Industrial Organization theory and its contribution to decision-making in purchasing

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This paper tries to investigate how Industrial Organization Theory and in particular the Structure-Conduct-Performance paradigm, can contribute to decision-making in the purchasing year cycle. The structure of a market is the concept behind Industrial Organization theory, rather than the firm itself. The theory indicates the influence of competitive forces on the industry, as well as, how the profitability is determined by them. These opportunities and threats in the external environment of a firm are important factors, influencing strategic management in general and in particular Supply Chain Management.

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1. INTRODUCTION – INDUSTRIAL ORGANIZATION ECONOMICS THEORY AND PURCHASING DECISION MAKING

In the recent decade the importance of strategic supply management has gained considerably more attention as a strategic function, due to a competitive global business environment (Krause, Pagell & Curkovic, 2001, p. 498). The structure of a market, thus how a market is functioning, " is the concept behind the industrial organization theory" (Tirole, 1988, p. 1), rather than the "conversion process, products and costs of an individual organization" (Ramsey, 2001, p. 39). Hence, the Industrial Organization (IO) theory is about, how a structure of a market has an influence on the strategy and decision making of a company.

Industrial Economics is a development of microeconomics and "is concerned with economic aspects of firms and industries seeking to analyse their behaviour and draw normative implications"(Barthwal, 2010, p. 2). But there are differences between those two theories, since Microeconomics is formal and deductive, whereas Industrial economics is less formal and more inductive. Furthermore, microeconomics is a passive approach with the aim of profit maximization of a company, without concerning operational aspects of the company. Industrial economics emphasis the operational aspect, e.g. production, in the theory and tries to "understand and explain the working of the existing system and thereby prediction of effects of changes in the variable system" (Barthwal, 2010, p. 2-3). The industrial organization theory puts a focus on the market a company operates in, rather than the company itself (Ramsey, 2001, p. 39). It is reflected in the structure-conduct-performance model, which claims that there is a "causal link between the structure of a market in which a company operates, the organization's conduct and in turn the organization's performance in terms of profitability" (Ramsey, 2001, p. 39). Thus the industrial organization theory focuses on the whole industry and market conditions of a company (Ramsey, 2001, p. 39) and the central analytical aspect can be used to identify strategic choices, which firms have in their respectively industry (Porter, 1981, p. 609; Teece et al. 1997, p. 511), which includes Strategic Supply Management.

Students from the University of Twente defined the Purchasing year cycle in a paper and it is used as the framework for the analysis of the Industrial Organization Economics theory regarding supply chain management later in this paper. The Purchasing year cycle divides the activities of the purchasing function in three processes on an annual basis: antecedent processes, primary processes and supportive processes.

The antecedent processes have to be done before the actual purchasing process begins is not done only by the purchasing function itself. It defines the purchasing targets, which have to be in line with the overall corporate strategy or can even be a part of the basis of the corporate strategy, if high purchasing integration is favoured (Cousins, Lamming, Lawson & Squire, 2008, p. 13-15 & 19). The other aspect of the antecedent process is the demand planning of an organization, which is concerned with the question about what material to buy, what quantity is required and at what time is the material needed (Monczka, Handfield, Giunipero, Patterson & Waters, 2010, p. 33-35). The source of need for accurate demand planning has been identified as on one hand to meet customer demand and on the other hand to be able to compete on the globalized market (Gupta & Maranas, 2003, p. 1219; Stadler, 2005, p. 580; Kilger & Wagner, 2008, p. 133). Based on these two inputs the make or buy decision point is discussed, since it is the decision which activities a company will do on its own and which activities are outsourced to an external supplier, which also determines the level of vertical integration of a company (Walker & Weber, 1984, p. 374). Important to the make or buy decision is the volume uncertainty, which relate to fluctuations in the availability of the required volume for a company and the existence of this uncertainty is likely to lead to a make decision (Walker & Weber, 1984, p. 373 & 379).

The primary processes are the main tasks of the purchasing function and it includes the strategic elements of supply management as well as operational aspects. Category Strategy is the concerned about to develop a strategy, defining how to source in a specific commodity group. The sourcing strategy is the second decision point; it has to the corporate strategy as a basis (Rendon, 2005, p. 8) and the kind of strategy depends on the strategic value of the commodity and the structure of the supply market, as shown in the Kraljic Matrix (Kraljic, 1983, p. 111). With the application of the fitting tactical sourcing levers, the sourcing performance of a commodity group increases (Schiele, 2007, p. 279). After the planning and analysis process the supplier selection has to be done, the supplier selection can begin with the aim to find an appropriate supplier. For the supplier strategies, a potential supply base has to be established and the most appropriate supplier has to be found by negotiation or competitive biding (Monczka et al., 2010, p. 38-39). Which approach is used depends on the attributes of the product or item that needs to be produced by a supplier, because for a complex, non-standardized product competitive biding is more used, since there are no given market prices (Bajari, McMillan & Tadelis 2009, p. 373). This leads to the fourth decision point, which is contracting the most appropriate supplier on the basis of the established strategies. The kind of contracts depends on factors like stability in markets, fluctuation of commodity costs, degree of trust between buyer and supplier, uncertainty of technology and process (Monczka et al., 2010, p. 336). Afterwards, the actual purchase is done and the strategic importance decreases, as it becomes an operational task (Monczka et al., 2010, p. 448). The last step of the primary processes is the supplier evaluation, which is important for future purchasing activities as well as to identify the performance of every supplier that a ranking is possible (Araz & Ozkarahan, 2007, p. 586). The basis for this evaluation are operational aspects such as price, quality and delivery, but Talluri & Narasimhan (2004, p. 237) claim that strategic evaluation include an evaluation of supplier capabilities and practices.

The supporting processes have the purpose of supporting the primary process by controlling, contract management, organization and personnel and analysis. These processes are required monitor the performance of the purchasing function with regard effectiveness and efficiency (Monczka et al., 2010, p. 470), which is clearly important, since there is a link between the purchasing performance and the corporate performance (Carr & Smeltzer, 1999, p. 49). Approaches to controlling can be historical performance, internal comparison and external analysis (Monczka et al., 2010, p. 483). Contract management is concerned with the administration and accurate execution of contracts.

Significant for the success of supply chain management is the position of purchasing in the corporate hierarchy, the organization of the purchasing department, the interplay of purchasing function with other parties involved in supply management activities and the design of the purchasing process (Kaufmann, 2002, p. 17). Important tools for the purchasing functions to execute the primary processes are several analyses, e.g. cost analysis, market analysis, supplier analysis and risk analysis.

2. INDUSTRIAL ORGANISATION ECONOMICS AND THE SCP PARADIGM

2.1 History - Industrial Organization Economics theory has its origin in the classical economic theory by Adam Smith

The industrial organization and the industrial economics theory are a macro- and micro-economic approach to explain the interactions between companies and markets. The foundation of economic theory was the book of Adam Smith in 1776, named "Wealth of Nations". In his classical economic theory, he described the implicit principles of economic theory, including the principle of division of labour, as well as the analysis of product pricing (Barthwal, 2010, p. 4).

Economist Alfred Marshall presented the first ideas about Industrial Organization Theory at the end of the 18. Century. His idea was on the firm, positioned around competition and he described it as a process of interactions between those (Corley, 1990, p. 84). Furthermore he included the entrepreneurial aspect into the analysis of value of a company, as being the ability to adapt to changing circumstances, due to the imperfect market of information in the real world (Corley, 1990, p. 85).

In the 1950s was the emergence of Industrial Organization & Economics theory and the Journal of Industrial Economics was founded (Corley, 1990, p. 88; Barthwal, 2010, p. 6). The Harvard University introduced the term "Industrial Organisation" (Grether, 1970, p. 83). Furthermore, the hypothesis that "market or industry structures determined member firms' conduct and performance" was analysed at the Harvard University by Edward S. Mason and Edward Chamberlin (Corley, 1990, p. 88), but his approach was used by Bain to develop a more generalised model and conclusions (Ferguson & Ferguson, 1994, p. 16).

But J.S. Bain developed the structure-conduct-performance paradigm as a tool for industrial analysis in the 1950s (Weiss, 1979, p. 1104; Barthwal 2010, p. 6) and his focus was on the barriers of entry to a market, respectively the threat of competition (Corley, 1990, p. 88). He was the first to present scientific publication on the behalf of the structure conduct performance framework in the middle of the 19th century. The aim of his empirical study was to acknowledge the different types of structure and conduct to find out if there are any causal relationships of these with performance (Bain, 1968, p. 3). Thus, J.S. Bain believed, that structure, conduct and performance have a causal and linear "one-way relationship", but posterior research has shown, that the market structure is be influenced by a firm's conduct (Chang, Yu & Chen, 2010, p. 45; Fu, 2003, p. 280).

Furthermore, many antitrust laws were implemented, due to the SCP paradigm (Shaik, Allen, Edwards & Harris, 2012, p. 5) and it is used as well for laws in the banking industry to e.g. obviate mergers (Evanoff & Fortier, 1988, p. 277).

2.2 Introduction SCP paradigm

Market structure and conditions are the most relevant keywords in Industrial Organization Theory. It contains several aspects that have an impact on a firm's decisions and behaviour, since the assumption that "behaviour is dependent upon the context in which the behaviour occurs" (Brown (2002), p. 105).

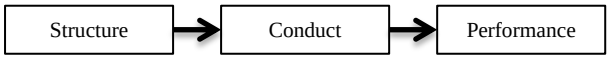

Figure 1: Structure-Conduct-Performance paradigm

The logic assumption of the SCP paradigm (See Figure 1) is that there is a causal linear relation between structure and performance. Thus, the conduct and performance of a firm have no impact on the market structure. As soon as there are feedback effects in the SCP paradigm of an industry, the causal relation between structure and performance disappears, since it is possible for firms to influence. The underpinning assumption of the model is the neoclassical paradigm (Ramsey, 2001, p. 39).

In the following I want to analyse every aspect of the SCP paradigm, in order to analyse the causality, the interconnection between the dimensions and the possibility of feedback effects.

2.2.1 Market structure is defined by its actors, products and entry conditions

The market of a company must be defined, in order to be able to analyze the market structure. According to Barthwal (2004, p. 68), the market structure arises from four different aspects (1) Degree of seller concentration, (2) Degree of buyer concentration, (3) Degree of Product differentiation, (4) The condition of Entry to the market.

According to Bain (1968) the first dimension of the variable structure is the seller concentration in individual industries, since the concentration of competing firms has an influence on the strategy (Bain, 1968, p. 113; Caves, 1980, p. 64). Concentration of a market is concerned with the amount of sellers or in a market and the higher the concentration is, the closer the market would be a monopoly structure, which includes a loss of competition (Mohamed, Shamsudin, Latif & Mu'azu, 2013, p. 1457). Based on the neoclassical assumptions, there is a positive relationship between market share and rate of return profitability, thus the higher the market share of the company is; the higher is also the rate of return (Shepherd, 1972 b, p. 25). Monopoly power can be used for price discrimination, which means to sell products "at different percentage markups over marginal costs" (Schmalensee, 1988, p. 658).

Atomistic industries are industries with a large amount of seller, thus the concentration of sellers is low and each seller has a small amount of market share. With this given, the seller's power on market prices is very low, because the market price is the result of the competing between all sellers and also a selling company cannot affect the price or sales volume of its competition. A given selling market price has impact on each seller in the market, because as the price is set, each seller has to calculate and predict at what level of output it is possible for him to maximise his profit (Bain, 1968, p. 113-114).

Oligopolistic industries have a high seller concentration, which means that the there are just a few companies in the market who sell a product and the concentration "reflects the degree of oligopoly" (Shepherd & Wilcox, 1979, p. 39). This means that each sellers' market share is large enough, that deviations in prices and output have an impact on the whole market and its competitors' output and prices (Bain, 1968, p. 114). Thus there is a "mutual interdependence in price-output decisions", since an action in pricing or output by one seller will have an reaction by the other sellers in the market (Bain, 1968, p. 114).

To distinguish between the two sellers market structure is rather difficult, since there is no "precise quantitative line between oligopolistic and atomistic markets" (Bain, 1968, p. 116). The essence is to know if there is an oligopolistic interdependence between the competing sellers, but in an unstable market price flotation and changes in the market share are common and it is difficult to identify a competitor as the reason for one's loose in market share. Furthermore, if the degree of seller concentration raises, the oligopolistic interdependence increases as well and

visa versa. This leads to the second conclusion by Bain (1968, p. 117), that a higher seller concentration in an oligopoly structure is more likely to lead to joint monopoly price and output policies, whereas a low concentration in an oligopoly leads to competitive prices and output.
Sellers in an oligopolistic market experience a conflict of interests, since on one hand he wants to cooperate to some extent with his competitors in order to reach a joint monopoly price, which is an industry price "which will yield maximum joint profits to all sellers". This way a seller makes the largest possible profit with its market share. But on the other hand each company also wants to increase their profit and market share at the expense of its rivals. Thus the dilemma is that competing in an oligopolistic market will lead close to atomistic market prices and will therefore decrease total profits of all sellers in the market (Bain, 1968, p. 118).
Buyer concentration in individual markets is concerned with the number and size distribution of the buyers (Bain, 1968, p. 150). Number and size distribution can influence markets, since negotiating power can shifts to the buyer side. The most extreme structure is the buyer's monopoly, a so-called monopsony, in which there is only one buyer in the market and the buyer has bargaining power and is able to depress buying prices (Bain, 1968, p. 150). The extent to which a monopsony buyer is able to depress prices depends on sellers' market structure and its seller concentration. A monopsony buyer has countervailing power, with which he can hinder oligopolistic or even monopolistic sellers to use their market power; e.g. with a threat of vertical integration (Shepherd & Wilcox, 1979, p. 41; Shepherd, 1972a, p. 36). But, monopoly structures are very infrequent in markets, but it is expected to lead to unilateral price determination by the only buyer or supplier (Bain, 1968, p. 151).
Bain (1968, p. 151) claims that there are four market structures, characterized on the concept of buyer and seller concentration, each with different attributes and properties. A fully atomistic market, or perfect competition market, includes many small buyers and many small sellers, which leads to independence of actions between each actor on the market and no influence on prices, since prices and outputs are generated by the impersonal market forces.
Many small buyers but a high degree of seller concentration is a simple oligopoly structure. In this market structure the few large suppliers have some control over prices, which make them increase the price level above the fully atomistic price level. But the extent to which this is possible depends on the degree of seller concentration (Bain, 1968, p. 151).
In a simple oligopsony structure, there are many small sellers and a high degree of buyer concentration. This is the opposite of the simple oligopoly structure, because in this case the buyers have more power, due to the higher concentration and through this bargain power they are able push prices below the fully atomistic price level. But also in this case the actual extent of pushing prices lower depends on the degree of concentration on the buyer side (Bain, 1968, p. 151-152).
Bilateral Oligopoly market structure has a high degree of buyer concentration, as well as a high degree of seller concentration. In this structure neither the buyers nor the sellers have the power of prices alone, so the powers from concentration counterbalance each other and it is expected that prices vary less from form atomistic prices than in oligopoly or oligopsony (Bain, 1968, p. 151-152).
According to Bain (1968, p. 224) product differentiation "refers (in some sense) to an imperfection in the substitutability – to buyers – of the output of competing sellers in an industry". A way of measuring the substitutability of products is the "cross-elasticity of demand", which measure changes in sales due to a change in price of one product. Thus a product with a relatively low differentiation will lose more sales to an increase in price than a product with relatively high differentiation (Bain, 1968, p. 224-225; Caves & Porter, 1977, p. 245-246). Sources of product differentiation can be in quality or design, the ignorance of buyers regarding the essential characteristics and qualities, developing buyer's preferences through promotion activities of sellers and developing significant product differentiation through advertising (Bain, 1968, p. 226-227). The impact of no product differentiation on a company's conduct and performance is that there can be only one price for all sellers and the market shares of sellers are determined randomly or as a result of past developments in the establishments. No product differentiation also means that advertising is ineffective and useless to raise the share of the market (Bain, 1968, p. 229). As advertising can be a source of differentiation, it can become also an entry barrier; depending on the advertising-intensity (Shepherd, 1972b, p. 26). Existing (significant) product differentiation, opens up the scope of conduct for each seller, because the sellers can have individual prices for their products with individual preferences.
Barriers to entry are elements that hinder new companies to enter a market and Shepherd & Wilcox (1979, p. 40) divide the possible sources of entry barriers into 3 kinds. First of all a specific device can stop a company from entering a market. This specific device can be e.g. a patent, ore rights or key location. Product differentiation can also be a source, since new companies can find it difficult to produce a product that is able to compete against the existing product. Another entry barrier can be the required volume that is required to enter a market, e.g. because a large-scale production is necessary to make profit and to be able to compete (Shepherd & Wilcox, 1979, p. 40; Bain, 1968, p. 255). Thus the cost structure is a disadvantage for smaller companies, since they suffer from diseconomies of smaller scale (Caves & Porter, 1977, p. 246). Connected to the required volume is the entry barrier vertical integration, which occurs when companies integrate vertically and therefore create the requirement that new entrants to the market have to do the same, which then leads to a higher entrance investment required or the entering firm has uncertain vertical value chain conditions (Caves & Porter, 1977, p. 246-247). Another approach for established companies to threat new companies to enter the market is to excess capacity, in terms of unused production capacity and gaining control over the inputs required for production (Caves & Porter, 1977, p. 245).
The impact of barriers to entry on the conduct and the performance is that it influences the setting of selling prices of established companies as high as possible "without inducing the entry of one ore more added competitors" (Bain, 1968, p. 270). The entry barriers can define the possible profitability, since they co-determine the amount of which prices can be set over marginal costs (Shepherd, 1972b, p. 26; Ferguson & Ferguson, 1994, p. 15). Furthermore, the ease of market entrance is connected to the level of seller concentration, since it is easier for a company to enter a market, which has a low concentration (Tung, Lin & Wang, 2010, p. 1124). Also, market power would not be there in the long run and joint profit maximisation would not be successful in the long term, if entry barriers would not exist (Schmalensee, 1988, p. 663).

2.2.2 The Conduct is the firms' use of resources and strategic behaviour and is based on the market structure

The market conduct is the behaviour of companies to achieve their organizational goals, e.g. through pricing practices, advertising, investments and research and development. Thus,

the conduct of company is the product strategies, innovation and advertising (Tung et al., 2010, p. 1119), as well as the question if the actions are made independently or are agreed upon with competitors (Ferguson & Ferguson, 1994, p. 15). These aspects are influenced by the structure of the market, since the activities of a company should be based on the environment it is in, in order to be successful (Mohamed et al., 2013, p. 1458). In oligopolistic markets, the conduct dimension of the SCP paradigm is the most important element, since a decision of collusive or competing behaviour has to be made (Ferguson & Ferguson, 1994, p. 17), as actions of one firm are expected to reaction by its rivalries (Teece, Pisano & Shuen, 1997, p. 511). Therefore, one firm's conduct has an impact on its rivalries' conducts and eventually on the market structure (Teece et al., 1997, p. 511). An important tool in this Oligopoly Theory is Game Theory, since it is framework for the analysis of competitive interactions between rivals (Porter, 1981, p. 611).

Part of the firm's conduct is advertising (Carlton & Perloff, 2000, p. 4), which is concerned with informing the buyers about a product's "existence, quality, price and terms of sales" (Ferguson & Ferguson, 1994, p. 62). Advertising is a contradiction to the neoclassical assumption of perfect information, but is still done to "inform new consumers about a product, to remind ex-consumers or to hamper the entry of new firms to the market" (Ferguson & Ferguson, 1994, p. 62). Thus, advertising has an impact on the structure, since it can increase the entry barriers, as well as product differentiation. But on the other hand influences the market structure the required amount of advertising of a firm, since advertising costs money and can decrease profits more than needed (Ferguson & Ferguson, 1994, p. 67). The amount of advertising needed depends on product attributes like " necessity or luxury, major expenditure item or minor or closeness of substitutes" (Dorfman & Steiner, 1954, p. 831). The market structure has an impact on the appropriate amount of advertising needed, since in an oligopoly market structure advertising activities are more important than price competition. The underpinning foundation of this correlation is the assumption that a change in selling price by one actor is shortly after perceived by the competition, which will match the price and the result would be that profits of all sellers decrease (Ferguson & Ferguson, 1994, p. 67-68). Therefore, in a perfect competition or fully atomistic market, advertising is less important than price competition and in a monopoly market, it is also less important and should be based on the advertising and price elasticity ratio, in order to maximise profits (Ferguson & Ferguson, 1994, p. 67). Thus, advertising has not only an impact on the structure, but also on the performance, because advertising as a persuasive view leads to higher demand for highly advertised products. The impact on performance would be "higher prices and costs, increased non-price competition and higher profits" and there would be a positive relation between level of advertising and market concentration (Ferguson & Ferguson, 1994, p. 71-75). But advertising can also lead to another outcome. The advertising as information view, claims that better informed consumers are able to make smarter purchases and therefore a reduction in entry barriers are occurring and the selling prices would decrease due to increased competition on a pricing level and the efficiency of a company would be the success factor (Ferguson & Ferguson, 1994, p. 72-73).

Pricing behaviour is a seller's conduct and in market, where a few companies have mutual interdependence the companies conduct can be to agree on a joint monopoly price, which then defines the performance of the company. In an oligopoly industry where the competing companies all have the same market share with the same selling price and their cost of production are the same, would mean that any kind of change in price or output by any actor is likely to have a answer by the other actors and therefore it is not possible for one firm to gain market share or increase profits, because competing would diminish their returns in the end (Bain, 1968, p. 119). The SCP model "proposes that market concentration lowers the cost of collusion between firms and results in higher than normal profits for all market participants" (Evanoff & Fortier, 1988, p. 278). Hence, the behaviour of the companies is decided collusively, in order to achieve higher profits and lower levels of output, in contrast to a perfect competition market (Ferguson & Ferguson, 1994, p. 17). Factors for a joint agreement are in the "social structure", which "include the degree of shared values and expectations" (Shepherd, 1972a, p. 36).

Mergers and contracting can be a conduct of companies and can happen in various ways. A horizontal merger is the merger between two firms in the same market and has the aim of gaining straight market power, by increasing the market share or increasing the barriers to entry to, in order to increase profitability (Shepherd & Wilcox, 1979, p. 164-165). A vertical merger is the merger between a frim and its supplier(s), to benefit from economies of integration, with the aim to decrease the costs of production. A conglomerate merger is a merger that is neither horizontal nor vertical, due to different geographical areas (market extension merger) or the merger adds a production line (product extension merger). Other gains than straight market power are technical economics, to achieve economies of scale, and pecuniary economics, to decrease the costs of input (Shepherd & Wilcox, 1979, p. 164-168). Mergers have an effect on the market structure and the firm's performance. The concentration of a market increases when a horizontal merger takes place and therefore competition is reduced and the merging companies increase their market power over prices. Vertical mergers have no effects on competition in a perfect competition market, but it can increase the entry barriers, because it can create the requirement of entrance that companies have to enter the market on both market levels (Shepherd & Wilcox, 1979, p. 167). Conglomerate mergers have no direct impact on competition, since the merging companies do not operate the same market, but the newly access to resources can give competitive advantages to both companies (Shepherd & Wilcox, 1979, p. 167). The impacts of mergers on performance are the mentioned aims, economies of scale, economies of integration and competitive advantage.

Research and Development is a conduct of firms, since it is another approach than price competition to compete with competitors. R&D can lead to "new products and services, improvement in the quality of an existing product or service, a new method of production, development of a new market, a new source of supply or a reorganisation of methods of operations" (Ferguson & Ferguson, 1994, p. 111 citing Schumpeter, 1934, p. 66). As neoclassical approach, implies perfect information, there is no explanation of innovation (Ferguson & Ferguson, 1994, p. 112). But an incremental product innovation, which improves a product, compared to rival products, increases its value for potential buyers. Thus, product improvement can act as product differentiation, which can shift market powers, as it shifts the demand curve of the innovating company to the right (Ferguson & Ferguson, 1994, p. 119). Process improvements are necessary if factors of production change, these include labour costs and production. Reasons for required product improvement can be change in demand, availability of new technology or the cost of producing a product increase to an extend that it is not profitable anymore (Barthwal, 2004, p. 250). These are impacts of the basic conditions and influence the conduct of a firm, which then can

influence the market dimension, but also the performance, since money is invested in R&D. Monopoly markets investment less on R&D, as firms cannot increase their market share through innovation (Chang et al., 2010, p. 47).
Innovations can have an impact on market structure, as an innovation, which is awarded with a patent, can increase the entry barriers, as the competitors are not able to find an alternative to it. This could also remove the product homogeneity in a perfect completion market and the innovative company could raise the prices up to a monopoly level, but for that a major or drastic innovation is required (Tirole, 1988, p. 391).

2.2.3 According to the SCP paradigm is performance determined by the market structure

According to the SCP model, the performance of a company is the result of the market structure and the firm's conduct and the "different aspects of market performance are, such as, production efficiency, advanced technology, product quality and profit rate" (Tung et al., 2010, p. 1119). The measurement of performance in Industrial organization is economic welfare, by satisfying consumer's needs and making efficient use of factors of production (productively efficient). Being allocatively efficient is regarded as producing the "right" product at the "right" level of output (Ferguson & Ferguson, 1994, p. 15). From a neoclassical point of view, the maximisation of profits in perfect competition markets is reached then price and marginal costs are the same, since in this situation the price and output of a firm is productively and allocatevely efficient (Ferguson & Ferguson, 1994, p. 15). The reason that companies are not able to increase prices above marginal costs is because they have no market power, since their share of market is not large enough and there is no product differentiation. Thus in market structures like monopoly, oligopoly or monopolistic competition firms have a certain amount of market power, which enables them to raise prices over marginal costs. Hence, they have some impact on the decision at which price to sell their products, which indicates the unlikeliness to achieve allocative efficiency (Ferguson & Ferguson, 1994, p. 15). A theoretical measurement of the market power is the Lerner Index. It is a price-cost margin ratio and a result of zero would indicate a perfectly competitive company and the closer the result is to 1 indicates greater market power. Lerner Index = (Price-Marginal Cost) / Price (Ferguson & Ferguson, 1994, p. 41). Hence, in the neoclassical theory, the amount of profits is related to market power and high profits indicate poor economic performance, with regard to allocative efficiency (Ferguson & Ferguson, 1994, p. 16).

2.2.4 Basic Conditions influence every industry

The basic conditions were added to the SCP paradigm, since these are conditions that influence any particular industry. The basic conditions are divided into a consumer demand and production (Carlton & Perloff, 2000, p. 4). The basic conditions of markets and the companies operating in have characteristics such as psychological, technological, geographical and institutional factors.

Consumer demand factors	**Production factors**
Elasticity of demand	Technology
Substitutes	Raw materials
Seasonality	Unionization
Rate of growth	Product durability
Location	Location
Lumpiness of orders	Scale economics
Methods of purchase	Scope economics

Table 1: Basic conditions of markets. (Carlton & Perloff, 2000)

2.2.5 Government Policies are market interventions of the government

The government policy has an impact on the whole economy and therefore, it also influences the dimensions of the SCP paradigm (Carlton & Perloff, 2000, p. 4). Antitrust tasks have the aim to increase competition in markets up to "the margin at which the benefits of extra competition are just offset by any lost technical economies of scale" (Shepherd & Wilcox 1979, p. 81). This is done by avoiding market dominance, where one firm has significant more amount of market share in a market compared the its competitors, which may be achieved through mergers and collusion between companies, which includes "anticompetitive behaviour", like "direct collusion among competitors, informal ties, tactic collusion, price discrimination, exclusion" (Shepherd & Wilcox 1979, p. 82).
The ambitions of the government can be divided into three areas. (1) Policing conduct, "to stop cooperation among firms to fix prices or restrain trade in other ways"; (2) "Restoring competitive conditions in established near-monopolies and tight oligopolies and (3) "Preventing new structural monopoly via merger" (Shepherd & Wilcox, 1979, p. 98). Government Policies include several tools, which have an impact on all other dimensions, e.g. Regulation, Antitrust, Taxes and subsidiaries (Carlton & Perloff, 2000, p. 4).

2.2.6 The extended Structure-Conduct-Performance Model indicates multiple feedbacks

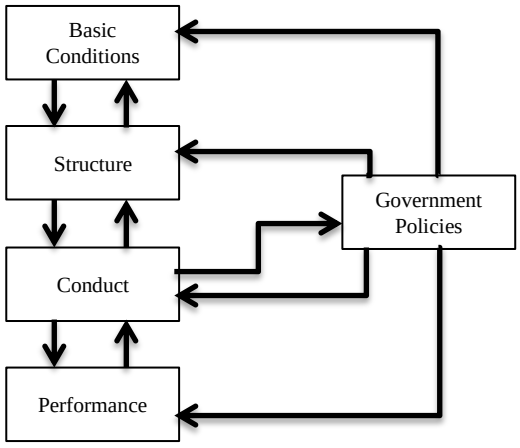

Figure 2: SCP paradigm based on Carlton & Perloff (2000)

2.3 Assumptions - Perfect information and perfect competition is required for the SCP paradigm

In Industrial Organization Economics, the emphasis is on the behaviour of companies in an industry (London & Kenley, 2001, p. 778) and the purpose of the SCP paradigm is the explanation of dynamics in an industry (Chang et al., 2010, p. 45). Furthermore, "Industrial economics is the application of microeconomic theory to the analysis of firms, markets and industries" (Ferguson & Ferguson, 1994, p. 1). The assumption of traditional IO theory is that firms in a market are homogeneous, expect for their size, i.e. market share (Porter, 1979, p. 214). Due to the existence on entry barriers, the firms in the market have market power and interdependence between

the rivals exist and therefore firms do not compete, in order to gain abnormal profits (Porter, 1979, p. 214) from direct or indirect price fixing (Conner, 1991, p. 124). In this environment, the traditional causal SCP hypothesis can be applied, as well as, in homogenous markets without entry barriers, where "competitive advantage and long-term above-normal profits are unsustainable" (Ramsey, 2001, p. 39).
But, as the conditions of homogenous products are rarely given and firms can influence the homogeneity of a market, e.g. through innovation or advertising, an alternative thesis developed.
The foundation of the SCP Paradigm is the neoclassical theory paradigm, which is based on the concept maximization rationality and aims to maximize profits (Ferguson & Ferguson, 1994, p. 4; Ramsey, 2001, p. 39; Church & Ware, 2000, p. 50). The concept of maximization rationality has the principle of perfect information, since it "implies that individuals have all the information relevant to any decision, which they are able to utilize effectively, so as to maximize profits or utility" (Ferguson & Ferguson, 1994, p. 4 & p. 37). The emphasis of the neoclassical approach is the decision maker instead of transactions and due to maximization rationality the decision maker is able to "maximize […] objectives subject to the constraints imposed by technology and market prices" (Ferguson & Ferguson, 1994, p. 4-5). Thus, the aim of maximization with regard to profits and utility is accomplished, which leads to an equilibrium in the market. The existence of perfect information seems unrealistic, but in an economy or industry, which has been stable in many years, the decision maker is able to develop a set of decision rules on how to act successfully in a range of situations (Ferguson & Ferguson, 1994, p. 5).
The main assumption of the SCP model is that the probability of collusion between firms is high when the concentration of the market is high (Weiss, 1979, p. 1105). Therefore the standard *structure performance hypothesis* of the SCP model assumes that there is an "inverse relationship between the degree of market concentration and degree of competition" (Shaik et al., 2012, p. 5). The basis of the hypothesis is the earlier mentioned joint profit maximization aspect, which suggest, that in oligopolistic markets with a high seller concentration, firms can earn more profits, due to collusion. Therefore it is assumed that, "there is a positive relationship between market concentration (measured by concentration ratio) and performance (measured by profits), regardless of efficiency (measured by market share) of the firm" (Shaik et al., 2012, p. 5).

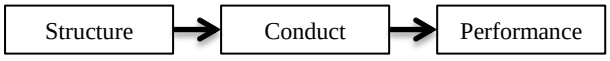

Figure 3: *structure performance hypothesis*

Also, as entry barriers increase, "the optimal price-cost margin of the leading firm or firms likewise will increase" (Weiss, 1979, p. 1105). Hence, there is a positive relation between concentration, entry barriers and profitability expected by the SCP model. Entry barriers are a reason for collusive behaviour and profits in a highly concentrated market, as there would be no reason to collude, if there would be no entry barriers, since any company could enter the market and therefore take market share of the established firms, which would lead to a competing strategy (Ferguson & Ferguson, 1994, p. 95).
An alternative approach of the Structure Conduct Performance paradigm is the efficiency structure hypothesis, which implicates that the market concentration is the result from the competing between firms on a price level and the firm, which is able to lower prices, due to higher efficiency, will be able to increase its market share. Therefore the alternative *efficiency structure hypothesis* assumes that a positive relation between a firm's performance and a firm's efficiency exists (Edwards, Allen & Shaik, 2006, p. 2). On the contrary to the structure performance hypothesis, the efficiency structure hypothesis includes the efficiency of a company and comes to the conclusion that is able to increase its market share and is able to increase profits, due to its increased efficiency and not collusive behaviour, which leads eventually to changes in the market concentration (Edwards et al., 2006, p. 2). Thus, a high concentration market might indicate the most efficient firms and not automatically adopt collusive behaviour, so that the antitrust approach might actually hinder social welfare, by hinder firms to maximise efficiency (Evanoff & Fortier, 1988, p. 279).

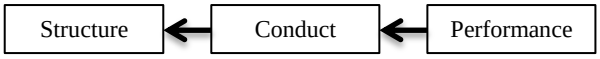

Figure 4: *efficiency structure hypothesis*

2.4 Empirics - Early empirical research indicated a one-way relationship, but recent research suggests the disappearance of the causal relation

A large number of empirical research studies in the field of the SCP model have been done. Shepherd (1972b, p. 25), looked in his empirical work at the relation between the market position of a company (market share, market concentration and entry barriers) and profitability with the help of a static analysis of large U.S. industrial corporations. His findings agreed with the neoclassical assumptions, as market share is the main element in defining a firm's profitability, whereas entry barriers appeared to have just a small impact on profitability of large firms (Shepherd, 1972b, p. 35).
Setiawan, Emvalomatis & Lansink (2012, p. 2) applied the SCP model to the Indonesian Food and beverages industry to analyse the relationship between the structure and performance. The analysed aspects were industrial concentration and price cost margin, as well as, price rigidity and technical efficiency. The results pointed at a simultaneous relationship between the analysed measures and therefore disagree with the original one-way relation of SCP paradigm. The conclusions based on the results were, that an increase in concentration may increase the price-cost margin, but also that technical efficiency can increase the price-cost margin, as it reduces the production costs. Furthermore the authors conclude that high concentration reduces technical efficiency, because there is less competing in the market (Setiawan et al., 2012, p. 14).
The UK hotel industry was analysed in the period 1989-1993, by Davies & Downward (1996, p. 733-734), on the structure/performance hypothesis assuming that high market concentration leads to high profits, but employment rate was also included as an indicator for economic growth. The measure of the market concentration was the Herfindahl-Hirschman, which "accounts for the number of firms in a market, as well as concentration, by incorporating the relative size (that is, market share) of all firms in a market" (Rhoades, 1993, p. 188). The calculation is to sum the "squares of the market shares (output of the firm divided by total output) of all firms in the market" (Ferguson & Ferguson, 1994, p. 41). $HHI = \sum_{i=1}^{n} S_i^2$; where n is the number of firms and S_i^2 is the square of the market share of the *i*th company (Ferguson & Ferguson, 1994, p. 41). The result of Davies & Downward (1996, p. 734-735) research was an indication that the demand for hotels is income sensitive, as

a relation between employment (economic growth) and demand (profitability) was found. Furthermore was the research able to agree with the causal theory of the SCP paradigm that high market concentration leads to high profits (Davies & Downward, 1996, p. 735-736). However, Tung et al. (2010, p.1124) found a two-way relationship in their research on Taiwan's international tourist hotel industry. In their research, a sample of 360 hotels were analysed with regard to market share, advertising and profitability between 1995 and 2006. The empirical results suggested that market share has positive effect on advertising, whereas advertising has a negative effect on market share, as high market share indicates a higher marketing budget (Tung et al., 2010, p. 1116-1124).

2.5 Development in the Field of IO is concerned with Game Theory and assumption that conduct and performance shape the market structure

There are several developments in the field of neoclassical theory, since the SCP model was not able to explain many issues in industrial economics, which was realized in the 1970's (Ferguson & Ferguson, 1994, p. 6). The SCP paradigm, which was proposed by J.S. Bain in the 1950s, was based on a "unidirectional flow of causation", but the literature from the 1970s on suggests to abandoned this unidirectional flow (Audretsch, Baumol & Burke, 2001, p. 615). The acknowledgement of the "multiple feedback effects and causation flows that existed in the SCP model" were not identified in the beginning (Tung et al., 2010, p. 1117-1118). Thus, J.S. Bain believed, that structure, conduct and performance have a causal and linear "one-way relationship", but posterior research has shown, that the market structure is be influenced by a firm's conduct, therefore it is a two-way relationship (Chang et al., 2010, p. 45; Fu, 2003, p. 280). Economists made several developments from the traditional SCP model, in order to try to explain the interrelations of the dimensions and the reasons for economic dynamics.

Chicago School suggest that performance of a firm is the result of efficiency, instead of the industry structure (Davies & Downward, 1996, p. 733), since the firm with the lowest production costs per unit will be able to sell the product at a lower price than its rivalries, in any market (Ferguson & Ferguson, 1994, p. 19). It is still within the neoclassical paradigm, but the focus is on "the rationale for firms becoming big, price theory and econometric estimation" (Shaik et al., 2012, p. 5). Furthermore, the Chicago School assumes that the market structure will "develop into that which enables production and distribution to be undertaken at least cost" (Ferguson & Ferguson, 1994, p. 19).

Public Choice Theory is based on the impact of governmental interactions in the IO environment. Furthermore the assumptions of the neoclassical view are applied to a political level, where political decisions are made on the basis of welfare maximisation for the politicians. Also government failure is part of the Public Choice Theory and it is concerned with the problem that governmental intervention, do not necessarily lead to better economic welfare (Ferguson & Ferguson, 1994, p. 6).

New Industrial Organization developed several mathematical tools for economic problems, including the game theory (Grimm, 2008, p. 19), in order to "integrate industrial economics more closely with neoclassical theory" (Ferguson & Ferguson, 1994, p. 19). Therefore, it "tries to sharpen the SCP approach by relating it more rigorously to neoclassical theory" (Ferguson & Ferguson, 1994, p. 6). Its emphasis is on conduct dimension, which interacts with structure and performance (Ferguson & Ferguson, 1994, p. 19). Hence, Oligopoly Theory and therefore game theory is one of the most important tools in New Industrial Theory (Ferguson & Ferguson, 1994, p. 6). Game theory has its application in situations where two or more decision makers encounter and the one's decision has an impact on the other decision maker and the decisions of the other decision makers have an impact one. Situations, where the game theory is applied in Industrial Organization are e.g. in oligopoly markets, where interdependence between the firms is high (Belleflamme & Peitz, 2010, p. 6-7; Porter, 1981, p. 611).

Audretsch et al. (2001, p. 615-616), implicate: "*The application of game theory to industrial organisation and an understanding of endogenous forces affecting market concentration indicated that structure is as much dependent on conduct, as conduct on structure. In many instances these attributes were shown to be simultaneously determined by the strategic action of firms*". Furthermore, the importance of dynamics in Industrial Organisation Economics was indicated due to the help of game theory, as it showed that "small adjustments in economic models can generate large changes in the competitiveness of firms' behaviour" (Audretsch et al., 2001, p. 616). It was indicated, that the dynamics had an impact on firms' behaviour, as a profit maximisation approach was likely to attract competitors to enter the market. Therefore, conduct is not seen anymore as being determined by structure only, but that structure and conduct have a mutual effect on each other (Audretsch et al., 2001, p. 616).

Outside the neoclassical paradigm, the developments of the New Institutional Economics took place. It includes the Principal-Agent Theory, which is still based on maximisation rationality, but its focus is on transaction (e.g. contracts). Also the Transaction Cost Theory is a theory within the New Institutional Economics, as well as the theory of the Austrian School, which does not assume that competition is static, but a process in perfect competition markets (Ferguson & Ferguson, 1994, p. 7-9).

3. INDUSTRIAL ORGANISATION THEORY CAN BE USED TO IDENTIFY STRATEGIC CHOICES, WHICH FIRMS HAVE IN THEIR RESPECTIVELY INDUSTRIES

3.1 General Introduction

The implementation of Industrial Organization theory can contribute to supply chain management, as IO is concerned with firms' behaviour, inter-organisational relations and interdependence among firms (London & Kenley, 2001, p. 778). From an IO perspective, Supply Chain Management is an approach to generate a competitive advantage over rivalry in an industry (London & Kenley, 2001, p. 783) and therefore to achieve long-term plan of profit maximisation, which is the corporate strategy (Caves, 1980, p. 64).

The central analytical aspect of IO can be used to identify strategic choices, which firms have in their respectively industry (Porter, 1981, p. 609; Teece et al. 1997, p. 511). The SCP model identifies the industry structure, thus the external environment, including its opportunities and threats, which are important factors for strategy development, as the external factors need to be matched by a firm's internal competences (Porter, 1981, p. 610-611). Furthermore, understanding a firm's position in its context is a crucial part of developing a competitive strategy (Chen, 2011, p. 1655-1656). This is the reason why Porter's five forces model, which is based on the SCP model, but it is converted into a "firm-oriented perspective" (Grimm, 2008, p. 19), is one of the most important tools for strategic management in general and also in particular

for Supply Chain Management (Grimm, 2008, p. 19). It indicates the influence of competitive forces on the industry, as well as, how the profitability is determined by them. Furthermore, the adopted strategy should aim to influence the market dynamics in favour for the firm, so that it can increase its profits (Teece et al., 1997, 511).

Amit/Schoemaker (1993, p. 33) identify a setting of three aspects for decision-making, which are the challenge for managing resources and capabilities in that way that the firm gains a competitive advantage. These aspects are Uncertainty, Complexity and Intra-organizational conflicts concerning the micro and macro environment of the firm. The SCP paradigm provides a framework for the analysis of these aspects, but it cannot provide an answer to the questions. However, the SCP model can be used to predict possible the possibly achievable performance of a company in its market, since different markets have different potential profitability rates (Porter, 1981, p. 611).

Supply Chain Management includes inter-organizational aspects (Grimm, 2008, p. 18), as it is a network of firms, which work together on the supply chain to "control, manage and improve the flow of materials and information from supplier to end users" (Handfield & Nichols, 1999, p. 2). Therefore, the relationship with suppliers indicates interdependences of organizations in the network, which has to be managed, in order to "deliver superior customer value at less cost to the supply chain as a whole" (Handfield & Nichols, 1999, p. 2). This indicates the usefulness of IO theory to purchasing, since its focus is on the environment a company operates in, rather than the company itself (Ramsey, 2001, p. 39).

This assumption is the basis of analysis and application of the SCP paradigm to the earlier mentioned four decision points of the Purchasing Year Cycle.

3.2 Decision Points

3.2.1 Market concentration and the diversification of the market power decides, from an economical point of view, the make or buy decision

The SCP model can be helpful in making the decision whether to make or buy in the Purchasing year cycle. First of all it is necessary to analyse the market structure, where the buyer and its suppliers interact. In order to determine which actor on which side has more market power to influence prices on the market, it is required, to determine the number of buyers, the number of suppliers, the entry barriers and product differentiation in the market. If the buyer has (significantly) more power the suppliers, as in form of an oligopsony or monopsony, there is, from an economic point of view, rarely need for a vertical integration, thus a make decision, as the buyers have a higher concentration and therefore bargain power, the buyers are able push prices to the perfect competition price level (Bain, 1968, p. 151-152). Therefore it will be very difficult for a firm to integrate vertically and to be just as efficient as the current suppliers, right from the beginning.

When the concentration is higher on the supply side, or the concentration is evenly on the supplier and the buyer side, the buyer is not able to push prices down, due to his market power, whereas the supplier is able to increase prices, due to the low number of suppliers in the market and collusive behaviour is expected. In this situation, a firm needs to think about vertical integration, as part of its conduct, in order to avoid the profit margin of the suppliers, which allow the buyer to decrease prices in the long run, which would then lead to a higher market share according to the efficiency structure hypothesis of the SCP paradigm. But the ability of integrate vertically, is also defined in the SCP model, as to the entry barriers of the supplier's industry, which could make it difficult for the buyer to establish himself in the market (Shepherd & Wilcox, 1979, p. 40). Therefore, the buyer needs to be able to overcome the entry barriers to the supplier's market, in order to foster vertical integration. Furthermore, the supplier's supply market needs to be analysed with the SCP model, as it defines if the buyer firm can produce the required volume to a lower price than the current supplier charges, since the current supplier might benefit from economies of scale, as he produces for several buyers and he makes only profit through the large amount (Caves & Porter, 1977, p. 246). Overall the market structure defines the possible conducts of the buying firm. On one hand, the buyer is able to overcome the entry barriers, which allows him to integrate vertically and therefore he is able to remove the profit margin from his cost structure and enables him to reduce selling prices and then increasing its market share. On the other hand, the structure might not allow the buyer to enter the supplier's industry and therefore he is unable to integrate vertically, therefore the supplier is able to maintain his market power and the prices for the buyer are set by the supplier, which implies that the cost reduction is not possible. From a strategic point of view, can a vertical integration of a buyer, reduce his production costs and therefore his possible selling price, but furthermore it can increase the entry barriers to the buyer market, as new entrants have to enter both markets (Caves & Porter, 1977, p. 246-247).

3.2.2 Sourcing Strategies are the firm's conduct based on the Market Complexity

The sourcing strategies need to be defined specifically for each commodity group. The Kraljic matrix helps to develop strategies for commodities based on the importance of purchasing of a commodity or the so-called value of the commodity and the complexity of the supply market (Kraljic, 1983, p. 111). A commodity is categorized as having a low or high value, based on its importance for the firm and as having a low or high complexity, based on the complexity of the supply market (Kraljic, 1983, p. 111).

The Kraljic matrix can be adapted to the SCP paradigm. In the structure dimension of the SCP model, the supply market complexity is defined. Both market structure approaches analyse the market in terms of supplier concentration, i.e. monopoly or oligopoly, entry barriers, pace of technological advance and logistic costs (Kraljic, 1983, p. 111; Barthwal, 2004, p. 68). The outcome of this analysis defines if a market is highly complex, i.e. highly concentrated or less complex, i.e. less concentrated. Based on the outcome of the measured complexity in both dimensions, the conduct of the firm would be choosing the appropriate strategy as identified by the Kraljic Matrix.

3.2.3 Market concentration determine Supplier Strategies, because Market power is used to benefit when sourcing

In this step, the firm has to select suppliers of the previously identified potential suppliers, which they want to work with. This has to be based on the objectives and on the shared vision. Furthermore the decision of single or multiple sourcing (Monczka et al., 2010, p. 164) and short-term or long-term supplier relationship has to be made (Fudenberg, Holmstrom & Milgrom, 1990, p. 2-3).

The SCP paradigm can help making this decision. The SCP model applied to the suppliers identifies the concentration ratio of them in the market, as well as technological changes, differentiation of the supply. As the theory of perfect information is applied in the SCP hypothesis, the buyer knows everything about the market and therefore his conduct is

determined to a certain extent. The conduct decision of single or multiple sourcing is based on degree of concentration, since when the buyer concentration is higher than the supplier concentration; the buyer makes use of its market power and decreases prices, by sourcing from several suppliers. Whereas when the supplier concentration is higher, he has more power on market prices and the buyer is the price taker and can only increase the efficiency by ordering from one supplier to benefit from economies of scale. Hence, the structure determines the conduct of the firm and therefore its performance. In a less complex supply market, which points at a perfect competition market, small companies and standardized products, it is possible for a buyer to use the multiple sourcing approach.
The decision of short term or long term contracts, needs to be based on
However, attention needs to be paid at the implications of contracting, as strategic behaviour, since it can have an influence on the structure and on the other firms in the market with interdependency. For example, a high volume long-term contract with a supplier, may implicate that this supplier can't supply any other buyers, thus the direct competition of the buyer would be affected, as market concentration can change. Furthermore, the contracting company could benefit from economies of scale, due to the long-term contract and therefore decrease selling prices, which would lead to a necessary reaction of the competing companies, as their value chain is affected.

3.2.4 Contracting is based on the market conditions and can have an impact on the market structure, competitors strategic behaviour and performance

Contracting is part of the firm's conduct and is therefore based on the industry structure and has an impact on the performance (Carlton & Perloff, 2000, p. 4). After the third decision point has the buyer a short list with roughly a handful of suppliers and the next step is to choose the most appropriate one by negotiating or competitive biding (Monczka et al., 2010, p. 38-39). After that an appropriate contract has to be found and agreed upon.
The decision between negotiation and competitive biding depends on the complexity of the market and therefore on who has the market power in an industry. Competitive binding implies that suppliers compete against each other, which is only expected in perfect competition markets, since in oligopolistic structures, as collusive behaviour is expected by actors on the market, in order to maintain their prices high. Therefore, competitive biding requires a less complex market, where product differentiation does not exist and suppliers have no impact on prices, as their market share is not large enough (Bain, 1968, p. 113 & 114).
The negotiation process is influenced by information and market power (Monczka et al., 2010, p. 304). Since in the neoclassical theory perfect information is given to every actor, market power is the determining factor. Based on this theory, negotiation is much more effective for the side, which has a higher concentration than the other. Furthermore, in a complex supply market, the buyer need to negotiate, since the suppliers have the market power or the market power is evenly distributed, as in a bilateral oligopoly structure.
Following the negotiation or competitive biding process, the type of contract between the buyer and the supplier has to be chosen and this decision is also based on the supply market factors (Monczka et al., 2010, p. 336). One factor of importance is stability of the supply markets, because price fluctuation has obviously an impact on the product price and therefore fixed price contracts are not suitable and bear risks for both parties. Furthermore, changes in demand and technology, as part of the basic conditions and the market structure (Carlton & Perloff, 2000, p. 4), need to be included in this decision (Monczka et al., 2010, p. 336).

4. CONCLUSION - THE SCP PARADIGM IS LIMITED IN ITS APPLICATION, BUT PROVIDES FAR-RANGING THEORETICAL FRAMEWORK

The structure-conduct-performance paradigm is a logic application and was applied successfully to the four decision points in theory (See Table 2). Hence, it was possible to indicate how the market structure has an impact on the conduct of a company with regard to purchasing activities. Furthermore, it was shown how a firm's conduct needs to be based on the market structure to achieve the highest possible performance, but on the other side was it also possible to indicate that a firm's conduct might be able to influence the market structure and the rivalry firms' strategic behaviour (conduct), which suggest the causal relationship in the SCP paradigm is not valid, or only in perfect market conditions.

	Decision Points			
Theory	Decision Point 1: Make or Buy	Decision Point 2: Sourcing Strategies	Decision Point 3: Supplier Strategies	Decision Point 4: Contracting after negation or competitive biding
Structure Conduct Performance	- Market structure determines if buyer or supplier has market power. - If the buyer has market power he can push prices down. If suppliers have market power, collusive behaviour is expected and the buyer the buyer is price taker. Thus he has to think about make-decision, as through vertical integration he can gain control of prices.	- Supply Market Complexity defines importance of commodity - Appropriate strategy is selected based on market structure - The market structure indicates strategy and performance.	- Market structure defines if single sourcing or multi sourcing is more appropriate. - The type of contract can have an impact on the structure, competitors and performance.	- Market structure complexity and market power determine negotiating or competitive biding. - In an oligopoly supply market, collusive behaviour is expected.

Table 2: Decision Point Matrix

The logic assumption of the SCP paradigm is at the same time its limitation, as it is only in possible to draw deductions about performance about markets with perfect competition (Ferguson & Ferguson, 1994, p. 37). This means that the structure performance hypothesis is only valid in perfect competition markets with homogenous products. In these markets there is a positive relation between market share and profitability. But as soon as there feedback effects and causation flows appear in the SCP paradigm of an industry, the causal relation between structure and performance disappears, since it is possible for firms to influence the market structure with its conduct and eventually with its performance.

Even though the SCP paradigm is widely spread for competitive analysis (Chang et al., 2010, p. 45), this is the main critique about the model, because perfect information are rarely available in real market conditions, which limits the usefulness to only stable markets, regarding change in demand, change in market structure and change in technology development (Ferguson & Ferguson, 1994, p. 37). Therefore, since the conditions of homogenous products are rarely given and firms can influence the homogeneity of a market, e.g. through innovation or advertising, the SCP paradigm is limited in its application. In dynamic markets the application of the SCP model can be misleading (Ferguson & Ferguson, 1994, p. 37).

The SCP approach is limited in its application, due to its neoclassical assumption foundation, which implies that there are equilibrium states and perfect information. But the paradigm has still value. It is a far-ranging theoretical framework for Industrial Organisation theory. Since IO puts a focus on the market a company operates in, rather than the company itself (Ramsey, 2001, p. 39), the theoretical framework of IO, that is the SCP paradigm, aims to identify strategic choices, which firms have in their respectively industry (Porter, 1981, p. 609; Teece et al., 1997, p. 511).

The impact of the SCP paradigm on purchasing activities is limited as identified, nevertheless, I think that the usefulness of the SCP framework for Purchasing Activities is significant, as each decision point is influenced by the market structure. The SCP framework was able to draw conclusions and provided possible approaches to act in situations, from imperfect market conditions, even though the causal SCP relation was not given. I was able to point at the appropriate strategic purchasing action in given market conditions.

These market conditions can be the foundation for Game Theory in Oligopoly Theory. Since the basis Game Theory is that one's decision has an impact on the other decision maker (Belleflamme & Peitz, 2010, p. 6-7), which is the contrary to the SCP paradigm. Furthermore, the dependency between structure and conduct can be analysed (Audretsch et al., (2001), p. 615-616) and there I suggest for future research to analyse how the New Industrial Organization Theory, and in particular Game Theory, can contribute to purchasing activities.

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