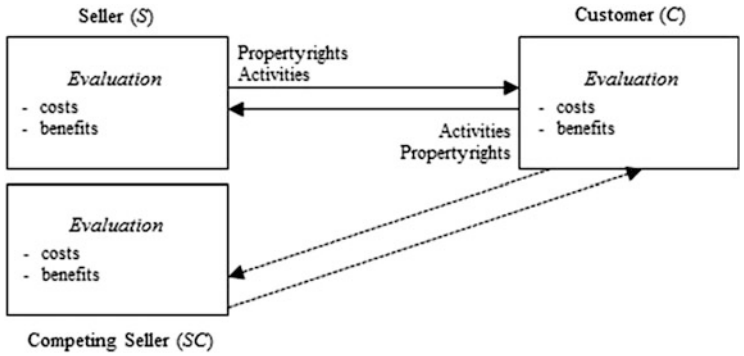

Fig. 1.7 Exchange and seller competition

manufacturing capacity. Generally, these situations may be described as supply shortages.

Now add a second seller SC instead of a second buyer, as shown in Fig. 1.7. A surplus supply situation now exists, a buyer's market, because only one seller can sell its goods or services. The buyer is now in the position of an arbitrator.[23] The conditions of exchange offered by the competing sellers will be compared and the buyer's choice is guided by perceived differences in the value of the offerings.

In the case of competition among sellers, the buyer B has more influence on his counterparts than when a seller's market exists. This is because B has the freedom to switch between S and SC, which allows B to negotiate a more favorable deal.

[23] Unlike in the sports sector, the arbitrator customer in the market activities is not bound to the rules of the game apart from the current laws. He is rather making an effort to lay down his own exchange rules. But he does not impart these rules to the suppliers, i.e., he communicates them in a misleading or incomplete way or reserves the right to modify them in the middle of the process. Sometimes the customer himself is not even sure of his own rules. Therefore, the analogy of sports competitions cannot be thoroughly applied to the role of the arbitrator customer.

Seller competition (buyer's market) is typical for mature markets where intense seller competition prevails.

Exchange in the face of competition is characterized by a battle among sellers and buyers within a given system of rules. To compete they use means designed to win the market partner's favor, which reflect their capacity to solve their exchange partner's problems. The greater the competitive advantage the easier it is to convince market partners to engage in exchange and, therefore, market actors strive to develop and sustain competitive advantages. Market exchange is controlled by the relative power of the parties involved, which derives from their competitive advantage.

In most cases the balance of power is in favor of one of the buyer or seller. Consequently, efforts to generate competitive advantage can be interpreted as an exercise in power creation with respect to the market counterpart (Arndt, 1980).

Distinguishing buyer competition (seller's market) from seller competition (buyer's market) allows us to specify more precisely the sources of power of market participants. Market power depends on the relative scarcity of supply, which depends on the degree to which the parties involved perceive there are substitutes available. The elimination or reduction of the perceived substitutability of a good or service creates opportunities to influence the other side of the exchange.

The competitive process, created and supported by the legal systems of a society, is designed to balance the power of all participants in the market. Market participants try to exploit conditions of scarcity to their own advantage in order to reach favorable agreements with other market participants. The means of doing this is by differentiating offers from those of competitors, offering differential advantage (Alderson, 1957). This does not mean that it is enough just to be different, the difference must make a difference in ways perceived as valuable by the market partner and they need to be difficult to imitate by competitors. Achieving and sustaining differential advantage is not easy because, as soon as a differential advantage is achieved, competitors try to imitate or better it, as we will discuss in more detail in a later section of this chapter.

1.1.3 Complex Exchange

The previous section extends dyadic exchange to triads by introducing a third actor competing with the seller or buyer. This results in two competing exchange ratios. But it still does not correspond to real markets, where exchange situations are usually far more complex.

We define an exchange as complex if there is a system of interdependent exchange ratioships with at least three parties involved (Bagozzi, 1975). The basic structure of a complex exchange is not S—B, but S—I—B, in which I is an additional party involved in a sequence of exchanges. We often find such triadic or multiple relationships in real markets, especially when the exchange between two parties takes place through an intermediary.

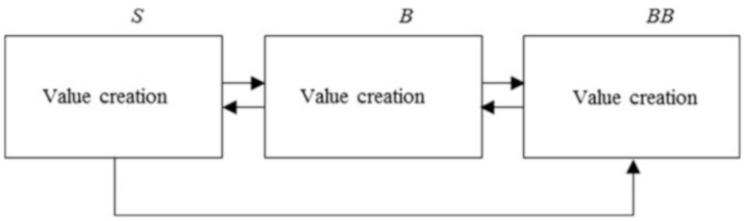

Fig. 1.8 Multi-level market from the viewpoint of seller S

Example 1
A seller S delivers to a buyer B, who is not the final user of the good, but a trader who sells the good on to its buyer BB. S not only contacts with B, but also BB in order to get BB to enter an exchange with B. This is the classic example of a *multi-stage market* (see Fig. 1.8).

Example 2
Seller S starts an exchange with firm I, who runs a trade fair. S wants to reach an agreement about favorable conditions for exhibiting at the fair, such that it will be able to attract buyer B. Firm I promotes the trade fair to buyer B in order to encourage B to purchase a ticket and visit the fair. If B visits the fair, S engages in an additional exchange process with the aim of reaching an agreement with B. The exchange between S and B cannot take place without the exchanges between S and I and between I and B. Figure 1.9 illustrates this complex exchange ratio.

Example 3
Seller S and its partner SP offer a buyer B an integrated total solution to a business need. In order to produce and supply this total solution S and SP are supported by a number of subsellers. S and SP are in an exchange ratio with one another as well as (as a group) with buyer B. Firm BB uses B to buy the total solution on its behalf because B has more experience. A third party, an engineering consultant D, is used to provide advice. Here, we have a network of exchange ratios as depicted in Fig. 1.10.

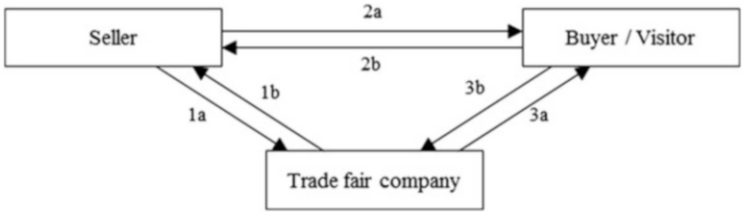

Fig. 1.9 An example of triadic exchange

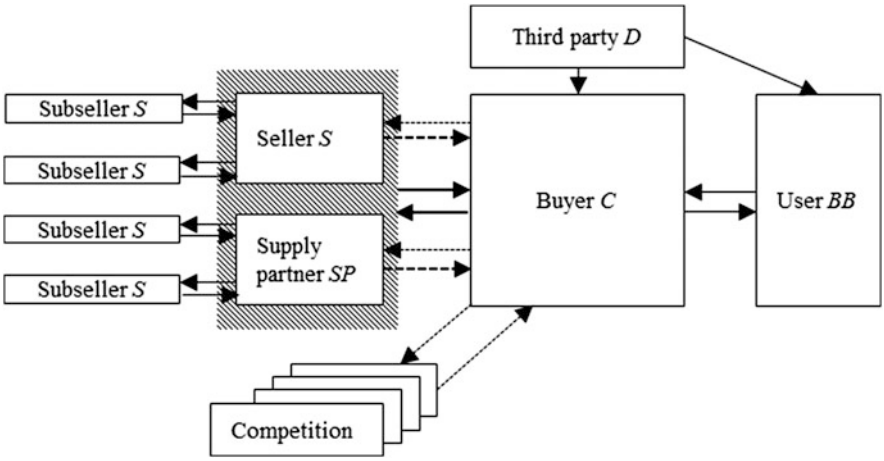

Fig. 1.10 A network of firms involved in a complex exchange

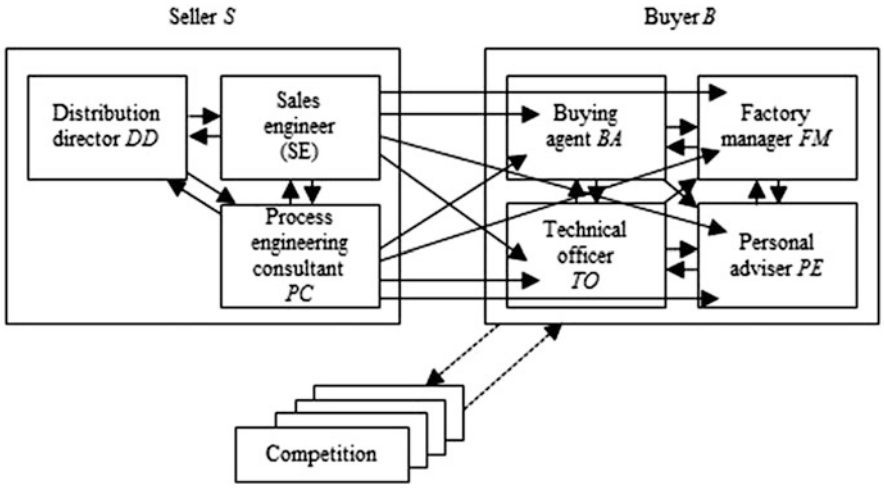

Fig. 1.11 People involved in a complex exchange

Example 4
Seller S wants to reach an exchange agreement with buyer B. The buyer is represented by the buying agent BA, the chief technical officer TO and the factory manager FM. The chief executive's personal adviser PE also plays an important role. S is represented by his sales engineer SE, his process engineering consultant PC, and by the distribution director DD. These people enter into a multi-dimensional exchange ratio with the people acting for the buyer, including a number of partly noncommercial internal exchange ratios. Figure 1.11 illustrates the complex relations network.

Many more examples could be given as complex exchange is the dominant type of exchange in industrial markets. Typically, several firms compete and many people are involved from each firm—deciding, advising, or influencing in other ways. This situation can be found in consumer markets as well, such as in family purchase decisions, but not to the extent found in industrial markets.

Example 4 above introduces some additional dimensions of exchange. So far, firms have been treated as single entities in the exchange process, whereas this example introduces the issue of group decision making. This shows that we must interpret complex exchange as both an inter-organizational and an intra-organizational pattern of interaction among people and activities.

So far the examples of complex exchange ratios have not considered the dynamics of exchange. But, in reality, exchanges *take place over time and have future consequences*. Exchange efforts carried out today have consequences not only for the exchange they are part of, but also for other exchanges, including others taking place at the same time as well as subsequently. Such *spill over or interaction effects* are of particular importance for understanding market exchange. From both the seller's and customer's perspectives, technical, economic, and psychological considerations make it difficult to change an exchange partner easily and, as a result, sellers and buyers tend to develop *supply relations* that can be relatively stable (Hakansson, 1989). A seller–customer relation is a result of exchanges between a seller and a buyer that are not accidental. "Not accidental" means that reasons exist to *systematically* link, a priori, certain exchanges over time, or that, de facto, such linkages emerge. Hence, a buyer–seller relation can be seen as a sequence of connected exchanges. We call such exchange sequences *business relations* (Plinke, 1989).

Examples
- A very insecure customer, after a lot of deliberation, decides to change his dentist. The first visit to the new dentist was very satisfactory. It is highly probable that the customer will go to the same dentist again.
- A car manufacturer is involved in a supply relation with a subcontractor, which involves both basic contracts as well as technical and administrative agreements concerning research and development, production, and logistics. It is not the

individual delivery that counts in these exchange processes, but the business relation as a whole.
- A seller sells to a firm for a number of years and a social bond develops between some of the representatives of each of the firms. The two firms learn about doing business with each other. For these reasons future exchange between the two firms is more likely.

1.1.4 Summary

The characteristics of market exchange discussed so far provide the foundation for our analysis of business markets in this book. We started off with dyadic exchange in order to recognize the basic effects of an exchange on the seller and buyer. This was extended to include consideration of competing sellers and buyers, in order to provide an understanding of the role of competition on exchange. Additional exchange parties, including intermediaries, were then introduced, as well as the many people involved in the exchange process, which results in a more detailed view of complex exchange. Finally, the dynamics of exchange and the connection among exchanges over time and place were introduced to complete the descriptive model of exchange.

The foregoing are the basic concepts necessary to describe any market exchange process. They enable us to consider the following fundamental question regarding the nature of the market process: Under what conditions is an exchange perceived as successful by the parties involved, or when does a mutually agreeable exchange agreement arise between seller and buyer?

1.2 The Market Transaction

We have described exchange in terms of a system of activities aimed at the preparation, negotiation, and control of a mutually conditioned transfer of rights between two or more parties. Our purpose here is to understand how a firm achieves its goals by means of exchange processes—how the input and output of goods and rights plays a role in reaching its goals.

One can analyze exchange from various perspectives—from sociological, psychological as well as from legal ones.[24] In this section we examine the conditions under which market participants reach agreements about the mutual transfer of rights and obligations. It is the agreement itself, each party's decision to accept the

[24] Schneider (1987) introduced the following enlightening illustration regarding the distinction between empirical and analytical objects: Business students sit in a dark theatre (science), and on the stage is reality. This reality can only be seen when the headlights are switched on—by scientists.

offer of the other party, that is the focus of our attention, and we call this agreement a transaction. The market transaction is an integral part of the theory of economic decision making. It has the characteristic that it does not concern the decision making of one economic actor considered in isolation but concerns the simultaneous interaction of the decisions of at least two parties.

1.2.1 Exchange Ratios

In order for each party involved to be able to solve its problems through market exchange an agreement between them is necessary. Each exchange party evaluates the costs of the goods and services they have to contribute and the benefits of the goods and services they would receive in terms of the problems they are trying to solve. The costs compared to the benefits expected we term the "*exchange ratio*."

Definition 5: Exchange Ratio
The perceived benefits received or claimed by the seller or buyer in an exchange compared to their perceived costs.

If at any time the buyer and seller agree upon the rights to be transferred, we shall call this agreement a *transaction*—in colloquial language this is referred to as a "deal".[25] If an exchange ended without an agreement, then no transaction has taken place. A transaction occurs when both parties to the exchange become convinced that the exchange ratio corresponds to their expectations and, therefore, they are willing to agree to the transfer of rights involved. In legal terms we refer to it as concluding a contract such as a purchase contract, a leasing contract, a license agreement. An agreement is the visible expression of the fact that, in the given circumstances, neither party perceives a better option, including no exchange.[26]

[25] Commons (1959) provided substantial contributions to the understanding of the transaction as the unit of economic analysis. He made the transaction the final unit of economic examination which represents a unit of transfer of legal control. It makes a classification of all economic decisions of the courts and tribunals of arbitration possible under the various economic factors involved in transactions at the moment they are actually made. Kotler, Keller, and Bliemel (2007, p. 14) make a similar distinction between an exchange process and a transaction. According to them two parties are said to be involved in an exchange process if they are negotiating and moving toward an agreement. A transaction takes place if an agreement is reached. Transactions are the basic unit within an exchange process.

[26] Kirzner (1973) writes about a pair of mutually fitting relationships: "Each pair of dovetailing decisions (each market transaction completed) constitutes a case in which each party is being offered an opportunity which, to the best of his knowledge, is the best being offered to him in the market. Each market participant is therefore aware at all times that he can expect to carry out his plans only if these plans do in fact offer others the best opportunity available as far as they know."

Definition 6: Transaction
An agreement between two parties about the value of the assets each of them gives up and receives in an exchange.

A necessary condition for a transaction is the *matching of exchange ratio for each of the parties involved*. The agreement between the parties turns the subjective exchange ratios into an objective reality. In order to understand the transaction, a more detailed analysis is needed of the value perceptions of each party regarding the exchange ratio.

1.2.2 The Elements of an Exchange Ratio

For the buyer and seller an exchange contains several sources of potential benefits and costs:

- The sales contract or agreement describes the performance requirements for each party and is therefore a source of benefits and costs for each side. We will refer to them as the *benefits and costs of the contract*.
- The negotiation and carrying out of a transaction is not without costs (Picot & Dietl, 1990; Williamson, 1985).[27] We refer to these as *transaction costs*. In addition, *transaction benefits* may arise in relation to the process of negotiating and carrying out a contract. For example, it might be an inherently enjoyable social or economic process in some situations, such as the bargaining processes that take place in street markets.
- A transaction is not carried out in isolation from other transactions and processes in the environment. Almost every transaction has external effects of one sort or another. Hence we distinguish between the benefits and cost that arise directly from the exchange, and side effects that only become apparent in other exchanges. We refer to these side effects as *side benefits* and *side costs* from the perspective of the parties involved in the focal exchange.

Figure 1.12 shows the possible sources of benefits and costs for a buyer and seller.

1.2.2.1 The Buyer's Perspective

If a product or service is provided as contractually specified, the buyer receives the contract benefits. These are the benefits the product provided contribute to solving a particular problem, which may involve completing various production, administration, logistics, or other tasks using the product. The meaning of the term "Product"

[27] It was the English Nobel Prize winner Ronald H. Coase (1937) who introduced this insight to market theory.

		Type of value	
		Benefits	Costs
Source of value	Value of contract object	Contract objects' benefits	Contract objects' costs
	Value of exchange accomplishment	Transaction benefits	Transaction costs
	Value of side-effects	Side-benefits	Side-costs

Fig. 1.12 The benefits and costs of an exchange ratio

in this context has to be interpreted in the broadest sense as a *means of producing value*, *of solving problems*: it comprises all the elements defined in the agreement including hardware, software, services, and ownership and usage rights. From the buyer's perspective, a product is not a physical object but a means of solving a problem, with the associated perceived benefits. It is not the machine that constitutes the product but the availability of manufacturing capacity; the consulting process is not the product but the resulting ability of the buyer to deal with a problem in a better way.[28]

The contract benefits are based on the *usership and ownership rights* gained from product provided, including the rights to use and consume, to earn a profit from, to transform, and to sell. The potential benefits of a product thus occur throughout its useful life, what we term its *life cycle benefits*. A product can have technical, economic, social, legal, and psychological dimensions. In addition, there are various non-contractual services carried out by the seller that result in benefits for the buyer, such as fair trading.

The potential *transaction benefits* for a buyer arise independent of the emergence of an agreement during the buying process.[29] One example is the know-how the buyer may gain from the seller as a result of their interactions, which may assist the buyer in later use of the product. Another is the positive experience the buyer has during the exchange process, from their own activities or those of the seller. The seller's efforts to facilitate the buyer's decision making, such as consulting advice, comparisons of alternatives, advertising, inspection tours, and test operations are yet another potential source of benefits that can increase the buyer's trust in the seller and hence lower its transaction costs.

[28] The relevance and importance of this distinction between a product as a physical resource or capability and the services or benefits that can be provided by using the product or resource is receiving increased attention in the marketing literature of late with the development of the concept of service dominant logic (e.g., Vargo & Lusch, 2004)

[29] Bagozzi (1986) mentions the possibility of exchange benefits.

The third type of benefit relates to the effects on other exchanges taking place alongside and after the focal exchange. One type of side benefit is related to future business activities. For example, in industrial markets the technical circumstances of the focal exchange may facilitate future buying decisions. This occurs when the technical compatibility of a system in the buyer's company is important. If a buyer decides to buy a system which offers high compatibility and a range of future extensions and improves the buyer's flexibility and certainty concerning future investment decisions. These side benefits can be important considerations and even outweigh direct contract benefits. We refer to such benefits as "*future purchase certainty*."

Another type of side benefit is the *simplification of future purchases*. The more technically complex an exchange is, the more past experience with the same partner influences future exchange costs. This is because the people responsible are known, interfaces have been clarified, contract patterns have been tested and technologies are known. Relevant past experience can have beneficial effects on the following aspects of an exchange:

- Knowledge about the market partner
- Decision-making routines
- Trust in the partner
- Technology and use concepts
- Clarification of specifications

Similar types of side benefits can occur in other exchanges taking place at the same time, as when knowledge gained in one exchange is relevant to another or the reputation a buyer gains in one exchange spreads to others.

The benefits will have to be compared to the costs, which we consider now. Costs include not only the purchase price, but all costs anticipated over the life cycle of the product, including implementation, operating, and disposal costs.

The buyer's transaction costs comprise all the efforts involved in reaching an agreement. They include both human time and effort and the use of resources designed to facilitate the buying decision. Of particular importance are the costs of information collection and use that are designed to *reduce risk*. In terms of the different stages of an exchange, transaction costs can be classified as follows (Picot, 1982)[30]:

- Transaction preparation costs, i.e., search for and procurement of information about possible exchange partners and their terms
- Transaction settlement costs, i.e., the time and effort involved in negotiation, contract formulation, and reaching final agreement

[30] A more detailed classification proposed by Albach (1988) is search costs, preparation costs, negotiation costs, decision costs, agreement costs, control costs, and termination costs.

- Transaction control costs, i.e., controlling and monitoring compliance with contract terms including timing, quality, quantity, price, and secrecy
- Transaction adaptation costs, i.e., time and quality adjustments and price and quantity changes resulting from unforeseen circumstances arising during the term of the contract

Costs from side effects can be of considerable importance to the buyer. Technical compatibility is a crucial issue. A buyer who selects a particular seller's system may lock itself into this system in the future and thereby sacrifice some of his future *freedom of choice*. The economic expression of this sacrifice is in terms of the buyer's *switching costs* in case of dissatisfaction.

1.2.2.2 The Seller's Perspective

The benefits and costs of an exchange ratio from a seller's perspective mirror those of the buyer.

The seller's contract benefit is the price paid. This is more than financial revenue. It comprises all contractually specified contributions, actions and non-actions of the buyer in relation to the seller, including monetary and non-monetary aspects.

The seller's transaction benefits comprise all the positive effects which are the direct outcome of the exchange process. These encompass all learning effects resulting from preparing the offer, including increased market knowledge.

The seller's potential side benefits are many. One is the deepening and consolidation of a *business relation* with the buyer, which increases the likelihood of future orders. In addition, the seller can gain technological benefits through cooperating with a leading edge customer in research and development. We call the benefits arising from a deepened business relation and from technological cooperation *cooperation benefits*.

Expectations regarding future business activities with other partners are also important, because an exchange can have carry-over effects on future business activities with the same or other customers. This is especially so when an exchange becomes a reference point for other customers and projects. The benefits here are the referrals that can arise from the focal exchange and we term these benefits *referral benefits*.

The seller's costs comprise everything invested in the development, production, and commercial launch of the product. The transaction costs relate to the seller's efforts to reach an agreement and carry out the exchange. As we did for the buyer, the seller's transaction costs can be divided into:

- Transaction preparation costs, i.e., search for and procurement of information about possible exchange partners and their terms
- Transaction settlement costs, i.e., the time and effort involved in negotiation, contract formulation, and reaching final agreement
- Transaction control costs, i.e., controlling and monitoring compliance with contract terms including timing, quality, quantity, price, and even secrecy

Table 1.3 The costs and benefits in an exchange

Type of benefit			
	Contract benefits	Transaction benefits	Side benefits
For buyers	Offered product benefits	Increased know-how, security	Security, cost reductions
For sellers	Purchase price	Increased know-how	Referral benefits, cooperation benefits
Type of cost			
	Contract costs	Transaction costs	Side costs
For buyers	Purchase price, costs of use	Negotiation, implementation, disposal costs	Switching costs
For sellers	Production costs	Negotiation, implementation costs	Lock-in costs, cooperation costs

- Transaction adaptation costs, i.e., time and quality adjustments and price and quantity changes resulting from unforeseen circumstances arising during the term of the contract

Side effects can become important costs if current transactions create future commitments. These may arise because of effects on the buyer's expectations. Examples are the cost of storing replacement parts and service expectations. The danger of such costs exists whenever the seller is willing to make commitments in the expectation of future exchanges (Söllner, 1993).

Table 1.3 provides an overview of the benefits and costs involved in an exchange from the viewpoint of the buyer and seller.

1.2.3 The First Condition for the Emergence of a Transaction

The preceding description of the exchange ratio and its associated benefits and costs provides the basis for specifying the necessary conditions for exchange partners S (seller) and B (buyer) to reach an exchange agreement, i.e., a transaction. Each partner must balance the costs and benefits involved in terms of what they must give and what they want to receive, with each wishing to get more—or at least not less—than they give. From the buyer's viewpoint, the emergence of a transaction requires that the ratio of anticipated benefit to anticipated costs, *the exchange ratio*, must be greater than one. This is the first condition for the emergence of a transaction.

Condition 1a
The exchange ratio from a buyer's perspective must be greater than one, i.e.,

$$V_B = \frac{\text{benefits}_B}{\text{costs}_B} > 1$$

where, V_B is the value of the exchange ratio perceived by the buyer, benefits_B is the value of the buyer's anticipated benefits and costs_B is the value of anticipated costs including what the buyer has to give up in the exchange.

The seller is only willing to agree to the contract if the anticipated benefits from the exchange exceed the anticipated costs, i.e., if the seller can realize an exchange ratio greater than or at least equal to one. This is the second condition for the emergence of a transaction.

Condition 1b
The exchange ratio from a seller's perspective must be >1, i.e.,

$$V_S = \frac{\text{benefits}_S}{\text{costs}_S} > 1$$

where, V_S is the value of an exchange ratio perceived by seller S, benefit_S is the value of the seller's anticipated benefits and costs_S is the value of anticipated costs, including what the seller has to give up in the exchange.

Both sides strive to achieve at least a balance between the broadly defined costs and benefits of the exchange ratio, which means that each of them wants to get at least as much as he gives (Barnard, 1938).[31] Without both parties anticipating an exchange ratio greater than one, no transaction will take place. Nobody easily consents to an agreement that makes them worse off. It might at first seem impossible to achieve simultaneously an exchange ratio greater than one for both parties. But the apparent contradiction disappears when we focus on *perceived* value in relation to each party's goals.

The buyer's perceived costs are *not* necessarily equal to the seller's perceived benefits and vice versa. Assessments are subjective, they depend on the problems the parties are trying to solve and they are influenced by uncertainty regarding the actual outcomes of the exchange process. This may result in one party perceiving its costs as low relative to the benefits perceived by the other party. The opposite may also occur, when one party perceives its costs to be high relative to the benefits

[31] March and Simon (1967) describe this behavior as striving for a balance between inducements and contributions. No party wants to contribute more than the value of the inducements it receives.

perceived by the other party.[32] The following simple example illustrates the asymmetry of costs and benefits in an exchange.

Example
When, after years of search, one of the authors found, in a flea market in Berlin, a door handle which fitted an 80 year old door in his house. He was very happy. Of course, the item looked corroded, but it would regain its glamour with some polishing. "50 Euros" the salesman requested. "You must be joking," the author responded, "You found it in a house that was being demolished." He was sure the salesman had not paid anything at all for it. The reader can easily reconstruct the logic of this situation. The author bought the door handle. What does this tell us? The sacrifice of the salesman in obtaining the door handle has got nothing to do with the benefits for the buyer. The benefits for the buyer arise from comparing the purchase with alternatives, and not from the costs of the salesman. In this case the alternatives were "no door handle" or "further search."

Those involved in an exchange process not only differ with regard to their goals and their current decision situation, they also have different knowledge. The buyer has incomplete knowledge about the goals and decision situation of the seller and vice versa. In complex exchanges in industrial markets, we frequently find that sellers of technological goods know more about the technology, whereas the buyers have more knowledge about the situation in which it is to be used (Gemünden, 1981).

This *information asymmetry* (Spremann, 1987)[33] underlies the fact that an exchange process is a non zero-sum game. The divergent assessment of benefits and costs in exchange ratios is the basis of the market process and the market economy in general.

In order to describe and explain the emergence of a transaction we must specify more precisely the relationship between what the seller gives and the buyer's

[32] An exchange is not a "zero sum game." The effects of that for marketing can only be mentioned briefly at this point. For a seller to achieve a positive exchange ratio, it is important not only to create a positive assessment for the buyer and to carry out the exchange, but also to keep costs as low as possible. The buyer and seller have considerable scope for action here. Each strives for a relation between outputs and inputs that is as favorable as possible. A production function is defined as the relation between resource inputs and realized outputs (Gutenberg, 1983). In a similar way, we can define a "marketing function" in terms of the relation between the input costs and the outputs for the market partner. Hence, production, and marketing can be described in terms of productivity. However, an analysis of the marketing function is different from Gutenberg's. He focuses on the company, whereas we focus on the relationship between a buyer and seller.

[33] Asymmetrical means that the principal has less relevant information than the agent. This principal-agent-concept in economic theory explicitly assumes that the principal and agent have different levels of information. It interprets the contractual relations between the parties on the basis of egoistical and opportunistical behavior.

perceived benefits and between the seller's perceived benefits and what the buyer gives. We can summarize the features of this asymmetric assessment in terms of the relationship between a seller S and a buyer B, as follows.

1. Everything S gives is possibly beneficial for B (and vice versa).
2. Not everything S gives is beneficial for B (and vice versa).
3. B decides what is beneficial for B; S decides what is beneficial for S.
4. Some of what S deliberately does remains unnoticed and thus not assessed by B (and vice versa).
5. Some of what S unintentionally does is noticed and assessed by B (and vice versa).
6. The relationship between the costs of S and the benefits of B is seldom proportional. The relationship between the costs of B and the benefits of S is also seldom proportional.
7. Some of what S or B do to create benefits for the opposite side can create damage.

Figure 1.13 illustrates the possible relationships between the buyer's perceived benefits and the seller's costs. Figure 1.13 shows (a) a linear relation between the seller's costs and the buyer's benefit, (b) a saturation curve, and (c) a curve with a maximum after which utility declines steeply and eventually becomes negative. Figure 1.13 (d) shows no relationship between the buyer's benefits and the sellers costs.

1.2.4 The Second Condition for the Emergence of a Transaction

The first condition means that nobody will voluntarily enter an agreement that makes them worse off—taking into account all anticipated benefits and costs. The second condition stems from the fact that a transaction does not take place in isolation, and that buyers and sellers make comparisons among alternatives when evaluating a transaction.

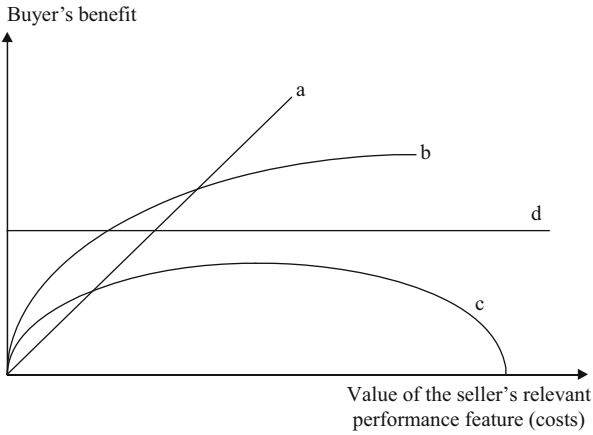

Fig. 1.13 Hypothetical utility functions for the buyer in terms of the seller's costs

The buyer and seller evaluate a given exchange ratio relative to a given *level of expectation*. The basis for comparison is what *Thibaut* and *Kelley* term the "comparison level (CL)" (Thibaut & Kelley, 1986). This constitutes a *reference point* that emerges from the decision makers past experience and from knowledge and beliefs about the alternatives available. In more general terms it refers to what the decision maker considers fair, right, appropriate, or realistic. The second condition for the emergence of a transaction is that the value of the exchange ratios for the buyer, V_B, must be greater than or equal to the buyer's comparison level. Otherwise the buyer will not accept the agreement—at least not without additional assumptions.

Condition 2
The value of the exchange ratio for the buyer must equal or exceed the level of expectation, i.e.,

$$V_B \geq CL$$

where CL = evaluation standard for V_B

The comparison level CL is determined by the claims and expectations of the buyer or seller. The claims are derived from experiences in past exchanges as well as from the perceived value of alternatives. If the transaction is influenced by *alternatives*, we call this situation competition. The buyer B and seller S are not alone; they compete in solving their problems through exchange with the *interests of other market participants*. This is because, in a market economy, a third party is involved in any exchange between a seller and buyer—the seller's competitor (SC) and the buyer's competitor (BC). Transactions under free market conditions are agreements reached under the influence of competition. Hence, the aim is not only the achievement of mutually acceptable exchange ratios but, in addition, each party has to prevail over a competing party. Naturally, this alters the exchange behavior of the parties involved.[34]

Definition 7: Market Transaction
The agreement between a seller and a buyer about what each of them gives and receives, achieved as the result of competition on the seller's and buyer's side.

Hence, the second condition for the emergence of the exchange is that S does not perceive a better alternative *and* B does not perceive a better alternative. The buyer

[34] Not every transaction is a market transaction. A transaction is an agreement between two parties about what each party gives and receives and is achieved if two parties reach an agreement without any market exchange process. This is the case for instance in labour relations, where party A gives an order to party B which B carries out because they are employed by A.

compares the offer of seller S with each alternative offer from sellers SC1, SC2, . . ., SCi, . . ., SCn. The seller compares the offer of buyer B with the offer of buyers BC1, BC2, . . ., BCi, . . ., BCm.

Condition 1 has to apply to each potential exchange partner. Sellers and buyers evaluate the partner in an exchange ratio, and they also undertake exchange activities with other potential partners and make comparisons.

The focus of comparison for the buyer in a given exchange ratio with S is the exchange ratio with the best alternative seller SC—the opportunity cost. S has to offer an exchange ratio which is superior to that of the best alternative seller. Thus, from the buyer's perspective, the second condition for the emergence of a transaction, considering all the perceived costs and benefits in the exchange ratio,[35] is as follows:

Condition 2a (Buyer's Perspective)

$$V_{B/S} > V_{B/SC} \Leftrightarrow \frac{\text{benefits}_{B/S}}{\text{costs}_{B/S}} > \frac{\text{benefits}_{B/SC}}{\text{costs}_{B/SC}}$$

The ratio of anticipated benefits and costs in the exchange with the seller S has to exceed the corresponding ratio with seller SC.

Condition 2 is developed in the same way for the seller. The seller, if the market situation permits, will develop a reference point that is used as the basis for choosing among potential buyers.

Condition 2b (Seller's Perspective)

$$V_{S/B} > V_{S/BC} \Leftrightarrow \frac{\text{benefits}_{S/B}}{\text{costs}_{S/B}} > \frac{\text{benefits}_{S/BC}}{\text{costs}_{S/BC}}$$

The ratio of anticipated benefits and costs in the exchange with buyer B has to exceed the corresponding ratio with buyer BC.

1.2.5 Conclusions

Each participant in an exchange process gives as well as receives. The value received is defined by the recipient, the value given by the giver. If the value received exceeds the value given, then a party's welfare will be increased. If this

[35] Whether the individual benefit and cost components can be added together we shall leave open at this point. Here we are concerned about but clarifying the structure of an agreement, not about measuring benefits and costs.

holds true for both sides, then the first condition for a transaction will be fulfilled. In order to achieve a market transaction, both the buyer and the seller must be unable or unwilling to find a better alternative. This is condition 2.

In summary, no one can successfully participate in market activities without being able to offer a deal (an exchange ratio) that is advantageous for others. This applies to firms as well as to employees, it applies to capital owners and to landowners, it applies to all people and organizations participating in market transactions.

Let us once again consider "Lucky Hans."

- During his brief journey, Hans is involved in five transactions with various exchange partners, i.e., he reaches agreements about goods to give and to receive. The horse seller accepts the horse for gold; Hans accepts gold for the horse and so on. The result is the mutual transfer of ownership and usership rights—Hans transfers ownership of the gold nugget, the horse owner that of the horse.
- Hans and his exchange partners engage in each transaction voluntarily. In each exchange situation, Hans determines afresh the subjective value of what he gives and gets and, presumably, so *do* his exchange partners. In each case he perceives the anticipated benefits as greater than the anticipated costs. Hans has, from his perspective, had a successful exchange in every case, as we can see from his expressions of happiness shortly after each exchange.
- Obviously, Hans has a certain style of decision making. He acts only according to condition 1, i.e., he is satisfied in each case if the value acquired seems greater than the value given. Hans has no reference point, as he does not compare an exchange ratio with earlier experiences or to alternatives, as we expect according to condition 2. Hans does not ask if other market participants would accept a similar exchange ratio or offer a more favorable one.

Now a hint to the reader: We have described complex exchange and know that, realistically, more than three parties are involved and that often more than one person is involved in negotiating an agreement. The consequence of this is that the conditions we set for the emergence of a market transaction are context and actor specific. They are formulated in a specific case for *each involved actor and person* and we need to take into account the effects of interactions among the people involved. Hence, an analysis of the design and influence of market transactions—the theory of marketing management—is very complex for both researchers and practitioners.

1.3 The Market Process and Entrepreneurship

Up to now we have described the characteristics of simple, extended, and complex exchange, as well as the conditions underlying the emergence of market transactions. Now we focus on the operation of the market as a whole rather than on individual transactions. Individual transactions do not occur in isolation, but are connected directly and indirectly to other market transactions. This interdependence arises from the competing interests of the actors involved, as when the buyer chooses seller S instead of SC, or the seller decides in favor of buyer B instead of BC. We call this competition. Here, we broaden our concept of competition to view it as a process that involves market participants learning from past experience. Of particular importance is the role played by the "entrepreneur" in the market process, the economic actor who identifies profitable opportunities. The central role of information in the marketing process is also highlighted.

The market is formed by all those seeking benefits via exchange and is in a sense infinite. In order to analyze the market process, we will confine our analysis to activities taking place in a particular period of time. We define the market process as comprising all exchange efforts and market transactions, together with their consequences, that occur in one time period such as a day, month, or year.

In order to illustrate the mechanism of competition it is helpful to conceive of a market in a rather abstract way—as a process in which every person and firm can participate as a buyer and/or as a seller. Everyone who joins the market process is in search of favorable exchange ratios and participates in exchange processes that either result in a market transaction or ends. A market transaction results if an agreement between at least two parties takes place (as defined in Sect. 1.2).

Individual market transactions affect one another in many ways. This is in part because each market participant has to coordinate their own aims and behavior with the aims and behavior of other market participants, including competitors and potential exchange partners. Hence, for a market participant to make its own decisions, information is required about the aims and behavior of other market participants. However, such *information always remains incomplete*, which results in errors and incorrect decisions leading to lower profits and value than might otherwise be possible. Purchases may be made that are more expensive than necessary; sales are made at prices that are lower than could have been obtained. Learning takes place based on such mistakes and provides a basis for improved decisions in the next period of the market process. However, since all market participants learn and adjust their behavior in the next period, further mistakes and incorrect and inferior decisions can still be made. In this way the market process continues.

The market process can be viewed as a *search process that never stops for any participant*.[36] Since all market participants are engaged in this search process, the

[36] Friedrich A. von Hayek (1960), the Austrian Nobel Prize winner in economics, describes the market process as a "process to discover facts which would remain undiscovered or at least unused without him".

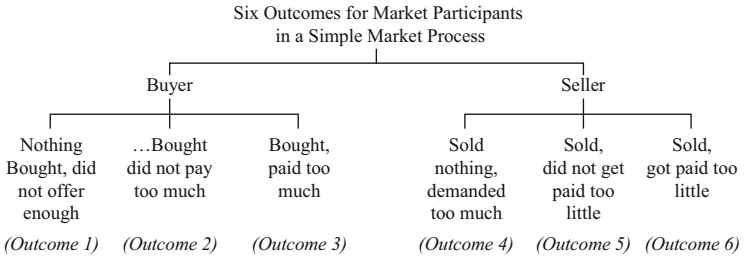

Fig. 1.14 Six outcomes for market participants in a simple market process

market in effect creates the knowledge needed by buyers and sellers to act: "... the whole organization of a market mainly serves the distribution of information according to which the buyer has to act" (Hayek, 1976). The basic explanation of the market process is in terms of the limits of human knowledge and the constant search for and acquisition of information (ibidem). The market is a mechanism for efficiently and effectively creating and dispersing information and responding to change (ibidem).

Kirzner developed a helpful way of describing the market mechanism (Kirzner, 1973). He first postulates a market of buyers and sellers in which no participant is aware of the whole market process. In addition, no participant is able to learn from past experience, such that they make their decisions again and again in the same way. In this situation there are six possible outcomes for the market participants as shown in Fig. 1.14:

- *Outcome 1*: Buyers exist that were willing to buy but go home unsuccessful because they did not offer sufficiently high prices. They have not learned that one buyer has to outbid the other.
- *Outcome 2*: There are buyers who purchased and did not pay too much.
- *Outcome 3*: Some buyers purchased, but have not discovered that they could have bought the same goods cheaper.
- *Outcome 4*: Some sellers leave with goods unsold, because they demanded too high prices. They have not learned that in order to sell, they have to underbid other sellers.
- *Outcome 5*: There are sellers that have sold and have not received too little.
- *Outcome 6*: Sellers exist that have sold, but without discovering that they could have sold their goods or resources at higher prices.[37]

In this model, market participants' plans are only met in outcomes 2 and 5. In all other cases they have not achieved their aims because they did something wrong

[37] We use Kirzner's model to aid our analysis, not for the description of the entire reality. Other outcomes could be imagined, such as sellers that could have sold more had they learned that they have to produce more.

without realizing it. In this model there are *profit opportunities* in cases 1, 3, 4, and 6. Let us now imagine an adaptive and alert new market participant entering this market where nobody learns. The alert new market participant would discover quickly that some participants buy too expensively and that others sell too cheaply. Hence, they would buy from those who have not noticed yet that they sell too cheaply (case 6), and sell to those who have not noticed yet that they buy too expensively (case 3). Profits result because of the inability of the other market participants to learn and the new market participant's ability to detect these opportunities. The new market participant's alertness is rewarded with profits. The profit consists of the difference between the selling price and purchase price or what is known as market arbitrage. Should the other market participants fail to learn, such profits are guaranteed in the long run.

This is a hypothetical example. Buyers and sellers in real markets do learn and are adaptive. They learn from the experiences of their actions in the market. For example, they discover that they have paid too much or sold too cheaply, they observe what other market participants do, and they can adjust their behavior accordingly. Hence, the profit opportunities in *Kirzner's* market model should disappear. And indeed they do—but with a delay. *Market learning takes time*, *and* therefore, *at least temporarily*, profit opportunities arise in real markets.

Profit opportunities arise again and again in markets as a result of uncertainty regarding the plans of other market participants as well as due to changes in the plans and expectations of market participants. But these opportunities disappear over time—sometimes very quickly, sometimes relatively slowly.

Market participants who are able to detect profit occasions are called "entrepreneurs" by Kirzner. The word "entrepreneur" has a special theoretical meaning and must not be confused with the everyday meaning of the term. It refers to the role of detecting profit opportunities. The entrepreneur is characterized by alertness and speed of response. Entrepreneurs find profit opportunities quicker than others who might have similar interests and they take the initiative, innovate, and thereby create advantages for themselves and others.

When the entrepreneur successfully exploits a profit opportunity, something important happens that underlies the operation of the market process. New market information is communicated to other market participants, which improves their market activities. By buying from the seller who up to now sold too cheaply and selling to the buyer who up to now bought too expensively, the entrepreneur sends out a *signal* to all other market participants:

- Other market participants hear that there are some who sold too cheaply. They will offer higher prices to them than these sellers thought possible up to now. These buyers then act as entrepreneurs.
- Other market participants realize that some have paid higher prices. They will offer lower prices—lower than these buyers thought possible up to now. These sellers then act as entrepreneurs.

The opportunities detected by an entrepreneur are seen by others, who will try to exploit them as well. In order to succeed, the entrepreneurs have to outbid one another for sellers and underbid one another for buyers. This process results in the gradual erosion of the opportunity as market participants are driven by competitive market processes closer to the limits of their ability to participate successfully at the market (Kirzner, 1973). Profit opportunities detected by entrepreneurs are therefore generally temporary. They disappear via the creation and diffusion of market knowledge, i.e., the information given to the other market participants by the entrepreneur. Profit opportunities attract other entrepreneurs, who start to *compete* with the original ones.

The market process cannot be fully known to the individual market participant, due to the imperfections of human knowledge and due to the uneven distribution of information about the plans and behavior of others. Individual market participants, through their market activities, gather information and at the same time send out information to the other participants in the market process. *The flow of information, as well as the search for and competition over favorable exchange conditions become key elements of a theory of the market process*. Figure 1.15 summarizes the nature of the market process.

In Fig. 1.15, the outcomes of the market process, i.e., the nature, extent, and terms of market transactions, depend on the market participants' plans and actions. These outcomes feed back to the market participants as information. This produces modifications in plans and actions in the next period and so the process continues.

The market process is driven by entrepreneurs' continuous search for profit opportunities. "The necessity to realize profits compels an entrepreneur to adapt as quickly and completely as possible to the desires of buyers (on the goods market) and sellers (on the resource market)" (Mises, 1949). Thus, one of the main driving forces of the market process is the role of the entrepreneur who continuously

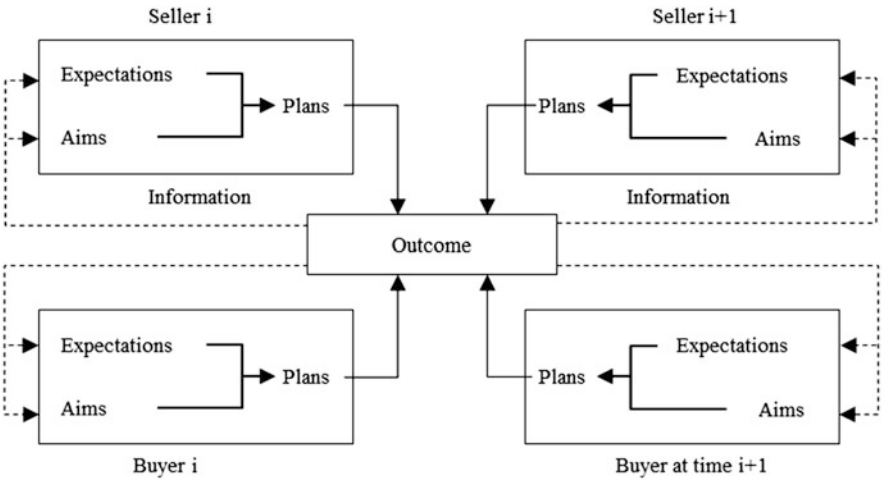

Fig. 1.15 Structure of the market process

searches for *yet unnoticed* changes in circumstances, which enable them to achieve more favorable exchange ratios than was possible or known up to that time. Markets are subject to continuous change because of market uncertainty and because of economic, technological, and social change. Hence, the market process can be seen as ". . . a journey into the unknown, an attempt to discover new ways to make things better than up to now" (Hayek, 1976).

The entrepreneur is not only a trader who buys and sells products. A producer can be an entrepreneur. A producer takes in inputs from its environment and combines or transforms them into products or services, which are sold. The value of these external inputs as well as the producer's own inputs is what the "producer" buys; the value of his products or services is what he sells.

An earlier description of an entrepreneur's function is the "dynamic entrepreneur" in the works of the famous Austrian economist Joseph A. Schumpeter (1984). According to him, the entrepreneur's task is to identify and bring about new combinations of manufacturing resources.[38] It is not necessary that the entrepreneur develops the ideas himself; he only has to recognize the potential benefits and innovate in the face of resistance. The profits earned by the innovator create in turn incentives for other market participants (*imitators*) to copy it. This gradually erodes the profit, which spurs entrepreneurs to seek out additional opportunities by means of further recombination of productive factors and by responding to industry or market changes. The result is what Schumpeter calls a process of "creative destruction" in the economy in which entrepreneurial activity leads to the continual supplanting of existing patterns of production by new ones.

A further refinement of the concept of the entrepreneur recognizes that the "entrepreneur" does not act alone in real markets. The detection of profit opportunities takes place in firms made up of systems of specialized labor that require coordination. Entrepreneurial functions are carried out by individuals as well as by groups. Furthermore, the entrepreneurial function needs the cooperation of a number of people in a firm, which leads to a coordination problem that cannot be separated from the entrepreneurial function itself. The perception of profit opportunities therefore arises from the joint action of members of a firm, and, as such, entrepreneurship is also an organizational and management task. The perception of profit opportunities also arises from the joint action of people in different firms because of the different types of knowledge and perspectives they are able to combine and recombine.

Let us consider once more "Lucky Hans." We can now make some important observations about Hans' behavior. First, he does not learn and adapt his behavior. As a market participant, he does not learn from past experience. In reality, however, we know that the market process is a learning process for all involved—for market participants as well as for observers. Second, in this fairy tale no competition exists. Rather, it tells us about isolated transactions between two individuals. If

[38] For Schumpeter, this encompasses not only new products and product attributes but also new technologies, new resource, and intermediate goods markets.

competition took place, a market process would emerge. Hans' willingness to exchange a large gold nugget for a horse would immediately come to the attention of other horse sellers, who would offer more favorable exchange ratios—maybe ten horses, or a big house for him and his mother plus a horse. But, since no competition exists, Hans receives no information about the other market participants' assessments of their assets and about the exchange ratios they are willing to offer. Hence, we see clearly the important role of information in the market process.

1.4 Competitive Advantage

We have come to understand the market process as a never-ending process of learning for all involved, a process that is kept running by the entrepreneur who detects profit opportunities. Entrepreneurs sense differences in the market, they discover the possibility to sell something at a higher price than they can buy it for, and they disperse this knowledge—voluntarily or involuntarily—to other market participants. This process is a competitive one that rewards the capable and punishes the less able. Competition among sellers, therefore, has a selection function that creates better problem solutions for the buyer.

The Austrian economist Ludwig von Mises described the situation in the following way: "The entrepreneur can only act a step ahead of his competitors if he strives toward serving the market more cheaply and better. More cheaply means richer supply; better means supply with products not yet in the market" (Mises, 1949). The selection process is analogous to that of biological selection, and selection is the fiercest among similar market participants. As Charles Darwin, in 1859, noted "The struggle for survival is most severe between individuals and varieties of the same species" (Darwin, 1989). In more modern parlance, the market may be described as a complex adaptive system in which large scale order and change arise in a bottom-up self-organising way from the local actions and interactions of the actors involved (Wilkinson, 2006).

In this section, we consider the most important factors that determine business success in the market. This requires a more detailed analysis of the nature of competition and competitive advantage. Questions that seem at first quite simple turn out, on closer analysis, to be much more complicated.

1.4.1 "Vive la différence!" The Principle of Sustainable Differentiation

This section analyzes the effects of similarities and differences in competition and will consider various situations that affect the nature of competition and the outcomes for the seller. The situations are differentiated in terms of three factors:

	Complete market knowledge	Incomplete market knowledge	
	No barriers		Barriers
Homogeneous offers	case 1	case 3	case 5
Heterogeneous offers	case 2	case 4	case 6

Fig. 1.16 Types of competitive situations

- Homogeneity: The offers in a market are homogeneous if they resemble each other in all aspects, so that the buyer perceives no difference among them. Offers are heterogeneous if they differ either objectively or as perceived by the buyer.
- Knowledge: Buyers have complete market knowledge if they know without delay about all offers in the market.
- Barriers: Barriers hinder free market entry: new sellers cannot enter the market without entry costs or constraints, and sellers already in the market cannot imitate the characteristics and behavior of other sellers.

Figure 1.16 depicts six cases that will be considered in more detail in the following.

Case 1 is not very realistic but provides a basic case for illustrating some of the issues discussed in this chapter. It describes a world in which there is no market uncertainty, several sellers exist, additional sellers can enter the market at any time without market entry costs, and sellers are homogeneous. The sellers offer products and services that are perceived the same by the buyers in terms of being offered at the same time, in the same place, in the same way, and for the same price. The buyer has complete market knowledge.

What happens in this case? Assuming that buyers are willing to buy, that they needed to solve a problem, it would not matter which seller they buy from. They are indifferent, because the exchange ratio with each seller has the same value. They would have to decide arbitrarily, by some random process. *No competition exists* here, as a buyer could just as well throw a dice to make a buying decision.

Let us now introduce the possibility for sellers to set a price for their offer. Sellers will try to attract buyers by undercutting each other, and other sellers will react. The outcome is a single market price. The reason for this is simple. If different prices existed for identical offers, all the buyers would know this and immediately buy from the cheapest seller. In 1871, the English economist Jevons first described this circumstance and called it the "Law of Indifference".[39]

[39] When a good is perfectly uniform or homogeneous in quality, any portion may be indifferently used in place of an equal portion: hence, in the same market, and at the same moment, all portions must be exchanged at the same ratio. There can be no reason why a person should treat exactly similar things differently, and the slightest excess in what is demanded for one over the other will cause him to take the latter instead of the former. Hence it follows what is undoubtedly true, with proper explanation that in the same market, at any one moment, there cannot be two prices for the same kind of article. The principle above expressed is a general law of the utmost importance in Economics, and I propose to call it "The Law of Indifference" (Jevons, 1911).

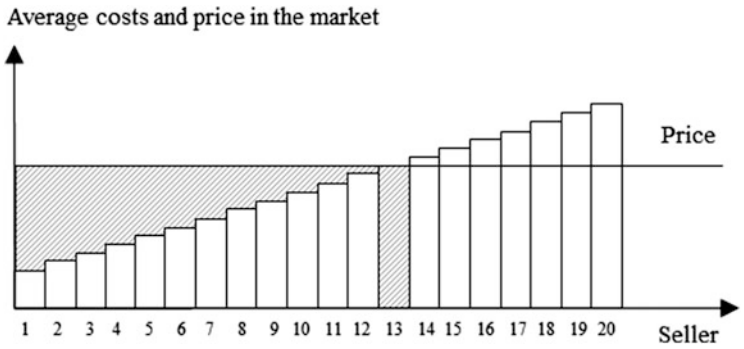

Fig. 1.17 The profit situation of different sellers offering identical products or services at the same price

Let us now assume that not all sellers have the same costs for the same performance. Hence, sellers exist with costs above and below average in the market. If under the conditions of the "Law of Indifference," a single price for all sellers arises, some sellers will exist for whom this price will be satisfactory, because it is above their average costs. Other sellers will make a loss, because the price is below their average costs.

Figure 1.17 illustrates this situation in simple terms. Each column represents one of 20 sellers ordered in terms of their average costs. The height of a column represents the average costs of a seller. Sellers 1–12 make profits, whereas sellers 14–20 make losses if indeed they offer their products or services for sale. If the price was reduced by one seller, say seller 4, then the price for all sellers would fall to that price, under the conditions of the "Law of Indifference." All sellers would have to adapt to the cost levels of seller 4 or exit the market. The purchased quantities would have to be supplied by sellers 1–4 or by new sellers with similar or better average costs.[40] Seller 1 with the most favorable cost structure has the highest degree of price flexibility and can make use of it subject to any constraints on his manufacturing capacity.

[40] Real markets with features similar to these, particularly those with homogeneous products or services, tend to have intense price competition, which creates a single price and erases major price differences. An example is the mass steel market since the middle eighties. Here, there are no major performance differences and the fight for survival is carried out primarily by means of price and related features. With cost structures being similar and with a supply surplus in the market, hardly any profits are made. That is why most sellers try to cut costs in order to create advantages. Price is the main competitive instrument and the really decisive competitive parameter is cost, which determines survival in market. A seller's competitive weapons are cost cutting modernization, rationalization, cross subsidies from other business activities in the case of companies with more than one product, and external subsidies as sometimes occurs in international competition. In these situations, attempts are made to organise supplier cartels that regulate the quantity supplied, as has happened in the oil market with the emergence of the Organisation of Petroleum Exporting Companies (OPEC). However, our analysis shows that the market itself will solve the situation anyway by eliminating less efficient suppliers from the market. This can happen on a global basis, which has happened in the steel, shipbuilding, and steel machine industry.

In sum, the competitive situation in case 1 is such that a single price arises at which only those sellers can survive whose average costs are lower or equal to this price. Every price reduction of one seller reduces the price for all because they are all completely substitutable.

Case 2 is closer to reality. Market offers are heterogeneous and sellers can satisfy buyers' desires in different ways. Because there is perfect market knowledge, buyers know about these differences and develop preferences based on different aspects of the offer, including place, time, features of the product or service, or personal characteristics of the seller. Because offers are heterogeneous, sellers have the potential to charge above average prices and make additional profits even given the additional costs of differentiation.[41] This creates a price range within which buyers and competitors do not react to price differences. The wider this is, the closer resembles the position of the seller that of a monopolist and the greater are its profits, other things being equal (Gutenberg, 1984).

The degree of discretionary pricing that is possible creates profit opportunities, unlike case 1. The reason for this is the existence of monopolistic elements in the market. Of course, the assumptions of perfect market knowledge and lack of any market entry barriers are unrealistic. In real markets we would expect imitators to emerge who would try to gain a share of the profits now possible, and they would, through the operation of the market process, eventually eliminate the profit opportunity. Hence the "Law of Indifference" would be valid again.

Case 3 differs from case 1 in that there is no perfect market knowledge, but sellers' offers are still homogenous. Buyers and sellers have incomplete information and therefore uncertainty becomes part of their decisions. The result is that, as we have described above, entrepreneurs arise, who buy from those who sell more cheaply and sell to those who have not yet noticed that they could buy more cheaply.

Entrepreneurs make *arbitrage profits*. Other entrepreneurs, learning about the profit opportunities, emerge and compete with the original entrepreneur, which eventually eliminates the profit opportunity as market knowledge is increased by the action of the entrepreneurs. The final outcome is perfect market knowledge and a single price for all buyers.

In summary, in a market with homogeneous offers, a single price arises even under incomplete market knowledge, depending on the speed of the flow of information. Profit opportunities in this situation arise temporarily as a result of the lack of information, and they are eroded through the activities of "entrepreneurs."

Case 4 is a further step toward reality. Heterogeneous competition and acquisitorial potential exist. Price competition and product and service differentiation prevail and market knowledge is incomplete, giving rise to entrepreneurs. This time, however, entrepreneurs do not only imitate the exploitation of price differentials in the market (case 3), they also imitate the successful seller who has created a partial

[41] This is why the analysis by Gutenberg (1984) focuses on the case of incomplete market knowledge.

monopoly for itself (case 2). Thus, the *entrepreneurs profit through information advantages as well as through innovation* which differentiates their offers. Imitation will sooner or later eliminate the profit opportunities arising in case 2.

In this case we see that imitation does not only eliminate differences in prices with cheaper offers succeeding. It also evens out quality differences, because more efficient, better offers prevail.[42] Information shortages and quality differences that initially exist will tend to disappear, and the temporary profits of cases 2–4 will disappear, shifting the situation to case 1.

Cases 5 and 6 differ from cases 1 to 4 because barriers exist. Barriers act as an obstacle to competition for new entrants as well as for those already in the market. Market entry barriers are always disadvantageous for new entrants compared to incumbent sellers, because the latter can approach buyers more easily than new entrants. And if a seller has a first mover advantage compared to its competitors then others cannot catch up—either because they are unable to (the advantage is too great) or because they do not want to (e.g., they are afraid of the first movers' response).

In the case of product homogeneity and incomplete market knowledge (case 5), a seller such as seller 1 in Fig. 1.17 can create a barrier for potential competitors by creating a cost advantage that cannot easily be imitated, at least in the short term. The result is that competitors cannot compete on price, because their competitive position is weak. The effect of that is shown in Fig. 1.17. Seller 1's profit is higher than the competitors'. And its profit is sustainable as long as no competitor is able to imitate the cost advantage.

The interpretation of case 6 is similar to case 5. If a seller manages through product or service differentiation to be preferred by the buyers and as a result earns higher profits, this acts as a barrier as long as competitors cannot imitate the differentiation. *Hence*, *barriers are*, *among other things*, *the reason for sellers earning profits significantly higher than competitors*.

The picture of competition created in cases 5 and 6 provides the basis for an analysis of competitive advantage. Dynamic seller competition means that sellers are permanently searching for and experimenting with new products or services in order to find or create ones that distinguish themselves from those of other sellers, in terms of value to the buyer and/or the costs they incur. If a competitor succeeds in operating with lower costs than its competitors, then it can offer lower prices to buyers, which can increase its market share and profits. If a seller succeeds in offering a better product or service without higher costs, then it can increase prices and earn higher profits. This never-ending search and experimentation has only one

[42] An example is the quality certification system ISO 9000 developed by the European Commission. At first, sellers that had their quality systems scrutinized and certificated had a competitive advantage. Today, with many sellers having done so, no positive competitive effect remains. Negative competitive effects do remain, in that buyers avoid sellers without a certificate. Kleinaltenkamp (1993) derives the competitive effects of norms and standards for product qualities from Kirzner's theory: "Accordingly, the existence of product and system standards could be interpreted as an equilibrium regarding the quality of the goods traded in the market."

aim: *By differentiation, the seller wants to avoid being substitutable*. Furthermore, a seller strives to establish a difference that is sustainable; it wants to avoid being imitated.

It is necessary for sellers to differentiate their offer in meaningful ways from competitors and to make it difficult for others to catch up. Nevertheless, others will constantly try to imitate the successful seller to become more successful themselves.

Let us summarize: One can only understand competition by focusing on the relations between sellers. The differences between them determine success or failure. Success depends on the existence of factors that maintain the differences, at least for a certain while. We will term this essential feature of market-driven action as "*the principle of sustainable difference*." Every effort of a seller to create a successful competitive position has to be planned, carried out, and controlled from this perspective. The size of a seller's competitive advantage and hence of its profits depends on how strongly its offer differs from competitors in features perceived and appreciated by buyers. But competitive advantage also depends on how much lower its average costs are compared to competitors, given comparable offers. The competitive strength of a seller is the outcome of differentiating itself from other sellers with respect to relevant features. Hence, competition is in the first place not about being "good" or "cheap," but about being "better" or "cheaper." That is why we focus on a firm's *relative* competitive position.

We shall analyze a firm's relative competitive position by means of a three-stage model: the sources of competitive advantage, its form, and its effects.[43]

Figure 1.18 describes how the three elements work together. Let us begin with the first stage—the sources of competitive advantage. In competition, every seller has certain capabilities or competencies based on its skills and resources, including all the people and their knowledge, the plant and equipment, customer relationships, and corporate image and reputation. Competencies are all the factors a seller can use in order to achieve its goals (Riebel, 1970).[44] It is essential for success in competition that the capabilities it has fit with the problem solutions desired by buyers. A seller who strives for competitive advantage will try to develop or acquire better talents and resources than competitors and will try to protect them against imitation.

Also essential for competitive success is the way in which processes within a firm are organized. Internal processes require specific combinations of competencies in order to be used. These processes encompass all the procedures and operations taking place within a firm including logistics, order processing,

[43] Similar arguments are presented by Day (1990) and Day and Wensley (1988) who see "skills" and "resources" as reasons for competitive advantage.

[44] Regarding the classification of sources of competitive advantage see also Engelhardt (1966). The idea of distinguishing between potentials, processes, and program was brought up by Erich Gutenberg who saw all procedures within a company as formed by resource inputs, resource transformations, and resource outputs (Gutenberg, 1989). We shall maintain Gutenberg's concentration on a company's productivity when determining competitive advantage from the interplay of potentials (resource input), processes (resource transformation), and program (resource output).

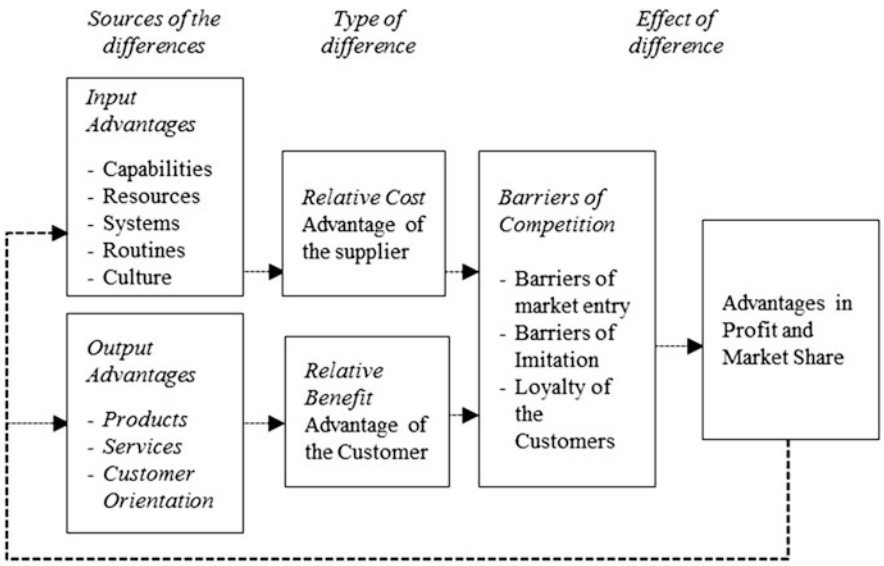

Fig. 1.18 Elements of competitive advantage

production, distribution, research, marketing, and planning processes. These processes can be imitated by others and this is why companies try to achieve and defend specific process advantages.

Competencies and processes together determine the output of a company and we call this a firm's *program*. It includes the outputs offered to the market and what it expects from others in return. The program is the firm's total offer including the nature of the product, the product range, services, communication, distribution, and price. The program is what distinguishes one firm from others. It is its visible source of differentiation for the buyer. Once achieved, a company usually tries strongly to defend an established differential advantage.

Competencies, processes, and programs together are the means by which a seller tries to create and defend differential advantage over his competitors. Every effort to improve a firm's competitive position has to start at one or more of these three components. Competencies are what the company *possesses* to survive in competition. Processes are function-specific operations and are what the company *does* in order to succeed against competitors. The firm's program is what the competencies and processes are transformed into in order to offer a benefit to buyers.

As a result of its particular mix of competencies, processes, and program, a seller achieves a certain competitive *position*. This position has various dimensions. First is the type of advantage, which may be by means of cost advantages or benefit advantages. The former describes the seller's average costs as compared to competitors; the latter describes the net benefits perceived the buyer, compared to buyers' perceptions of competitors' offers.

The second dimension of a firm's competitive position concerns the effects of cost or benefit advantages. It is these effects that create a favorable competitive

position. For the seller, cost and benefit advantages lead to increased buyer satisfaction, an enhanced image, an increased repeat purchase rate, higher than average profit, and potentially a higher market share compared to competitors. Above average profits and a greater market share indicate a seller's superiority. Furthermore, its extra profits mean it can *invest* more heavily in competencies, processes, and programs in order to secure and extend its advantageous position.

To summarize, it is clear that we have to distinguish between the seller's and the buyer's perspective. We can also distinguish between the sources of competitive strength—differences in competencies, processes, and programs—and the effects of a competitive position—the cost and benefit differences.[45] We will now analyze the dimensions of competitive advantage in more depth.

1.4.2 Analysis of the Sources of Competitive Advantage

1.4.2.1 Differences in Competencies

Each company is different, because each has its own history. Over time, as a result of its actions and interactions, a firm develops a unique set of experiences. These experiences reflect all the decisions that the company has made in the past and all the learning that has taken place by the people in the company, including the collective learning that has taken place. The latter includes experiences in managing the internal interactions taking place among different subunits and processes in the firm; the effects of earlier investments in goods and services on internal operations, on human resources, or on market relations; and the external effects of such investments on business contacts and relationships, on market knowledge, and on the firm's reputation. The sum of these effects is embodied in the competencies of the firm. There are competencies in all aspects of a firm, in the structures of leadership, in the ways employees think, and in the learning ability of the firm and its immediate environment.

Therefore, competencies are all the abilities, resources, capacities, external linkages, and support a seller can activate in order to *approach* a new market, to *attack* a competitor, or to *defend* itself against an attack from competitors. In competition, competencies only make a difference if they are firm specific, i.e., if they cannot easily be acquired by others internally or externally. One of the most important competencies is the corporate culture, which results from the collective development processes. Some examples of the potential sources of differential advantage are:

[45] An issue here is that of measurement. Customer perceptions and assessments cannot be measured in the same way as those of the seller. Differences in competencies, processes, and program are difficult to quantify. However, an analysis of relevant differences can be carried out. This chapter is not about techniques for measuring a firm's competitive strength, but about conceptual questions regarding the nature and sources of competitive strength.

- The productivity and creativity of researchers and developers
- Design competences
- Availability of new technologies
- Knowledge about customer needs and about how to meet them
- A deep and broad product range
- Reputation
- A favorable location
- Access to essential raw material and to important input suppliers
- Capital stock
- Relationships to important opinion leaders
- Stable business relationships
- Integration into a cooperative network.

It is the competencies firms have relative to competitors that underlie their strengths and weaknesses. A firm's competencies can result in various types of performance of relevance to buyers, and it is their strength in *possible* competition that is relevant.

One way to analyze the competencies of a firm is in terms of its strengths and weaknesses. This analysis involves first developing a list of the main types of abilities, resources, capacities, external linkages and supports, and weighting them according to their perceived importance. Then, a firm is rated in terms of how strong or weak it is on each item. A weighted summation reflects the overall strength or weakness of the firm.

A strengths-and-weaknesses analysis can be carried out from a seller's or a buyer's perspective. If carried out by a seller, it will try to adopt a *buyer's perspective* in rating and weighting the items, although there are of course dangers of projecting the seller's own views onto the buyer. The buyer might think about these items in a completely different way.

A strengths-and-weaknesses analysis of a seller can also be done by a buyer. It can be used to compare different sellers in a systematic way before choosing one. Many industrial customers carry out such analyses regularly and give the results to their suppliers, often including previous results. Sometimes buyers use this as a basis for giving awards to their suppliers or for imposing penalties. In this way it is used as an instrument to improve sellers' performance.

1.4.2.2 Process Differences

Each firm is different, because each firm has different processes. The uniqueness of its processes is a direct result of the uniqueness of competencies. Competencies influence *actual* processes in the same way as the firm's history influences its competencies. The competitive strength of a seller is therefore not only dependent on its competencies, but equally on the *processes* it employs, which encompass all functional parts of the firm. The following questions illustrate the variety of processes involved:

- How long is the time between order and delivery?
- How fast can the firm adapt to demand changes?
- How fast does the firm complete development projects, reorganize processes, bring new products on to the market, and react to customer demands?
- How much and where does the firm invest in research and development compared to its competitors?
- In which way has the firm organized its distribution compared to its competitors?
- How flat or extended is its management structure compared to its competitors?
- How "market driven" is the firm?
- How well does the coordination of the individual departments enable a consistent market orientation?
- How many production processes does the firm carry out itself, and which ones are carried out externally?
- What can be achieved externally that is less costly?

Michael Porter's model of the value chain is useful when analyzing process differences (Porter, 2004). The firm is interpreted in terms of a system of interrelated processes that together accomplish the tasks of the firm. The value chain indicates the way in which a firm fulfills its tasks and reflects the firm's history, its strategy, its methods of operation, and the economic foundations of the firm's activity (ibidem).

The "value chain" as illustrated in Fig. 1.19 includes the value creating processes of a firm plus the profit margin. According to Porter, the overall value created by the firm's production processes minus the profit margin forms the costs of the value creating activities. Primary activities are concerned with the production of a product and with its sale, delivery, and customer servicing. Support activities are necessary to maintain the primary activities. They are involved in procuring and managing inputs of products, technology, and human resources, and in carrying out functions necessary for the operation and integration of the other activities such as financing and planning. The dotted lines indicate that an activity can be relevant to both primary and supporting activities (ibidem).[46]

The value chain enables us to analyze differences in processes among sellers with regard to possible competitive advantages. Every activity within a firm can be analyzed in terms of its relevance for differentiating the firm's performance in terms of creating benefit differences or in creating a potential to decrease costs. By analyzing process differences we gain information about the competitive strength of sellers, because we can identify processes determining competitive success. However, the analysis is not so much concerned with process differences themselves but with their effects on the seller's costs and—via differentiation—on the buyer's net benefit.

[46] It is not possible to discuss here whether Porter's distinction between different value creating activities is useful or not. What matters is the analytical idea to develop instruments that enable a comparison between companies in order to analyze and build on competitive advantages. We will come back to the topic of process structures later.

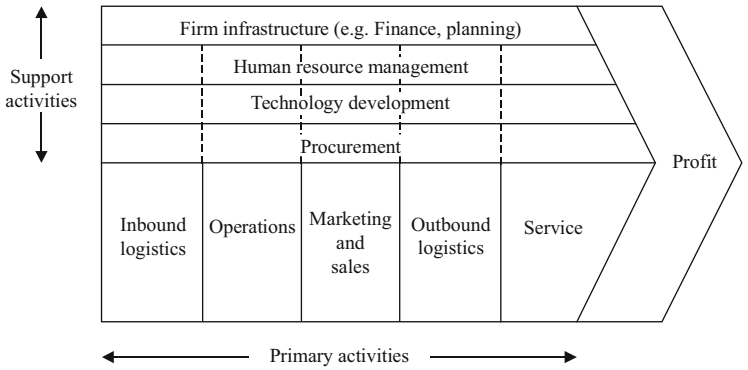

Fig. 1.19 Porter's value chain (*Source*: Porter, 2004)

1.4.2.3 Differences in Sellers' Programs

The program a seller generates is the outcome of and is limited by its competencies and processes. The scope of the product range, the product's fit with market demand, the advertising fit, and the firm's image in the buyer's mind are all outcomes of the firm's competencies and processes. Price is also part of the program and reflects the competencies and processes, because they determine the firm's costs.

The differential advantage a seller has over its competitors is in part achieved through what it is prepared to do for the buyer. A seller offers a different product and/or service, a different promotion campaign, or distribution channel, or a new method of purchase financing and so on in order to be different from competitors. Naturally, a firm will choose modes of differentiation that the buyer will be able to recognize and value. Only then they will become relevant for the latter's purchase decision. Another way to differentiate is in terms of price. Lower prices increase the buyer's net benefit; higher prices indicate a superior product.

A common way to seek differential advantage is in terms of product differences. *Product comparisons* and tests can be carried out regarding product attributes, aesthetic qualities, use costs, purchase price, etc. As far as possible such an analysis tries to be objective and relates to the buyer's perception and use of the product. The aim is to get to know the competitors' products, to understand the differences that are relevant to their competitive position. From a buyer's perspective, product tests offer useful background knowledge to inform purchase decisions. Industry organizations and research institutes, special interest journals, and specialized service companies serve the markets with comparative product information. If a test focuses on relevant purchase criteria, it can offer useful knowledge regarding the differential attractiveness of products.

However, a product test by itself does not capture a seller's competitive strength. Suppose that in a product test one particular model gets the highest score. Is this proof of its competitive strength? It is, no doubt, an indicator. But you would have to compare the score with the price difference. If, for instance, a higher price

indicates higher costs, then the score would not necessarily indicate a particular competitive strength because product tests can only be one indicator of competitive advantages. Other elements will have to be included. Another consideration is that buyers may not be homogeneous with respect to the problems they are trying to solve or the purchase criteria they use. Hence, a product may rate highly for some buyers but not others. A fuller analysis of buyer behavior and what this means for establishing competitive advantage is left for later chapters. Here, we assume that a market is made up of similar buyers in terms of their problems and purchase criteria and difference among buyers constitute submarkets.

1.4.3 Analysis of Competitive Position

1.4.3.1 Relative Cost Advantage

A seller's competitive strength depends in important ways on its *relative* costs. If a seller manages to produce a similar product at a lower cost than its competitor, it is in an advantageous position that it can use in different ways. We define "cost advantage"[47] as

Definition 8: Cost Advantage

$$\text{cost advantage}^{S/SC} = \text{costs}^{SC} - \text{costs}^{S}$$

A positive number indicates seller S's superiority, and a negative one indicates an inferior position. Figure 1.20 clarifies the effects. Seller 1's position is advantageous compared to seller 2 and 3. Its productiveness is higher since its *performance is similar but at a lower cost*. The reasons for this might be superior competencies and/or superior processes stemming from past experiences (Henderson, 1968). Relative competencies, such as availability of natural resources, qualified employees, or technical competencies in production or communication systems can create significant cost advantages. These result in superior *productivity*. Significant cost advantages can also be achieved by means of process differences,[48] especially if the process differentiation is realized through increased speed of operation. Speed advantages are significant productivity factors and have important impacts on costs. They are therefore an important source of cost advantages (Clark & Fujimoto, 1991; Stalk & Hout, 1990).

[47] Later, we relate S's cost advantage over SC to the profit difference between S and SC, in order to eliminate the impact of prices on the definition of competitive advantage (see part 4). However, this does not affect the cost difference criteria as a determinant of competitive advantage.

[48] Hammer and Champy (2003) give illustrative examples.

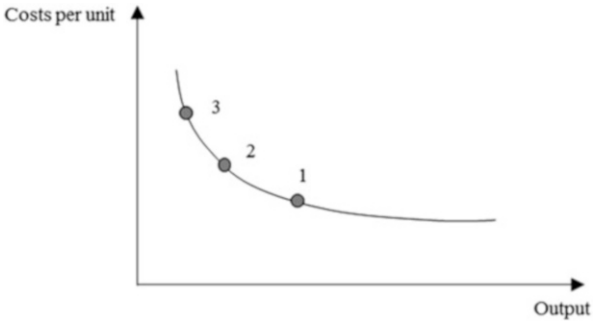

Fig. 1.20 Cost advantage

A cost advantage has more than one positive effect for the seller:

- The seller can, at similar prices, gain greater profits per unit sold, and it can use this to improve its competitive position, e.g., by investing in the firm's skills and resources, through research and development, or in the conquest of new markets.
- The seller can undercut its competitors and expand its sales and market share, which creates opportunities for further improvements in relative costs.
- The seller can, more efficiently than its competitors, protect itself against new market entrants, because its ability to defend is stronger. Price cuts can be used as a weapon in such situations, a weapon that firms with a cost advantage have a greater freedom to use.

1.4.3.2 Net Benefit Advantage

When analyzing benefit differences, we need to focus on the meaning of differences in competencies, processes, and programs for the *buyer*. A seller's competitive strength is its ability to offer greater benefits or lower costs, i.e., greater *net* benefits, to the buyer compared to competitors.

In order to analyze this ability, we can make use of the description of the market transaction given above. Let us once again consider condition 2. With freedom of choice, no buyer will choose a particular seller if he perceives that other problem solutions offer a more favorable exchange ratio. The buyer will choose seller S if S offers a higher net benefit (the difference between benefits and costs) than a competitor SC. Therefore, S will have to have a positive difference between the net benefits of S and SC on the critical dimensions. Figure 1.21 summarizes the elements of such a net benefit difference.

Therefore, we define the net benefit advantage as

Definition 9: Net Benefit Difference

$$\text{net benefit difference}^{S/SC} = \left(\text{benefit}^{S} - \text{costs}^{S}\right) - \left(\text{benefit}^{SC} - \text{costs}^{SC}\right)$$

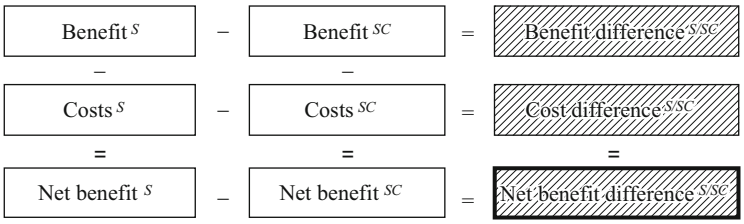

Fig. 1.21 Elements of net benefit difference

From this perspective, it is not absolute values that affect purchase decisions—it is the *relations* between values that count. A buyer compares the differences. We shall use this for assessing buyer advantage: We do not have to determine all four components of the comparison separately as we can focus on the *differences* in the evaluation of sellers.[49] The comparison between the two offers is simplified in this way. The following elements are needed to compare S and SC in terms of the benefits and costs for the entire life cycle of their products or services.

1. *Purchase price*: The amount of money the buyer has to pay to the seller for the problem solution. This includes all additional costs, including services such as transportation, insurance, and consultancy.
2. *Costs of the buying process*: This includes any advanced payment and subjective effort on part of the buyer to prepare the investment decision and implement the problem solution. These include the costs for external consulting services, land and property acquisition, the construction of floor foundations for a machine to sit on, electrical sockets, staff training, etc.
3. *Costs of the long-term availability of the problem solution*: These include costs to install, use, and maintain the product throughout its life cycle, including all spares, servicing, and final disposal.

   The sum of costs 1–3 are often referred to as *life cycle costs*.
4. *Benefit differences*: The difference between the perceived benefit of the problem solution compared to SC's offer. Again the entire life cycle is the focus.

Figure 1.22 shows the comparison. Cost differences and benefit differences between S and SC are shown. The price of seller S's offer is slightly higher, but S offers the buyer significantly lower costs of use, maintenance, and disposal. Overall, the buyer is better off buying from S than SC, the difference being the "perceived cost difference S/SC." Furthermore, the buyer perceives the overall benefits of S's problem solution greater than SC's. By changing to S, he can improve his position in terms of the "perceived benefit difference." The sum of

[49] In order to simplify and clarify, we assume that we can precisely determine the exchange ratio offered by SC that is preferred by the buyer. We assume further that this offer gives an exchange ratio of 1 for the buyer i.e., costs and benefit are equal.

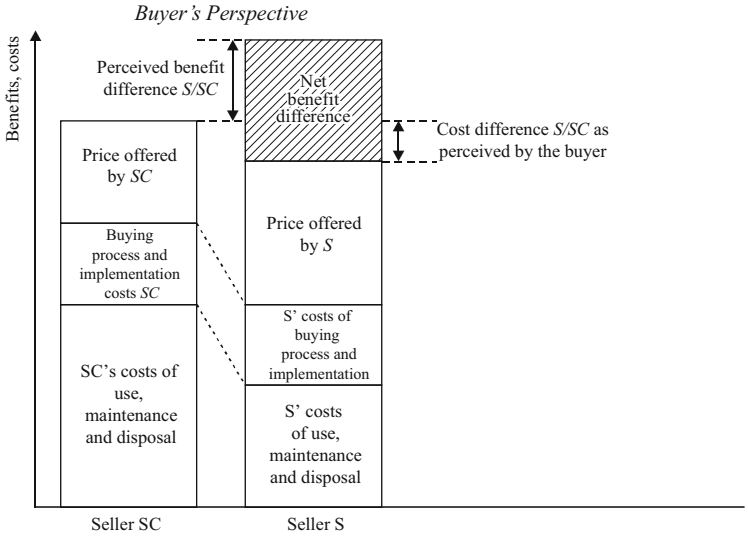

Fig. 1.22 An example of net benefit differences between two alternatives

the two difference values (costs and benefit), when switching from SC to S, forms the overall net benefit difference between S and SC.

In an earlier section we introduced the elements of an exchange ratio based on the perceptions and evaluations of the exchange participants. This subjective perspective is valid also for the definition of benefit and cost differences.

What does a seller have to do in order to create a net benefit difference for a buyer? The seller has to create an offer that promises lower costs or higher benefits than competitors. It has to offer a product or service as good as the others but cheaper. Or, it has to offer at the same price as others something special, something that is unique and positively valued. Or, it has to do with a combination of these. Of course, compensating effects are also possible, as when an unfavorable price is more than offset by a benefit advantage. Figure 1.23 summarizes possible situations for success and failure.

The ability to create an advantage for the buyer is dependent on a seller's competitive strength. This strength is reflected in its ability to offer better exchange ratios.

1.4.3.3 The Effects of Competitive Advantage

At equal prices, a seller with a cost advantage will gain greater profits than its competitors. At lower prices, the seller will increase its market share and strengthen its cost advantage, creating the basis for higher profits in later periods. A seller that provides its buyers with a greater net benefit is valued more highly by them; it strengthens its reputation, and buyers satisfied with its performance will become repeat customers. These are the conditions for profits being greater than competitors' and for increased market share.

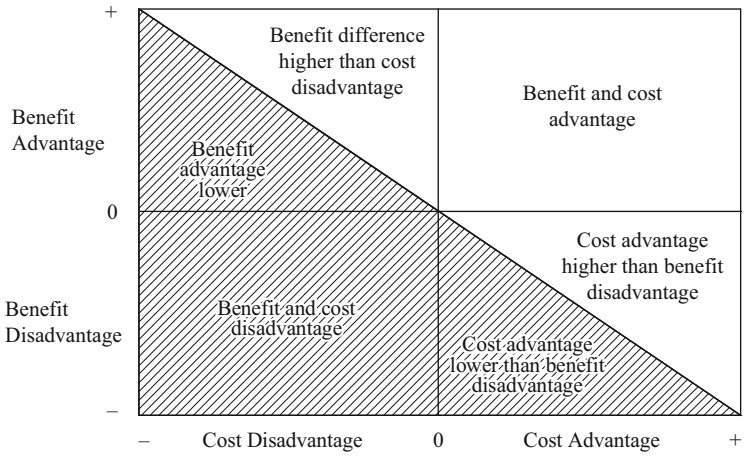

Fig. 1.23 Benefit and cost advantages and disadvantages

Profits that are the outcome of an advantageous position can be used by the seller as additional investments that competitors can only finance from other sources. The effects are as follows: a competitive advantage facilitates investment and thereby it helps to protect existing advantages and/or create new ones. Hence, it is vital for every competitor to create, find, or extend its competitively advantageous position. It is the very nature of competition that success or failure depends on the firm's competitive position and *every action has to be analyzed in terms of its effects on this position—how it improves or degrades it and how it utilizes it*.

1.4.4 The Economics of Competitive Advantage

1.4.4.1 Efficiency and Effectiveness

Sellers differentiate themselves from others through their ability and willingness to offer benefits to their buyers. If a seller can do so on a sustainable basis, its competitive position is strong. *Sustainability* depends on whether a seller's abilities can be easily *imitated* and whether it can offer the benefits to buyers at conditions that are favorable or at least acceptable. Let us reconsider Fig. 1.22 and clarify the structure with an example.

Example

A producer of travel coaches, SC, offers its products with a certain level and pattern of life cycle costs and associated benefits that the buyer perceives as equal in value to the costs. In simple terms, the coach is "worth it's cost." Another seller, S, is able to offer more comfortable seats, a higher maximum

(continued)

speed, and better springing, which makes the buyer perceive a benefit difference. Also, use costs are lower because of a better fuel consumption or longer maintenance intervals. The net benefit difference between sellers S and SC is the sum of the buyer's benefit advantage and the advantage stemming from the lower costs of use.

This does not show S's total competitive strength compared to SC. That S offers more benefits to the buyer is not necessarily a competitive strength. For instance, maybe buyers are only concerned about price so that a buyer's advantage depends on offering a low price that does not cover a seller's costs. S offers these benefits in a desperate struggle to remain in the market. If S's price is below its average costs, it does not affect the net benefit difference. However, we have to assume that, in this situation, the seller does not have a particular competitive strength—otherwise, it could have achieved a higher price. In this case, the relative cost disadvantage has to be taken into account as a counterpart to the positive net benefit difference.

It is therefore necessary to include *both* the cost advantage/disadvantage and the net benefit difference to describe a seller's competitive strength. To do so, we will reconsider Fig. 1.18. The superior seller has certain abilities and resources (*competencies*) that he transforms into *processes* that create certain performance outcomes (*program*). The criteria for assessing the seller's competitive strength are (1) the extent of its superiority over its competitor as perceived by the buyer, which is reflected in the net benefit difference and (2) the extent to which it can achieve profits in this situation, which is reflected in its *cost advantage*. *The Net benefit difference and cost advantage together form the competitive advantage*.

In order to compare the competitive strength of two sellers S and SC, we have to consider both the net benefit difference and cost advantage.[50] We therefore extend Fig. 1.22 in Fig. 1.24.[51]

The left hand side of the Figure illustrates the buyer's perspective and corresponds to Fig. 1.22. The right hand side depicts the seller's perspective. The two price offers of S and SC are compared, each being divided into average costs and profits. Seller S has the same costs as SC, but a higher profit because of its higher price. S's higher profit margin than SC's is another indicator of competitive strength in addition to the net benefit difference. This is because even if SC offers its product at a price equal to its average costs and S reduces its price to its average costs, S would still make a profit, other things being equal. The full competitive

[50] We are not concerned with the quantifiability of every feature in our definition, but with the analysis of competitive strength.

[51] See a similar approach in Forbis and Mehta (1981). Here, the authors' definition of competitive advantage is problematic because they concentrate on the difference between the benefit orientated upper price limit of the seller and its average costs. This cannot be used to measure competitive advantage, because you cannot compare costs and profits between a seller and its competitor in this way. Therefore, we focus on profit differences between the relevant sellers.

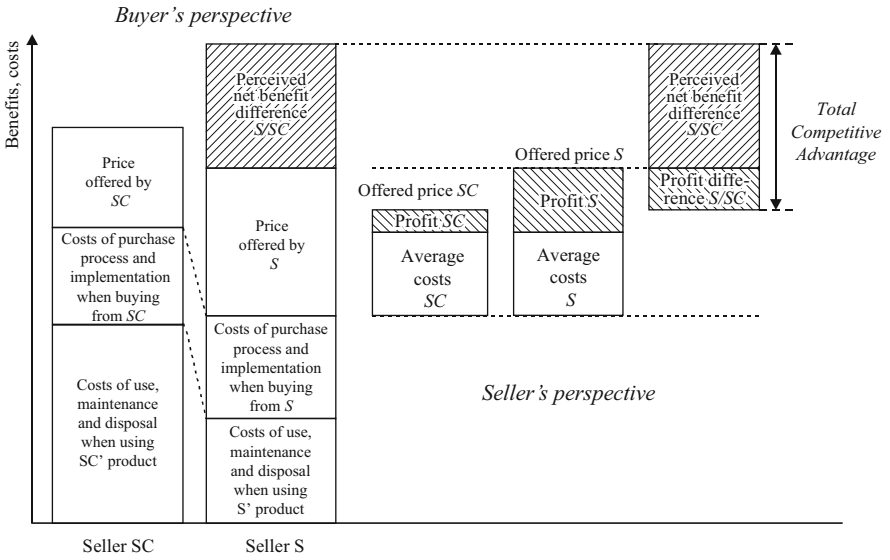

Fig. 1.24 An example of competitive advantage

strength of seller S can be seen: S does not only have lower average costs than SC, it can offer the buyer lower costs of use and higher benefits as well.

In the example, S's competitive strength is partly reflected by its higher price. However, the strength would remain even at a lower price. The reason is simple: A price decrease increases the net benefit difference, because it means that S's offer is more attractive to the buyer and hence has greater competitive strength. It is not relevant whether a higher price gives way to a low price or a low price to a high net benefit difference, the competitive advantage is equal in either case.

The overall advantage that S can use when competing with SC is its competitive advantage$^{S/SC}$ and we define it as follows[52]:

Definition 10: Competitive Advantage
A seller S's competitive advantage over SC is the buyer's net benefit difference $^{S/SC}$ in favor of S plus S's positive profit difference $^{S/SC}$.

The competitive advantage expresses a seller's relative position regarding cost and net benefit differences. We therefore have to define competitive advantage as a

[52] The algebraic notation should not give the impression that we only treat quantifiable elements when analyzing costs and benefits. On the contrary, the contents of an exchange ratio, as outlined in above, contain all value components, both positive and negative, as perceived by the buyer. The quantification in expression 1) therefore is a task not yet solved. We use the expression in order to clarify the structure of the concept, not as a mathematical formula.

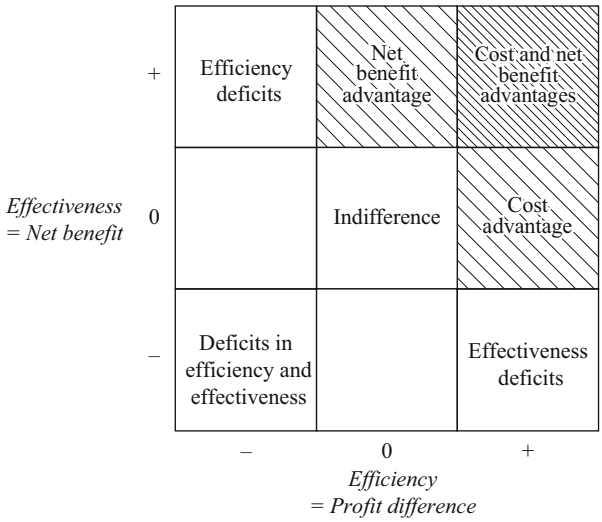

Fig. 1.25 Efficiency and effectiveness as dimensions of competitive advantage

two-dimensional entity composed of efficiency, which relates to cost advantages and effectiveness and which relates to net benefit differences perceived by the buyer.

A seller's possible competitive positions are presented in Fig. 1.25 in terms of *efficiency* and *effectiveness*. The columns show the relative cost positions, measured in terms of the profit difference between S and SC. The vertical axis shows the relative net benefit position. We distinguish between negative, zero, and positive values on each dimension resulting in nine relative competiveness situations.

Definition 11: Effectiveness and Efficiency
Effectiveness: An external performance measure that indicates the extent to which a firm satisfies it's buyers' expectations and demands.

Efficiency: An internal performance measure that indicates the relation between inputs and outputs.

Competitive advantage can be seen as the outcome of efficiency and effectiveness advantages. Indifference means that the seller and competitor are equal in both dimensions. Weaker situations reflect weakness in effectiveness, efficien,cy, or both. A seller has superior efficiency and effectiveness when it achieves a superior cost position and a net benefit advantage for buyers.

The two-dimensional classification of competitive advantage indicates that a seller has to focus on two distinctive spheres of operation when searching for competitive advantage: the internal operations of the firm and the buyer's requirements. The advantages a seller derives as a result of internal operations are

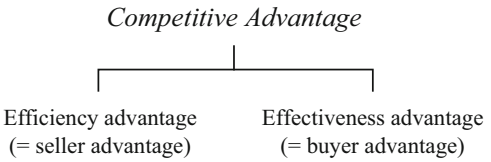

Fig. 1.26 Components of competitive advantage

termed *seller advantages* and those arising for buyers are termed *buyer advantages* [53] (see Fig. 1.26).

S*eller advantage* is solely the outcome of differences in competencies and processes among sellers—it would exist even if buyers perceive all offers to be homogeneous. In competition, a seller advantage is a crucial advantage, whether it is realized in terms of higher profits per unit or lower prices. A lower price is particularly effective, because buyers will respond to a lower price faster and more precisely than a performance difference.[54]

Buyer advantage is the superior benefit S offers compared to SC. It is a *relational* measure. The difference can only be shown between two sellers. In a purchase situation, as many different buyer advantages exist as there are possible pairwise comparisons between relevant sellers.[55]

1.4.4.2 Competitive Advantage as a Guideline for Firms

Gaining a profit greater than a competitor depends on the existence of competitive advantage. Competitive advantage is the sum of buyer advantage and seller advantage. Buyer advantage is the result of differentiation within the seller's program, which results from differences in competencies and processes. Seller advantage also results from differences in competencies and processes. Competitive survival

[53] The term "buyer advantage" was introduced by Große-Oetringhaus (1990): "Understanding marketing strategically means satisfying a buyer's needs better than competitors. This relative degree of satisfaction we shall call buyer advantage." Forbis and Mehta (1981) mean the same when using the term "economic value to the customer.".

Customer advantage has to be distinguished clearly from the term consumer surplus used in microeconomical theory since Alfred Marshall [see for instance Stackelberg (1951)]. Consumer surplus describes the difference between the market price and the highest price at which a customer would buy, whereas customer advantage is about the difference in price of an individual competitor. The term consumer surplus is derived from the conditions of atomistic competition, whereas the concept of customer advantage treats a situation of oligopolistic competition with heterogeneous performances and limited market knowledge.

[54] The idea in Fig. 1.20 is the same as in Fig. 1.17. Those sellers with lower average costs realize higher profits per unit sold. Microeconomic theory calls this difference between the market price and the lowest price at which a seller would sell "producer surplus." However, this is not related to the individual competitor's situation, but to the market price in atomistic competition.

[55] This is why in an actual business situation, it is essential to choose the right seller for comparison. However, it is not the model's application that we are concerned with. Here, we are defining the seller's competitive actions in terms of buyer advantage.

means being different from others: Be different or die! (Alderson, 1957).[56] Hence, competitive advantage becomes the decisive guideline for the market oriented firm. In the end, it is not financial targets such as profits and turnover that guide executives' activities, but the continuing search for competitive positions that enable the firm's *survival*.

Different terms can be found in the literature to describe essentially the same concept as competitive advantage. Wroe Alderson introduced the concept into marketing theory using the terms "differential advantage" and later "competitive advantage" (ibidem), the term that we use. However, the words used are a secondary consideration. It is their meaning that matters. One has to consider precisely what an author means when referring to "competitive advantage" or using another term, because different interpretations can hide behind the use of the same terminology (Ansoff, 1965; Nieschlag, Dichtl, & Hörschgen, 2002; Ricardo, 1817).[57]

Let us consider some terms which are not the same as competitive advantage. A product advantage is not a competitive advantage, because it is not related to the buyer's problem solving needs. A seller's strength is not a competitive advantage, because it is a general feature of its competencies that may not help to solve a buyer's problem. Process advantage is not a competitive advantage if it does not result in superior performance in terms of costs and/or buyer's net benefit. It is necessary to take a holistic view in order to assess competitive advantage. The distinction between efficiency and effectiveness forces the further distinction between buyer and seller advantage. These two together constitute competitive advantage.[58]

Definition 12: Competitive Advantage
Competitive advantage: A seller's sustainable ability to be more effective than its competitors in terms of creating more benefits (i.e., buyers' advantage) and/or to be more efficient than its competitors in terms of lower costs or faster operations (i.e., sellers' advantage).

[56] "Every business firm occupies a position which is in some respects unique. Its location, the product it sells, its operating methods, or the customers it serves tend to set it off in some degree from every other firm. Each firm competes by making the most of its individuality and its special character. It is constantly seeking to establish some competitive advantage. Absolute advantage in the sense of an advanced method of operation is not enough, if all competitors live up to the same high standards. What is important in competition is differential advantage, which can give a firm an edge over what others in the field are offering."

[57] The business literature contains various terms for competitive advantage. Alderson (1957) introduced it into marketing theory, referring back to J. M. Clark's theory of monopolistic competition. Rogers (1962) used the term "relative advantage" as a determinant of the success of product innovations. Ansoff uses the term "distinctive competence". In consumer advertising, the term "Unique Selling Proposition" is well known. Porter (2004) writes about "competitive advantage", and so does Simon (1988). Aaker (2001), calls it "Sustainable Competitive Advantage (SCA)".

[58] Backhaus and Voeth (2014) use the term "comparative competitive advantage", linking it to Ricardo's term "comparative cost advantage". The authors' definition of "comparative competitive advantage" also includes perspectives of buyer and seller advantage (Backhaus & Voeth, 2014).

A seller with competitive advantage can make life hard for its competitors in two different ways. First, it can shield its buyers from the competitors by either satisfying them to the extent that they do not *want* to change the seller (or at least because it would require too much effort) or by creating a situation in which they *cannot* switch sellers, because they are dependent on it. The latter way focuses on decreasing the buyer's mobility by erecting *mobility barriers*. Such barriers are created by a sustainable net benefit difference or by switching costs.

The second way is to deter or de-motivate potential or actual competitors. Existing competitors are de-motivated by the difficulties of imitating the superior performance of the focal seller. These difficulties could exist, for example, because the competitors cannot easily copy the superior seller's competencies. Other reasons are that they cannot reproduce the seller's processes, because they require special know-how, or the product cannot be imitated, because certain raw materials are not available. We use the term *imitation barriers* to refer to reasons for competitors not trying to take over the superior seller's buyers.

Potential competition is limited by the sellers' advantages due to experience, structural cost advantages, or from legal protection. All the forces that hinder potential competitors targeting a superior seller's buyers will be called *market entry barriers*. Credible deterrence maneuvers such as threats of retaliation are part of these.

Competitive advantage is created by the mobility barriers, market entry barriers, and imitation barriers a seller may be able to set up for potential competitors. Figure 1.27 summarizes these effects.

Finally, let us summarize the necessary conditions for a competitive advantage.

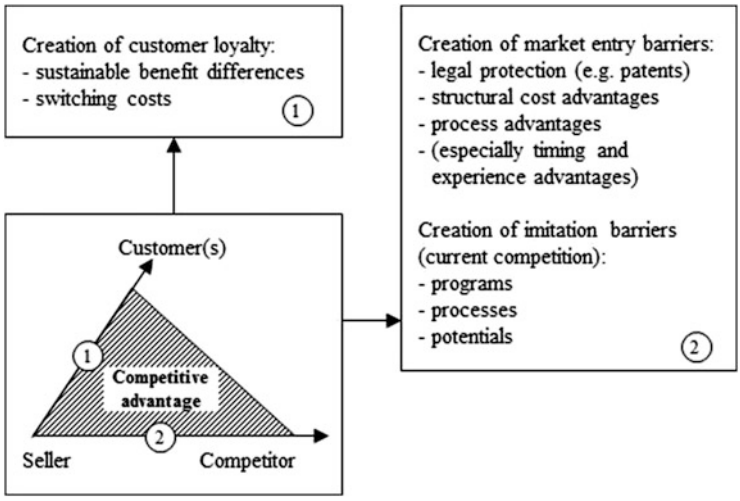

Fig. 1.27 Possible ways to protect a competitive position

1. Particular *abilities and resources* exist that result in certain competencies and processes and lead to a performance output or program. The abilities and resources are better than the competitors' and lead to superior efficiency and effectiveness. Included here are the firm's employees and their abilities, especially the ability to learn. It also includes the availability of physical or financial assets, know-how, flexibility, market access (e.g., being known and well known, having efficient and effective distribution channels), buyer understanding, and finally the ability to create internal synergies that lower costs. The seller can either offer comparable performance cheaper than its competitors, or it can offer greater performance at equal costs.
2. The ability to "do something better" refers to something of importance to the buyer—it is related to the solution of buyers problems. Even the most efficient service system cannot create a competitive advantage if the buyer has its own maintenance and repair team. The features important for the buyer have to remain important for a period of time, because there would be no competitive advantage without a problem that needs to be solved.
3. The ability to "do something better" is *perceived* by the buyer, whether it be a price advantage or greater benefits. If the potential benefits are hard to communicate, this will affect the perceived benefit. They have to be *believed* to be acted on.
4. The ability to "do something better" exists in relation to all *relevant* competitors. Relevant are those competitors the buyer thinks it is possible to buy from. A single competitor catching up would destroy the competitive advantage.
5. The ability to "do something better" or with lower costs is relatively *sustainable*, hence, making the competitive advantage *worth protecting*. This implies that competitors must be unable to imitate the advantage's sources in terms of the underlying competencies, processes, and program.

In the end, the ability to *protect* a competitive advantage is crucial. A seller has to be *more* efficient and/or effective than its competitors. Competitive rivalry and efforts to imitate are at the very heart of the competitive process and a competitive advantage can be sustained only for as long as imitations can be prevented.[59] Hence, the bases of competitive advantage, the differences in competencies, processes, and program have to be sustained or renewed. The "principle of sustainable differentiation" is valid everywhere. However, firms cannot completely escape the threats of imitation or innovation by rivals, which will eventually eat away at any competitive advantage.

The difficulty and fragility of competitive advantage are highlighted in a study of 6,772 firms in 40 industries over 25 years in the USA (Wiggins & Reufli, 2002). This reveals that some firms do perform in a truly superior way for a time but only a very small minority does so and it rarely persists for very long.

[59] We can only discuss this problem briefly here. For additional discussion, see Reed and De Filippi (1990).

1.4.5 Conclusions

The definition of competitive advantage indicates what counts in competition. A seller has to focus on being more effective and/or efficient than its competitors. A firm's competitive advantage is the sum of its seller and buyer advantages and reflects what the seller has achieved and his competitors have not. Seller and buyer advantages are the profits created by the market transactions.

In market transactions, the seller acts in a way that enables it to gain profits. Two methods of doing this are available or a combination of them. A seller can limit the buyer's advantage and hence increases the seller's advantage. This will result in greater profits per market transaction, but a smaller number of such transactions achieved. We call this *market skimming behavior*. The seller can also limit the seller's advantage, and hence increase the buyer's advantage, which results in less profit per transaction but a greater number of transactions. This we call *market penetration behavior*. The choice between skimming and penetration has a significant impact on the seller's market share and profit. The choice depends on the seller's assessment of the price elasticity of demand and on its strategic intentions. These questions have to be discussed elsewhere.

This completes our discussion in this chapter. We return to conditions 1 and 2 for the negotiation of a market transaction, which we treated in part 2. No market participant will accept an exchange agreement that does not improve their position, and they will only accept it if they cannot improve their position further with another exchange partner. As we can see, conditions 1 and 2 indicate that both the seller and the buyer have to expect a profit that is greater than in other transactions, otherwise the market transaction will not occur. Therefore, a seller's competitive advantage marks a situation in which it can more easily bring about market transactions than its competitors. Its profit is a signal for others to try to do the same. The opportunity detected by an entrepreneur is also a profit opportunity for others—by means of imitation. Once a seller has detected an opportunity, it will, subject to its abilities, try to protect these opportunities by erecting barriers against competitors. The market process is on the one hand a never-ending struggle to create and protect advantages and, on the other, an arena for followers that want to copy the advantages created by others, thus finally destroying profits.

Exercises

1. What options exist for the purchase of goods and for sales?
2. What is an exchange?
3. Why do exchanges exist?
4. What value can result from an exchange?
5. What is a problem and a problem solution?
6. Explain the causes of uncertainties which can be connected with an exchange.
7. What is a risk and what kind of possibilities are there for managing a risk?
8. What is the difference between a simple exchange and an extended exchange?

9. What are the characteristics of a buyer's market and a seller's market?
10. What is a market transaction?
11. What are the elements of a market transaction?
12. Explain the benefits and the costs resulting from a transaction.
13. What is the difference between a buyer's perspective and a sellser's perspective?
14. Explain the conditions for the emergence of a transaction.
15. What is a market process?
16. Describe the terms "innovation" and "imitation."
17. Explain the elements of a competitive advantage.
18. Describe the causes of competitive advantages?
19. Describe the terms "efficiency" and "effectiveness."
20. Explain the connections between effectiveness with seller advantage and efficiency with buyer advantage.

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