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ARE LOYAL CUSTOMERS PROFITABLE?
Customer Satisfaction, Customer Loyalty and
Customer Profitability at the Individual Level

by

Øyvind Helgesen

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CONTENTS :

0. ABSTRACT[1].

Customer satisfaction is supposed to be positively related to profitability. This link between satisfaction and profitability is perceived to be so self-evident that the relationship is taken for granted. Therefore this conception may be called "the paradigm of customer satisfaction". Nevertheless, only a few studies have examined this fundamental relationship. Thus, evidence for this "much talked about relationship" is questioned. In this working paper the focus is on the individual customer with respect to the relationships between customer satisfaction, customer loyalty and customer profitability at the customer level. The following hypotheses are tested; H_1 : The more satisfied a customer tends to be, the higher is the loyalty of the customer; H_2 : The more loyal a customer tends to be, the higher customer profitability is obtained; H_3 : The more satisfied and loyal a customer tends to be, the higher is the obtained customer profitability. As expected, the findings (results) provide strong support for the three hypotheses. However, the relationships between the variables seem to be non-linear (in-creasingly downward sloping), and only valid beyond certain levels or thresholds. Thus, customer satisfaction beyond a certain level seems to have an influence on customer loyalty, but the effect is diminishing. Analogously, customer loyalty beyond a certain level is supposed to have an influence on customer profitability, but with a diminishing effect based on the relative customer results which are obtained. As long as customer satisfaction is not achieved without costs, the findings suggest that an optimal level of customer satisfaction may be estimated. In order to carry out such estimates the managers among other things have to identify the key drivers of customer satisfaction and establish a market-oriented system of customer accounting. Further managerial implications are discussed at the end of the working paper. Finally, some central problems and problem areas and suggestions for fur-ther research are presented.

I. INTRODUCTION.

Customer profitability is supposed to be positively related to customer loyalty and customer satisfaction. This link between customer satisfaction and profitability forms the cornerstone of the marketing concept. And the lesson is that firms should be striving to meet the customers' needs, desires and requests. Thus, according to this way of thinking, the compa-nies that are able to increase the satisfaction of their customers can in the long term expect a positive effect on the firm's profitability (see e.g. Felton, 1959; Ames, 1970; Bagozzi, 1975; Houston, 1986; Webster, 1988; Grønroos, 1990).

The positive relationship between satisfaction and profitability is perceived to be so self-evident that it is taken for granted by many. Consequently this understanding may be called "the paradigm of customer satisfaction". In spite of the fact that this understanding has gained popularity, the reality is that only a few studies have been analyzing this fundamental relation-ship. Thus evidence for this "much talked about relationship" is questioned (see e.g. Foster &

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[1] This working paper is based on Helgesen (1999a), a dissertation for obtaining the degree doctor oeoconomiae at the Norwegian School of Economics and Business Administration, Bergen. The problems which are adressed in this working paper are among the topics which are discussed in the dissertation.

Gupta, 1994; Storbacka, 1995; Oliver, 1996; Söderlund, 1997; Shields, 1997; Ittner & Larcker, 1997).

The focus of this working paper is the relationships between customer satisfaction, customer loyalty and customer profitability at the individual customer level. The context is the order-handling industry which in this working paper are four Norwegian exporters of fish products and their customers (Helgesen, 1999a). This industry is amongst other things characterized by almost world-wide export activities towards various product markets (geographical areas). In each of the product markets a lot of actors participate, both on the buyer side and the seller side. The competition is hard both among Norwegian competitors and foreign companies.

II. LITERATURE REVIEW.

In a market-oriented business one is concerned with the satisfaction of both the customers and the firm. The customers are in general believed to be satisfied when the offered products meet the customers needs, desires and requests. The firm is satisfied when exchanges result in profitability. This duality has been called attention to in many publications since the marketing concept came into use at the end of the 1940s (see e.g. Felton, 1959; Ames, 1970; Bagozzi, 1975; Houston, 1986; Webster, 1988; Grønroos, 1990; Petro, 1990; Kohli & Jaworski, 1990, 1993; Narver & Slater, 1989, 1990, 1994). Nevertheless, the implementation of the marketing concept has been rather heavily focused on the customers needs, desires and requests. Very few firms have knowledge of the costs incurred and the profitability obtained by exchanges (see e.g. Shapiro & al., 1988; Howell & Soucy, 1990; Reichheld & Sasser, 1990; Selnes, 1992; Foster & Gupta, 1994; Connolly & Ashworth, 1994; Foster & al., 1996).

However, during the last decade there has been a growing interest in market-oriented managerial accounting (see e.g. Ratnatunga & al., 1988; Ward, 1992; Foster & Gupta, 1994; Foster & Young, 1997). Most attention has been directed to customer accounting and customer profitability analysis (see e.g. Anandarajan & Christopher, 1987; Cooper & Kaplan, 1991; Storbacka, 1995; Foster & al., 1996; Ittner & Larker, 1997). Furthermore a lot of effort has been made to prove the excellence of the marketing concept. These studies may be perceived as originating from different kinds of marketing literatures and can broadly be

divided into two main groups related to (1) market orientation and (2) the customer relationship orientation.

According to the first group of approaches, customer responses are perceived as only one set of consequences of the market orientation by a firm. Two other sets of consequences are employee responses and business performances (Kohli & Jaworski, 1990, 1993). Various models and contexts have been used in an attempt to prove the superiority of the marketing concept (see e.g. Narver & Slater, 1990; Jaworski & Kohli, 1992; Ruckert, 1992; Diamantopoulos & Hart, 1993; Slater & Narver, 1994; Greenley, 1995a; 1995b; Selnes & al., 1996; Pelham & Wilson, 1996). Even if the findings are somewhat ambiguous, the results[2] might be perceived as convincing. However, these empirical studies are not analyzing relationships at the customer level. Since this level of analysis represents the most important area of the other main group of approaches, the rest of this working paper is based on this literature and is in particular focusing on customer relationships.

Customer relationship orientation is based on conceptions about positive cause- and effect relationships between the following main variables : (1) antecedents of customer satisfaction, (2) customer satisfaction, (3) customer loyalty, and (4) customer profitability, cf. exhibit 1.
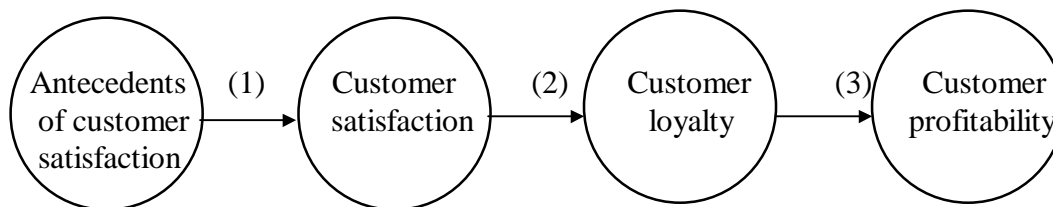
Exhibit 1. Customer relationships – main concepts and supposed causalities.

Exhibit no. 1 only shows the main concepts of what may be called "customer relationship orientation". Some of the models that have been used have included different relationships, concepts, antecedents, intermediary variables, etc. This information has been used in different ways (see e.g. Oliver, 1996; Rust & al., 1996; Fornell & al., 1996; Anderson & al., 1997; 1994; Lee & Cunningham, 1996; Gummesson, 1995; Leuthesser & Kohli, 1995; Evans & Laskin, 1994; Parasuraman & al., 1994; 1988; Anderson & Sullivan, 1993; Fornell, 1992;

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[2] In order to maintain that the marketing concept is superior to other concepts one should carry out comparative studies. For example, the marketing concept should be compared with the sale concept or other concepts.

Bittner, 1990; Hildebrandt, 1988; Zeithaml, 1988).   The focus of this article is on the main concepts. Consequently other concepts are either not addressed or only discussed briefly.

Relationship no. 1 :

The concept of customer satisfaction has for years formed the cornerstone of the marketing concept (see e.g. Drucker, 1954; Felton, 1959; Levitt, 1960; Lear, 1963; Ames, 1970; Houston, 1986; Grönroos, 1989). Thus, measurements and analyses of customer satisfaction and its antecedents are not a new phenomena. A lot of studies have been carried out in relation to this topic (see e.g. Hausknecht, 1990; Myers, 1991; Parasuraman & al., 1988; 1994; Ryan & al., 1995; Oliver, 1996). To explain variations in customer satisfaction several antecedents can be taken into consideration, for example price, quality, service, expectations, etc. In addi-tion, it is usually distinguished between concepts that are objectively measurable and concepts that are perceived («perceived quality», «perceived price», etc.).

However, during the last decade customer satisfaction has received a lot more attention than earlier. The reasons are many, but some can be linked to the increased attention concerning total quality management and national quality awards (see e.g. Garvin, 1991; Heaphy & Gruska, 1995; Hayes, 1997). In addition, the implementation of national customer satisfaction barometers may be yet another reason for the increased attention customer satisfaction has received (see e.g. Fornell, 1992; Fornell & al., 1996; Anderson & al., 1994; 1997; Andreassen, 1994; 1998).   In addition to analysis of customer satisfaction and its antecedents, these approaches are also focusing on effects of customer satisfaction, which is the second relation-ship of exhibit no. 1.

Relationship no. 2 :

When judging candidates for quality awards such as the Malcolm Baldrige National Quality Award one should be aware of the following with respect to customer satisfaction and markets. The customer satisfaction results along with activities and programs concerning en-hancement of customer satisfaction and customer relationships, and other areas related to customers and markets, count for a considerable part of the amount of points that can be obtained (about 20 %). This proportion is much the same with respect to other awards such as the European and the Norwegian ones. Some of the criteria are related to the consequences of customer satisfaction. The main consequence is by many perceived to be customer loyalty.

Thus, the similarity with the national customer satisfaction barometers is striking. An interesting example is the American Customer Satisfaction Index (ACSI) (Fornell & al. 1996). This model consists of six latent variables (customer expectations, perceived quality, perceived value, overall customer satisfaction, customer complaints and customer loyalty), which are calculated by using fifteen questions or variables. Concerning customer loyalty Fornel & al. writes the following :

"Loyalty is the ultimate dependent variable in the model because of its value as a proxy for profitability (Reichheld & Sasser 1990)" (Fornell & al, 1996, op. cit. p. 9).

However, linking these important relationships to only one study is at least disquieting. Taking into account the large amounts of money that is spent on various analyses of customer satisfaction and of total quality and national customer indexes or barometers, there ought to be more publications that are proving a positive relationship between the last two concepts of exhibit no. 1.

Relationship no. 3 :

In a comprehensive analysis of publications for the period 1921-1987 Capon & al. (1990) identified 320 empirical studies whose principal aim was to find factors or variables that could explain variations in business profitability. Customer satisfaction or behavioural effects of customer satisfaction were not utilised as explanatory variables in anyone of these studies. However, during the 1990th some studies have been carried out, but the number of such studies is still rather small.

One of the most cited studies focusing on profitability effects in relation to various levels of customer satisfaction is the study by Anderson & al. (1994). The study is using 77 Swedish firms as a basis for analysis. This study found a positive correlation between customer satisfaction and profitability. Based on this finding Anderson & al. are discussing some presumed theoretical relationships and also suggest some hypotheses[3] for further research. However, it should be noted that customer satisfaction is measured by the judgements of the customers with respect to one of the products of the firms, while business performance is measured as some sort of overall profitability (return on assets located in Sweden).

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[3] Later on Anderson has analyzed some of the propositions (Anderson, 1996), for instance the relationship between customer satisfaction and price sensitivity.

Reichheld & Sasser (1990) and Page & al.[4] (1996) are dealing with customer defections which is yet another central topic. Reichheld & Sasser (1990) claim that customer profitability to a great extent depends on the ability of a business to keep its customers :

«Customers defections have a surprisingly powerful impact on the bottom line. They can have more to do with a service´s profits than scale, market share, unit costs, and many other factors usually associated with competitive advantage. As a customer´s relationship with a company lengthens, profits rise. And not just a little. Companies can boost profits by almost 100 % by retaining just 5 % more of their customers» (Reichheld & Sasser, 1990, op. cit. p. 105).

Reichheld & Sasser assert that the ability to retain customers has a tremendous positive effect on both the revenues and the costs of a business. More specifically they claim that : (1) the longer the customers are retained, the more revenues are generated; (2) the share of a particular customer will usually increase over time; (3) a loyal customer is less sensitive for price changes than a customer that is not loyal; (4) loyal customers speak favorably about the business (worth of tongue); (5) marketing activities to create loyalty may result in large initial costs, but (6) the operating (running) costs in established supplier customer relationships may fall considerably over time. However, Reichheld[5] & Sasser do not offer any solid (scientific) evidence for their findings and suggestions.

With respect to the existing contributions related to customer accounting profitability (CAP) or customer profitability analysis (CPA), these are mainly focusing on problems that have to be solved in order to establish reliable customer accounting figures (see e.g. Anandarajan & Christopher, 1987; Selnes, 1992; Foster & Gupta, 1994; Connolly & Ashworth, 1994; Foster & al., 1996). Some other contributions are focusing on practical ways of handling various issues related to the profitability concepts that are under consideration (see e.g. Shapiro & al., 1987; Bellis-Jones, 1989; Tibbert, 1989; Pogue, 1990; Howell & Soucy, 1990; Reichheld & Sasser, 1990; Stuchfield & Weber, 1992). Only a few of these publications are dealing with accounting systems such as customer- and market-oriented systems. These systems may be implemented and used as natural parts of the system of managerial accounting in a business setting (see e.g. Marple, 1967; Beik & Buzby, 1973; Kirpalani & Shapiro, 1973; Hulbert & Toy, 1977; Dunne & Wolk, 1977; Robinson, 1990; Cooper & Kaplan, 1991; Ward, 1992; Booth, 1994; Storbacka, 1995). However, most of these publications are only outlining

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[4] Page & al. (1996) present various techniques of analysis. Furthermore some empirical examples are presented. The article gives a practical introduction to the topic under consideration.

(suggesting) a market-oriented accounting framework and are normally based on the approach called the contribution method. Consequently, contributions in this area are few (see e.g. Foster & al., 1996; Oliver, 1996; Söderlund, 1997; Foster & Young, 1997). Furthermore, the very few[6] empirical contributions which exist, are mainly related to banks[7] and are for the most part dealing with various ways of analyzing customer profitability (Rust & Zahorik, 1993; Storbacka, 1995; Hallowell; 1996).

Thus, we have seen that most of the studies dealing with relationship no. 3 are mainly based on the firm level or business-unit level data and not data on the individual customer-level. Recently, some studies have been focusing on the customer-level, but customer profitability has still been measured by using averages. Thus, this may not be perceived as analysis at the customer-level, but rather figures related to an average customer in a market or a customer segment. In reality, the focus is on the customer base and not on the individual customer. Oliver (1996) emphasizes that in order to do analyses related to the customer relationship orientation, cf. exhibit 1, the level of analysis has to be the same for each concept under scrutiny (Oliver, 1996) :

«Until recently, few data were available to establish the «much talked about» relationship between satisfied consumers and a firm's profits. While many working in the satisfaction field assume that the relationships between satisfaction and loyalty and between loyalty and profits are inherently intuitive and self-evident, others can (and do) provide anecdotal evidence to the contrary. ………. To study this loyalty-profit relation, one must either break down profit into customer-specific basis or aggregate loyalty up to the firm level so that aggregate loyalty figures can be related to profitability on an interfirm basis» (Oliver, 1996, op. cit. p. 401).

Evidence for this commonly used relationship or "much talked about relationship", used to be called "the paradigm of customer satisfaction", is questioned (see e.g. Foster & Gupta, 1994;

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[5] In later articles the argumentation is more detailed. But still the customer loyalty concept forms the basis of these approaches.

[6] In some studies customer profitability aspects are briefly mentioned, but most of these studies may be perceived only as theoretical contributions that are mainly focusing on aspects that are peripheral to the topics of this working paper (see e.g. Paltschik & Storbacka, 1992; Johanson & Mattsson, 1994; Kalwani & Narayandas, 1995; Leuthesser & Kohli, 1995; Ittner & Larcker, 1997). For instance, Ittner & Larcker (1997c) examine three research questions related to the measurement of customer satisfaction: (1) Are customer satisfaction measures leading indicators of financial performance ?; (2) Is the economic value of customer satisfaction (fully) reflected in contemporaneous financial statements ?; and (3) Does the release of customer satisfaction measures provide new or incremental information to stock market ? To answer the questions, analyses are carried through using customer, business unit, and firm-level data. Customer-level data are figures of customer satisfaction, customer revenues and customer loyalty, and not figures or measures of customer profitability. Nevertheless, the findings are very interesting and are supporting the findings presented below, cf. part V.

[7] There are some exceptions (see e.g. Söderlund & Vilgon, 1995; 1999).

Storbacka, 1995; Oliver, 1996; Kaplan & Norton, 1996; Söderlund, 1997; Shields, 1997; Hayes, 1997; Ittner & Larcker, 1997). And the focus of this working paper is the relationships between customer satisfaction, customer loyalty and customer profitability at the customer level (Helgesen, 1999a; 1999b).

III. PROBLEMS AND HYPOTHESES.

Exhibit no. 1 shows the supposed links between the main concepts of the customer relationship orientation. In this working paper the attention is directed to the last three concepts, that is relationship no. 2 and relationship no. 3. And the problems thay we are dealing with, may be summarised as follows : Does customer loyalty increase with increasing customer satis-faction (is there a positive relationship) ? Does customer profitability increase with increasing customer loyalty (is there a positive relationship) ? Are satisfied and loyal customers more profitable than the rest of the customers ?

Since the composition of the set of data is cross-sectional, only correlation analyses are carried through, which imply that the following hypotheses may be used :

H_1 : The more satisfied a customer tends to be, the higher is the loyalty of the customer.

H_2 : The more loyal a customer tends to be, the higher customer profitability is obtained.

H_3 : The more satisfied and loyal a customer tends to be, the higher is the obtained customer profitability.

If the statistical results indicates that each of the first two hypotheses may be supported, hypothesis no. 3 may be looked upon as an evident consequence. Nevertheless, the third hypothesis can be tested by using figures from the customer-level that are related to different customer segments. However, such analyses are not presented[8] in this working paper.

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[8] Such analyses of customer segments also including antecedents of customer satisfaction, that is analyses of all the three relationships of exhibit no. 1, are worked out in Helgesen (1999a) and are going to be published in a forthcoming working paper : "Does quality pay ?"

IV. RESEARCH DESIGN, RESEARCH METHODS AND MEASUREMENTS.

In order to test the formulated hypotheses there is a need for empirical data, and in this study Norwegian exporters of klipfish and frozen fish are chosen as a context. These types of products are based on groundfish as raw material. This part of the Norwegian fishing industry is amongst other things characterized by almost world-wide export activities orientated towards various product markets (geographical areas). In each of these product markets a lot of actors participate both on the buyer side and the seller side. The products that are offered for sale may be perceived as generic and the trading patterns tend to show seasonal fluctuations. Usually, the importers buy products from several exporters that are often located in different countries. Repurchases often forms a crucial part of the picture of the trade with fish products. Consequently, the customers do have a lot of experience when judging the method of delivery and the quality of the products. Altogether, the part of the Norwegian industry that has been selected as a context for this working paper can be viewed as suitable. Nevertheless, it may correctly be asserted that the two groups of products are somewhat different; for example based on different methods of preservation or technologies. However, the two lines of business have so much in common (groundfish as their raw material, generic products, high level of competitive, order-oriented marketing, distribution, etc.) that there should be no doubt that they belong to the same industrial sector.

The empirical data are collected from four Norwegian exporters and their customers. Two of the companies in the sample are exporting klipfish while the other two are exporting frozen fish/filets. Measured in annual revenues, their sizes vary from about 20 million NOK to about 200 million NOK (1996). Information has been collected by two[9] means :

- Customer accounts (order accounts) and profitability analyses based on accounting information from the four exporting companies.

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[9] In order to answer all the research questions in Helgesen (1999a) more data was collected : (1) Customer ratings (creditworthiness) including financial statements (furnished by customer rating agencies), and (2) Manage-ment's ex-ante perceptions of the profitability of individual customer accounts and of the creditworthiness of some of the customers.

- Market surveys (measurements of customer satisfaction, etc.) among the customers of the four Norwegian exporters.

In order to estimate customer account profitability (CAP) at the individual customer-level a market-oriented accounting model had to be established (Helgesen 1999a; 1999b).

Customer Profitability Accounting.

For many industrial enterprises there may be several links in the distribution channels between the firm and the ultimate buyers, that is consumers or end users, for example importers, wholesalers and retailers. Thus, there are various customer markets to take into consideration (Tellefsen, 1995). However, in this working paper the understanding of the customer concept is traditional. Thus, a customer is defined as the direct buyer of a firms products and/or services (usually a company).

Establishing reliable profitability figures of customer accounts or "Images of Customer Profitability" (ICPs)[10] is not straightforward, cf. Helgesen (1999b) which is focusing on problems related to seven topics or problem areas : (1) theory basis, (2) cost basis and cost estimation methods, (3) market hierarchy – a market-oriented accounting framework, (4) the separation of costs into main groups, (5) the understanding and assignment of costs to cost groups, (6) the market-oriented accounting concepts and models, and (7) analytical methods. The choices made for each problem area have practical implications. «Descriptive» ICPs may for instance be established by using different estimation methods : (1) full costing (the absorption method), (2) variable costing (the contribution margin method) or (3) activity based costing (the «hierarchy-method»). These methods will of course tend to result in different designs of the specified accounts. However, the most important aspect to remember is that different approaches result in different estimates of customer profitability. Consequently, arguments may be put forward to make use of various methods simultaneously. However, the ABC-approach has advantages compared with the two other methods (Helgesen, 1999a; 1999b). Therefore this approach is chosen.

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[10] «Images of Customer Profitability» (ICPs) may be divided into two main groups; «descriptive» and «causal» ICPs. Causal ICPs, that is images indicating nexuses of causes and effects, can only be worked out when

Exhibit 2 shows the market hierarchy[11] chosen and illustrates the assignment of costs to different levels. It also reflects the chosen market-oriented accounting framework. Costs are assigned to the level where they are incurred (orders, customers, markets, etc.). All the revenues are related to the order level. The costs of the orders are subtracted from the revenues from orders. In this way the results can be estimated for each order. Then revenues and costs from orders are transferred to the customer level. The customer result for a given period is the aggregate revenues from orders related to the actual customer less the aggregate costs related to the orders as well as the costs related to the customer. Then revenues and costs from the customers are used on the market level. The market[12] result for a given period is the aggregate revenues from the customers that are related to the actual market less the aggregate customer and the market related costs. Analogously[13] the result of the strategic business unit is estimated. This approach[14] is consistent with the ABC-approach and the Nordic step analysis (Bjørnenak, 1994b).

Customer profitability.

During the period of analysis (the financial year of 1996), the total revenue of the four Norwegian exporting companies amounted to 350 million NOK. The sample of orders comprises revenues of about 180 million NOK, that is about 52 % of their[15] total revenue during the year. The total Norwegian export of klipfish and frozen fish/filets for the same period summed up to about 4,5 billion NOK, and the total Norwegian export of fish and fish

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«descriptive» ICPs are established. Furthermore, there is a need for registrations of potential factors explaining variations of customer profitability so that causal analysis may be carried out.

[11] Accounts are kept on the transaction-level. Consequently, marketing activities may be related to different levels : transaction, order-line, invoice, part order, order, customer, customer category, product market, market segment, market area, distribution channel/value chain, agent area, etc. Thus, profitability images may be elabo-rated for various objects with respect to the market.

[12] Markets can be categorised and segmented in various ways (Abell, 1980,1993; Shapiro & Bonona, 1984; Kotler, 1992). As long as descriptive ICPs are available the chosen approach makes it possible to estimate the profitability of various market segments based on the assumption that the costs related to the appropriate market segment level are handled according to the ABC-approach.

[13] The outlined methodology makes it possible to establish designs of the specified accounts for each level of the market hierarchy (Helgesen, 1999a;1999b).

[14] The approach is also consistent with propositions formulated by Kaplan, referred to in Robinson (1990). The principle objective of Kaplan's speech was related to product costs, but he also touched on customer accounts and distribution channels : «Another way to look at operating expenses focuses on customers and distribution channels. We can compute the margins earned by each customer or distribution channel by summing the product-level margins of the products sold to each customer or through each channel and than subtracting expenses incurred for individual customers or channels. We need to find out what causes expenses to vary and at what level of the organization, but expenses need not and should not be allocated below the level at which they are incurred» (Kaplan/Robinson, 1990; op. cit. p. 13).

[15] The sample sizes vary from about 37 percent to 100 percent.

products reached approximately 22,5 billion NOK (Norwegian Seafood Export Council, 1996). Thus, the lines of business of current interest represent about 20 % of the total Norwegian exports of fish products. And the sample, consisting of 564 orders related to 176 customer and 36 geographical markets, represents about 4 % of the total Norwegian exports of products from these lines of business.

Exhibit 2. Market hierarchy for order-handling marketing companies.

Costs related to business unit	Business unit ←	Cost driver
Market costs	Market ←	Cost driver
Customer costs	Customer ←	Cost driver
Revenue (price) Order costs	Order ←	Cost driver
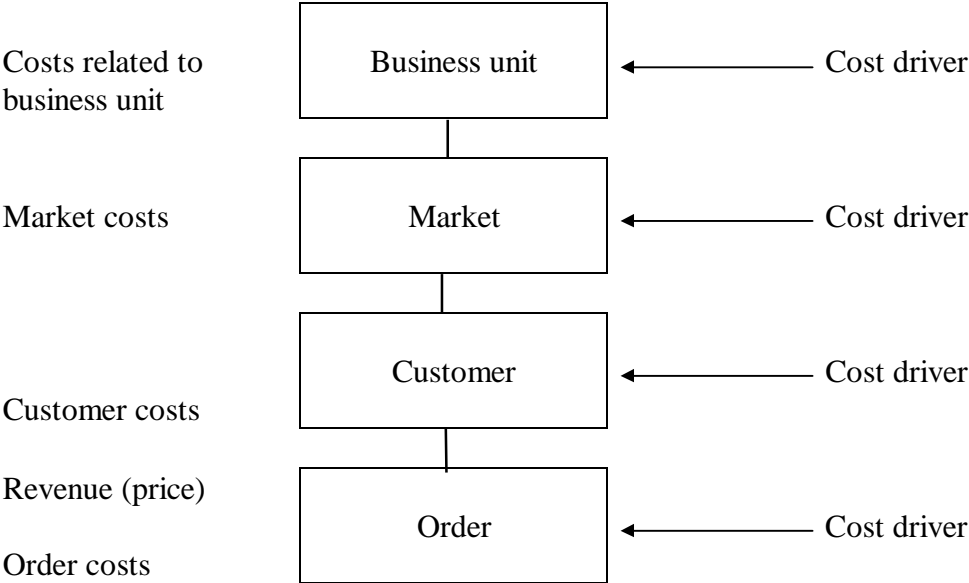
None of the four exporting companies had earlier worked out customer accounts or customer profitability analyses in a systematic way. But all of them had well arranged systems of managerial accounting. In two of the companies the intention for some time had been to carry through customer profitability analyses. Thus, some of the necessary information such as the revenues and the easily traceable parts of the costs was recorded. This basic work contributed to facilitate the work. Nevertheless, all the accounts and all the vouchers had to be thoroughly revised. By means of various ways of recording this information (data bases and cross tables) all the accounting information was reregistered and assigned to profitability objects according to the chosen procedure. Later on all the accounts were balanced with the ledger. The job was time-consuming, but the insight acquired clearly justified the chosen method of approach.

Revenues were assigned to the order-level and the costs were traced and assigned to the various levels of the market hierarchy. In this way about 98,5 % of the total costs were traced and assigned directly to the costs objects. Thus, only 1,5 % of the costs (indirect costs) had to

be accumulated into cost pools and allocated to the various cost objects according to the[16] ABC-approach. The proportion of direct costs was much higher than thought in beforehand. The chosen approach allowed for the use of accounts and profitability analysis for various market objects based on a market-orientation (Helgesen, 1999a; 1999b).

Exhibit 3 presents descriptive statistics for the customer relationship sample. Because of defection for some of the respondents the sample only consists of 71 customers. Relative customer results (customer revenues minus all direct and indirect costs as a proportion of customer revenues) ("KRESIPRO") are used as measures of customer profitability. It appears that the average customer is[17] unprofitable, but the variation is rather high (for further information see Helgesen, 1999a).

The rearrangement of the accounting figures was worked out in close collaboration with the marketers, accountants and managers of the four exporting companies. There was no disagreement concerning the results that were elaborated. The orders included in the sample were selected at random in such a way that several succeeding orders were analyzed in order to simplify the balancing work. However, it should be mentioned that the selected exporting companies are looked upon as being in the vanguard of the industry. And surely, this was one of the reasons for choosing them as working partners. This choice proved to be successful. Consequently, it may be questioned whether the sample is representative. The established sample is analyzed at the market level, comparing the four exporters' market-revenue figures with the total Norwegian export for these lines of business for the period under consideration to each of the 36 geographical markets. The analysis shows a strong and significant correlation (r=0,804; p<0,001). In addition, the 20-25 most important geographical markets for this part of the Norwegian fishing industry are represented in «the sample revenue». Thus, it may at least be asserted that the sample is not non-representative of the population.

Customer survey.

In order to collect perceptual data to reveal the satisfaction of the customers with the four Norwegian exporters, a questionnaire was distributed to the customers. The questionnaire was examined by experts, both business people and academicians, (face validity), pre-tested, then

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[16] Cost drivers representing causalities were used to assign the indirect costs to the objects. In this way the com-plexities of the transactions (number of products lines per order, number of batches per order, etc.) were taken care of.

adjusted somewhat and sent to 244 customer (June, 1997). That includes all the custo-mers[18] that had placed orders during the last year. In order to compensate for return postage a small gift (a Norwegian pin) was enclosed. Two reminders[19] were sent in such a way that 30 days passed between each mailing. 128 questionnaires were returned of which 124 were usable[20]. Thus the response rate was about 51 %. Respondents are importers from 29 countries. All the main geographical areas are represented and the distribution of the response did to a great extent co-inside with the Norwegian export activities of the business lines under consideration for the various countries (cf. Norwegian Seafood Export Council, Annual Statistics).

Customer satisfaction.

The customer satisfaction concept may be perceived and measured in different ways (Haus-knecht, 1990; Myers, 1991; Fornell, 1992; Ryan & al., 1995; Oliver, 1996). In this study cus-tomer satisfaction is measured by using two variables. One of these variables is used to express fulfillment and the other is used as a standard for comparison (Oliver, 1996). For each statement or question in the questionnaire a line with a length of 10 cm was presented, and the respondents were asked to simply put a mark (tick, point, cross) on that line which was placed to the right of the question (see e.g. Hair & al., 1995). The measure of customer satisfaction was found as the average of the two responses made. By using Cronbachs Alpha the reliability of the concept is estimated to 0,859 which is satisfactory (Carmines & Zeller, 1979; Spector, 1992).

The perceptual variables of the customer survey, for example the statements used to measure customer satisfaction, are all measured on an ordinal level. However, the chosen procedure of measurement with a great number of response alternatives may justify that the analysis is

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[17] This does not imply that the customers on the average are unprofitable.

[18] Cover letter and questionnaire was translated to English, French, German, Italian, Spanish and Portuguese.

[19] Each questionnaire was openly coded so that the reminders only were sent to the non-respondents. But this procedure also made it possible to combine information in such a way that the formulated hypotheses could be tested. In the cover letter the attention of the respondents were directed to the codes which were placed on the last page of the questionnaire. No remarks were made. Furthermore, all information has been analysed and pre-sented in such a way that answers are untraceable. It can with good reason be asserted that questionnaires not were answered anonymously. However, in what other way should the information from the respondents then be obtained to match perceptual data with behavioural data for each customer in the sample ?

[20] Four of the customers returned the questionnaire but informed that the trade-volume was so little that they were unable to respond.

carried out as if the variables are measured on an interval[21] level (see e.g. Asher, 1983; Hair & al., 1995). Thus, customer satisfaction is perceived as a continuous variable according to the common suppositions when doing such an analysis.

Exhibit 3 presents descriptive statistics for customer satisfaction for the customer relationship sample. It appears that the average score is 67,9 but the variation is high. This satisfaction-level is common for foods (see e.g. Fierman, 1995; various National Customer Barometers).

Exhibit 3. Descriptive statistics for the variables «SATIS», «KUNDAND» and «KRESIPRO» (n=71).

Variable names and concepts:	Arithmetic mean	Standard deviation	10. percentile	90. percentile
«SATIS» (Customer satisfaction)	67,9	21,4	36,5	92,9
«KUNDAND» (Customer loyalty)	13,4	24,5	0,1	57,7
«KRESIPRO» (Customer profitability – relative figures)	-2,2	10,4	-11,1	4,7

Customer loyalty

Customer loyalty may be related to various characterisations or phases (Oliver, 1996) : (1) cognitive loyalty, (2) affective loyalty, (3) conative loyalty, and (4) action loyalty. Thus, the concept may be perceived and measured in different ways (see e.g. Hirschman, 1970; Reyn-olds & al., 1974-75; Kau & Ehrenberg, 1984; Hildebrandt, 1988; Ostrowski & al., 1993; Innis & La Londe, 1994; Søderlund & Vilgon, 1995; Mägi, 1999). Often loyalty is equated with future behavioural intentions. However, I agree with Olivia & al. (1992, p. 85) when they argue that «an intention is only a tentative measure of behavioural loyalty». Consequently, I measure customer loyalty as the share of the total purchases a customer buys from a particular supplier (given a particular product and a given particular period of time) (see e.g. Peppers & Rogers, 1995; Pine II & al., 1995).

In the survey the customers were questioned about their total purchases in the line of business under consideration, that is both with respect to the total value ("INNKJVER") and the total

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[21] «It appears that the greater the number of categories in the ordinal variable, the less critical is the interval

number of orders. The total sales of the exporters to each of the customers were found in the ledger of accounts for the debtors, that is the total value ("KITOT") and the total number of orders. Customer loyalty is then estimated as the proportion of the value of purchases ("KUNDAND"), that is as "KITOT"/"INNKJVER". Exhibit 3 presents descriptive statistics for customer loyalty (customer shares) for the customer relationship sample. It appears that the average proportion is 13,4 but the variation is high. In addition, another variable, "ANDINNKJ", was established to reflect the number of orders placed with the exporter. This was estimated as the proportion of the total number of orders with respect to this line of business. The sample for this relationship had to be based on only 57 respondents. The Pearsons correlation coefficient between "KUNDAND" and "ANDINNKJ" is strongly positive and significant (r=0,558; p<0,01) which gives support[22] to the estimates of the shares of the customers.

The relationship sample – some further comments.

Exhibit 3 presents descriptive statistics for the relationship sample consisting of 71 customers, that is the customers where all information is available. Of course, each existing sub-sample had a little higher number of answers than the relationship sample (profitability sample, n=176; satisfaction sample, n=116; loyalty sample, n=94). Comparing the relationship sample with each of the existing rest samples by way of t-tests does not reveal any significant diffe-rences (p<0,05). Thus, it may at least be asserted that the relationship sample is not non-representative of the total sample of the study.

The formulated hypotheses are tested by using correlation and regression analyses (OLS). Exhibit 3 indicates that the variables under consideration are not normally distributed. In order to comply with methical requirements, the variables are transformed before analyses are carried out, cf. the presentation below. Such transformations result in non-linear relation-ships between the original variables. As a starting point one has to take into consideration that such relationships are results of the transformations and not consequences of suppositions that the relationships between the variables are non-linear.

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requirement» (Asher, 1983, op. cit. p. 90).

[22] The customers were also asked about the number of suppliers used ("ANTLEV"). Out of the relationship sam-ple of 71 respondents 67 answered this question. The Pearsons correlation coefficient between "KUNDAND" and "ANTLEV" is negative (r=-0,146) but unfortunately not significant (p<0,05).

It appears from the discussion above that the measures of customer profitability are based on accounting information from the fiscal year of 1996. The customer survey was carried out in mid-1997. Thus, the respondents amongst other things could take into consideration their experiences with the 1996-deliveries, which is a procedure according to theory. Still according to theory, the supposition is that increased customer satisfaction does result in increased loyalty. However, the chosen measure of customer loyalty (customer shares) is estimated by using accounting information from the fiscal year of 1996. Consequently, the time sequence may be questioned. Similarly, relative customer results are based on 1996-figures. However, the observations may be perceived as being related to the same orders or transactions. Therefore, I take it for granted that the data may be interpreted as cross sectional and may be studied by way of correlation analyses between the variables of the models under scrutiny. However, I do emphasize that ideally all the analyses in this working paper should have been based on time series.

V. FINDINGS.

Exhibit 1 shows the supposed links between the main customer relationship concepts. In this section the findings are presented which means that the formulated hypotheses (section III) are tested and discussed. As stated above, the analyses are carried out only with respect to the last two relationships.

Customer satisfaction – customer loyalty.

The size of the Pearson's correlation coefficient between the variables "SATIS" and "KUND-AND" (r=0,209; p=0,040; n=71) seems to indicate that there is a positive relationship between customer satisfaction and customer loyalty at the customer level. As earlier pointed out, the variables are non-normal. Therefore further analyses are carried out on transformed variables.

The distributions of the variables under consideration show that the variable "SATIS" is negatively skewed and the variable "KUNDAND" is positively skewed, cf. exhibit 3. By establishing a new variable, "ASATIS", which is "SATIS" squared, normality is obtained, or more precisely, it may not be maintained that the variable is non-normal. (Kolmogorov-Smir-nov Z=0,105 is indicating a probability of normality with at least a value of 0,05). For the variable "KUNDAND" normality is obtained by using a ln-transformation for the establish-ment of a

new variable "AKUNDAND". (Kolmogorov-Smirnov Z=0,092 is indicating proba-bility of normality with at least a value of 0,20).

The relationship between customer satisfaction ("ASATIS") and customer loyalty ("AKUND-AND") can be analyzed by using a simple regression model (OLS) where variations in custo-mer satisfaction is supposed to explain at least a part of the variations in customer loyalty. That relationship can be expressed as follows :

(1) $AKUNDAND = b_o + b_1 ASATIS + u$

Exhibit 4 presents the estimates of the regression coefficients including the standardised re-gression coefficient (beta) which for bivariate regression is equal to the linear coefficient of correlation. In addition, the t-values are shown. Other main statistics[23] are; R=0,318, R^2=0,101, R^2adj.= 0,088, standard error of the estimate = 2,10 and F=7,76 (p<0,007). According to these results, variations in customer satisfaction explain about 10 % of the variations of customer loyalty. To explain the remaining part of the variations one has to search for other explanatory variables. The model as a whole is significant at the 0,01-level, which is another way of saying that the equation as a whole is significant.

Exhibit 4. Customer satisfaction ("ASATIS") and customer loyalty ("AKUNDAND") at the customer level - estimates of regression coefficients, etc. (n=71).

	Arithmetic mean	Standard- error	Std. coeff. beta	t
Constant	-0,528	0,544		-0,971
ASATIS	0,00027	0,001	0,318	2,786[a]

[a] p<0,01

However, because of the transformations of the variables, the shape of the relationship bet-ween the original variables ("SATIS" and "KUNDAND") is not easily seen. Based on the estimates above this relationship is therefore presented in exhibit 5.

The correlation between the variables "SATIS" and "KUNDAND" seems to be positive, but declining. Thus, it seems that the more satisfied a customer is, the more loyal he is. How-ever, the degree of correlation is degressive (the relationship is weakening gradually). The

results do not surprisingly support the formulated hypothesis (section III). It seems that this hypothesis may be accepted, which lends support to the statement that "the more satisfied a customer tends to be, the higher is the loyalty of the customer" (H_1).
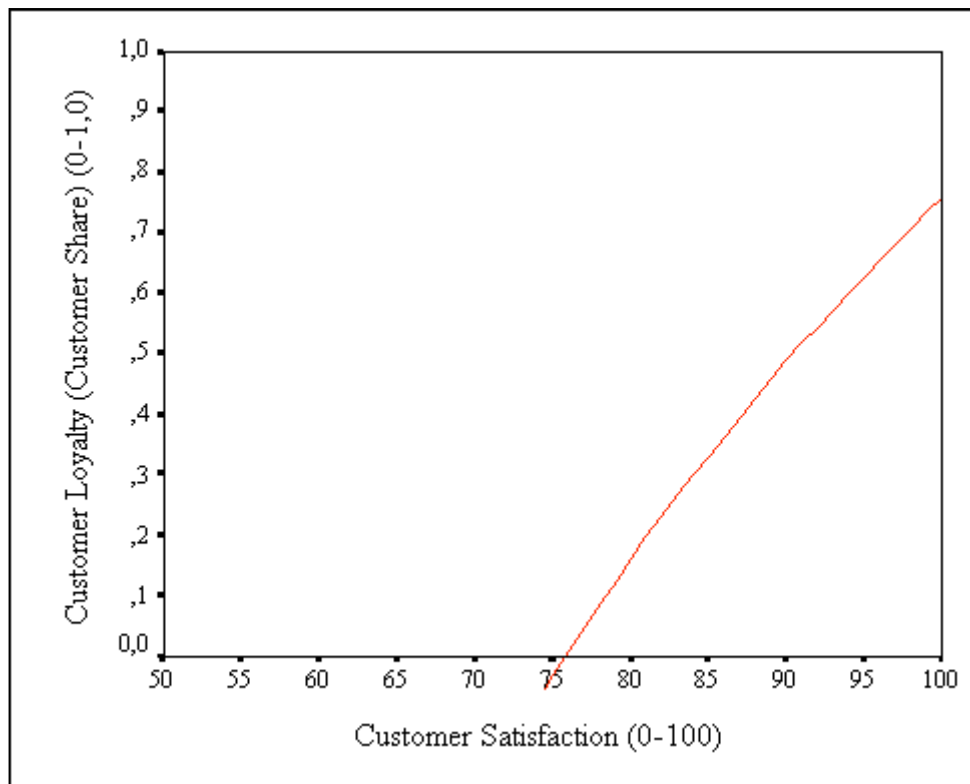

Exhibit 5. Customer satisfaction and customer loyalty at the customer level (n=71).

The relationship[24] between the variables "SATIS" and "KUNDAND" may be interpreted as if the satisfaction level has to pass a certain threshold if it is going to have any influence on customer loyalty. This finding[25] is in accordance with earlier studies (see e.g. Ittner & Larcker, 1997; Oliver, 1996; Paltschik & Storbacka, 1992). Furthermore it seems that the relationship is degressive, which means that increased customer satisfaction beyond the "zero-point" has a diminishing effect on increased customer loyalty. This result is also in accord-ance with earlier studies and theoretical reflections (see e.g. Ittner & Larcker, 1997; Stor-backa, 1995). However, the achievement of customer satisfaction is not normally assumed to be without costs. Thus, the findings do suggest that an optimal level of customer satisfaction may be calculated. This is based on the assumptions that customer loyalty shows a positive

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[23] Residual analysis also provides satisfactory results.

[24] I do emphasize that the formulations are based on the assumption that a cause- and effect relationship really exists between the two variables.

[25] This threshold seems to be at a level or value of customer satisfaction of about 75. This coincides with earlier findings. However, it is not the figure itself, but the fact that the relationship seems to have such a shape that is interesting.

correlation with customer profitability, and furthermore that estimates can be made both of customer revenues and customer costs as effects of increased customer satisfaction.

Customer loyalty – customer profitability.

The size of the Pearson's correlation coefficient between the variables "KUNDAND" and "KRESIPRO" (r=0,231; p<0,026; n=71) seems to indicate that there is a positive relationship between customer loyalty and customer profitability at the customer level. This gives support to H_2, cf. section III.

Analogously to the presentation above, the relationship between customer loyalty ("AKUND-AND") and customer profitability[26] ("KRESIPRO") may be analyzed by using a simple regression model (OLS) where variations in customer loyalty is supposed to explain at least a part of the variations in customer profitability (relative customer results). That relationship can be expressed as follows :

(2) KRESIPRO = b_o + b_1AKUNDAND + u

Exhibit 6 presents the estimates of the regression coefficients and the t-values. Other main statistics[27] are; R=0,325, R^2=0,106, R^2adj.=0,093, standard error of the estimate = 9,90 and F=8,16 (p<0,006). According to these results, variations in customer loyalty explain about 10 % of the variations of customer profitability. To explain the remaining part of the variations one has to search for other explanatory variables. The model is significant at the 0,01-level.

Exhibit 6. Customer loyalty («AKUNDAND») and customer profitability («KRESIPRO») at the customer level - estimates of regression coefficients, etc. (n=71).

	Arithmetic mean	Standard-error	Std. coeff. beta	t
Constant	-3,426	1,255		-2,730[a]
AKUNDAND	1,540	0,539	0,325	2,856[a]

[a] p<0,01

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[26] The variable "KRESIPRO" is non-normal, but the departure from non-normality is not of such a character that analyses should not be carried out. "It is almost impossible to find data that are exactly normally distributed. For most statistical tests, it is sufficient that the data are approximately normally distributed. Thus, for large data sets, you should look not only at the observed significance level but also at the actual departure from normality" (SPSS, 1993; p. 191). The major problem here is kurtosis, that is a rather peaked distribution. "For practical purposes, symmetry (with no severe outliers) may be sufficient. Transformation are not a magic wand, however. Many distributions cannot even be made symmetrical" (Hamilton, 1992; p. 23).

[27] Residual analysis also provides satisfactory results.

Because of the transformation of the variable "KUNDAND", the shape of the relationship between the original variables ("KUNDAND" and "KRESIPRO") is not easily seen. Based on the estimates above this relationship is presented in exhibit 7.
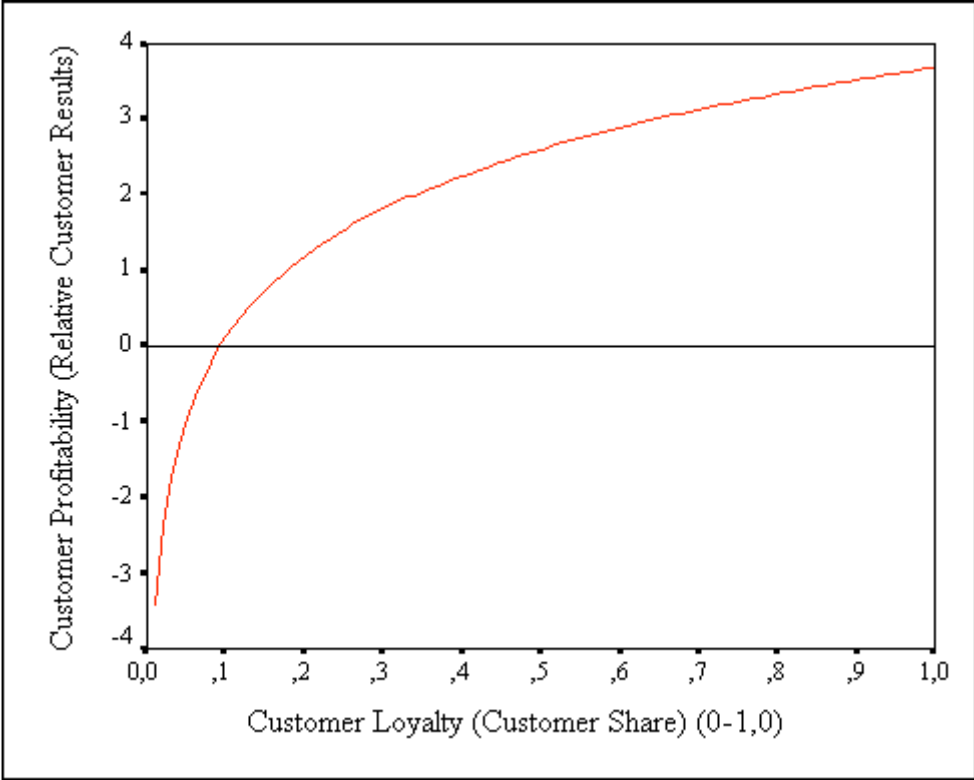

Exhibit 7. Customer loyalty and customer profitability at the customer level (n=71).

The correlation between the variables "KUNDAND" and "KRESIPRO" seems to be positive, but declining. Thus, it seems to be the case that the more loyal a customer is, the more profitable he is, but as pointed out earlier the degree of correlation is declining. This result provides support for the formulated hypothesis (section III). It seems that this hypothesis may be accepted, which implies that "the more loyal a customer tends to be, the higher is the obtained customer profitability" (H_2). The increase in customer profitability is measured as an increase in the relative customer results, and the increase in absolute figures is obviously positive.

The relationship[28] between the variables "KUNDAND" and "KRESIPRO" seems to be degressive, which indicates that increased customer loyalty has a positive effect on customer profitability, but at a decreasing rate. Several arguments can be used to explain such a re-

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[28] I do emphasize that the formulations below are based on the assumption that a cause- and effect relationship may be supposed to exist between the two variables.

lationship between the variables (see e.g. Anderson & al., 1994; Paltschik & Storbacka, 1992; Fornell, 1992; Rust & Zahorik, 1993; Johanson & Mattsson, 1994; Kalwani & Narayandas, 1995; Ittner & Larcker, 1997; Helgesen 1999a). According to the estimates, customer loyalty has to be above a certain level in order to have any influence on customer profitability. This critical level seems to be a customer share[29] of about 10 %.

<u>Customer satisfaction – customer loyalty – customer profitability.</u>

The results above provide support for the third hypothesis of section III, that is "the more satisfied and loyal a customer tends to be, the higher is the obtained customer profitability" (H_3). This result may be analysed further by dividing the sample of customers into various degrees of customer satisfaction and customer loyalty. This type of analysis is done in Helgesen (1999a) and the estimates provide support for the results presented above. Thus, one of the necessary criteria for the calculation of optimal customer satisfaction level with respect to customers may be perceived as being fulfilled, cf. the discussion above. However, the topics related to the calculations of customer revenues and customer costs are not addressed in this working paper.

VI. DISCUSSION AND MANAGERIAL IMPLICATIONS.

The findings above are in accordance with the marketing concept and the customer relationship orientation, cf. exhibit 1. There seems to be a positive relationship between customer satisfaction and customer loyalty, and there also seems to be a positive relationship between customer loyalty and customer profitability. The analyses that are carried out at the individual customer level also imply that increased customer satisfaction seems to be positively related to increased profitability. Thus, support is provided for the formulated hypotheses which all are in accordance with the basic theories of marketing. It should be mentioned that the customers of the Norwegian exporters of fish products are located in various geographical areas. Between the various groups of customers there seems to be very small differences con-cerning the importance of customer satisfaction as a key driver of customer loyalty and custo-mer profitability.

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[29] I do emphasize that is not the figure itself which is of interest, but the fact that the relationship seems to have such a shape.

However, it should also be noted that customer satisfaction is only a consequence of various antecedents of customer satisfaction, and can only be improved indirectly. Therefore, it should be of great interest for the managers to identify the drivers that have the greatest influence on customer satisfaction. This will contribute to establish good relations with the customers so that the ultimate aim of customer profitability may be obtained. In accordance with these results, it should be mentioned that customer satisfaction seems to be of great importance for companies with customers that have good knowledge of both products and the market, and/or for companies that are selling products that can be categorized as generic products (which is products that are not too complex) (Anderson & Sullivan, 1993). The customers of the Norwegian exporters of klipfish and frozen products/filets have good know-ledge of these products. Besides, the products may be perceived as generics. Thus, the ex-porters should be very interested in finding the key drivers[30] of customer satisfaction. How-ever, these conclusions are not revolutionary, but rather in accordance with "the conventional wisdom".

The implications of the other results may be perceived as even more interesting. The two rela-tionships under consideration are both found to be non-linear. Both the relationship between customer satisfaction and customer loyalty and the relationship between customer loyalty and customer profitability seem to be positive at a declining rate, and the anticipated independent variables seem to have to be above certain levels in order to have an impact on the anticipated dependent variables. It is probably of great interest for the managers to get further insight into these relationships that also include information about the various levels or thresholds for the variables under consideration. Furthermore, as long as the activities related to the achieve-ment of the satisfaction of customers are not without costs, the findings imply that an optimal level of customer satisfaction may be estimated. In order to perform such an analysis there is a need for figures of customer profitability. Costs related to the antecedents of customer satisfaction can then be compared with revenue and cost figures taken from customer accounts. In this way a company can establish cost-effective methods for the achievement of customer satisfaction. This insight into cause- and effects could serve as guidelines for decisions that may result in increased profitability.

Customer accounting and analysis of customer profitability may produce a lot more infor-mation than what has been indicated so far. Based on the proper database, various cause- and

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[30] This is done by Helgesen (1999a). The results are going to be published in a forthcoming working paper.

effect models or relationships may be analyzed. Over time this may provide insight into the causalities under scrutiny and reveal the drivers that seem to have the strongest influence on the performance of the business. These variables may be perceived as key drivers of the business, that is the strategic revenue and the strategic cost drivers.

A lot of models can be used when analyzing relationships between strategic revenue drivers and customer profitability (see e.g. Day & Wensley 1988; Narver & Slater, 1989, 1990, 1994; Kohli & Jaworski, 1990; 1993; Fornell, 1992; Anderson & al., 1994; Fornell & al., 1996). Analogously, there exists a lot of models or strategic cost drivers which are supposed to explain variances in costs, thus considerably influencing profitability (see e.g. Lewis, 1987; Riley, 1987; Ghemawhat, 1986, 1992; Shank & Govindarajan, 1989, 1992, 1993). The choice of models or explanatory variables and the registration of the selected factors or strategic revenue and cost drivers are compulsory for doing analysis of cause- and effects.

Such strategic revenue and cost drivers may be disclosed for various aspects or perspectives of the business under consideration. By putting them together into a scoreboard, the decision makers get a multi-dimensional insight into the decision situation. Such a «balanced score-card» can be viewed as a natural part of the managerial accounting information that is used by the managers of a company (see e.g. Richardson & Gordon, 1980; Sloma, 1980; Globerson, 1985; Wisner & Fawcett, 1991; Kaplan & Norton, 1992, 1993, 1996a, 1996b; Lebas, 1996). Measures of customer satisfaction and customer loyalty are usually included in such score-cards, but measures of customer profitability and antecedents of customer satisfaction also should be taken into consideration.

In order to do such analyses of cause- and effects where a measure of customer profitability represent the ultimate variable, there is a need for reliable figures for customer profitability. Causal "Images of Customer Profitability" (ICPs), that is images indicating nexuses of causes and effect relationships, can only be worked out when «descriptive» ICPs are established. Thus, reliable ICPs form the cornerstone of such models.

There are many other reasons for establishing ICPs (Helgesen, 1999a; 1999b). For example, managers need to ensure that customers contributing considerably to the profitability of the organization also receive a comparable level of attention from the organization. Moreover,

managers have to consider whether customers which are unprofitable (over some time) should be excludeed. A managerial accounting system that reports and compares customer profitability provides the managers with information to carry out such important tasks.

VII. LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH.

Even if the findings of this working paper may be perceived as convincing and are giving support to "the paradigm of customer satisfaction", some limitations should be mentioned. The suggestions below may hopefully provide some guidelines for further research in this area of managerial economics.

The sample of relationships in this study only consists of 71 respondents because of defections of customers. Nevertheless, the number of respondents is satisfying in relation to the statistical methods used. Furthermore, the part-samples that have been related to the variables or levels of the customer relationship model, cf. exhibit 1, are used to validate the results presented. Nevertheless, if the number of respondents had been higher, a more comprehensive analysis could have been carried out, that is an analysis that simultaneously[31] take into consideration all levels and all variables of the four links of the model of customer relationships, cf. exhibit 1. Even though this particular limitation do not have any effects concerning the statistical conclusive validity of the findings, it has an impact on the overall understanding of the relationships under consideration. Thus, more respondents could have increased the insight gained by the models, that is the relationships between antecedents of customer satisfaction, customer satisfaction, customer loyalty and customer profitability.

Besides, it should be emphasized that only one analysis with a context taken from order-handling industry which in this study are Norwegian exporters of fish products and their customers, may not be perceived as sufficient for the documentation of this "much talked about relationship". Therefore more analyses should be carried out and published. Because of the supposed generality of the relationships it is also recommended that other contexts are being used. Hopefully, analyses will be carried out at the individual customer level for all links of the customer relationship model (cf. Helgesen, 1999a; 1999b).

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[31] This can be carried out by using structural equation modeling (e.g. LISREL) (see e.g. Bollen, 1989; Hair & al., 1995).

With respect to profitability the marketing concept is founded on a long-term perspective. Thus, the analyses should be based on a time series design and not on a cross-sectional design as presented in this working paper. By collecting necessary data over time various analyses of causes and effects may be carried out. And such analyses are prerequisites for maintaining the positive links between customer satisfaction and long-term profitability. Thus, it is possible to get profound insight about the causalities. Many companies are making surveys concerning satisfaction and loyalty of customers. To the contrary, very few firms have good knowledge of the costs incurred and the profitability obtained by exchanges (see e.g. Shapiro & al., 1987; Howell & Soucy, 1990; Reichheld & Sasser, 1990; Selnes, 1992; Foster & Gupta, 1994; Connolly & Ashworth, 1994; Foster & al., 1996). Consequently, this area of managerial economics may be perceived as a focal area for elaborating such an understanding of the most relevant cause- and effect relationships.

The results show that variations in customer satisfaction only can explain about 10 % of the variations of customer loyalty. Analogously, variations of customer loyalty only can explain about 10 % of the variations of customer profitability. Concerning the relationship between customer satisfaction and customer loyalty the degree of explication is rather low (see e.g. Fornell, 1992; Fornell & al., 1996; Anderson & al., 1994; 1997; Andreassen, 1994; 1998; and results from various national customer satisfaction barometers). But the findings are in accordance with earlier studies (cf. part II of this working paper), which implies that the variations of customer loyalty only can partly be explained by variations in customer satis-faction. To explain the rest of the variations other variables have to be added into the models. Concerning the relationship between customer loyalty and customer profitability, comparisons are much more difficult to do because of the fact that only a few studies exist and because these studies are not based on a thorough analysis of customer accounts at the individual customer level. Nevertheless, these results suggest that other variables also should be in-corporated into the chosen models. This suggestion may be perceived as self-evident. Vari-ations in customer satisfaction may be supposed to be more easily traced to variations of ante-cedents of customer satisfaction than for instance variations of customer profitability based on customer loyalty. In order to explain variations in customer profitability a lot more variables are evidently influential (Helgesen, 1999a).

Customer relationship orientation may be perceived as a part of a firm's market orientation, cf. part II above. Therefore the model showing the main concepts of this orientation, cf. ex-hibit 1, may be looked upon as a part of more comprehensive models (see e.g. Kohli & Jaworski, 1990; 1993; Narver & Slater, 1989; 1990). By tracing cause- and effects between variables according to such more complex models, the insight will most likely be much higher. More complex models are probably more in accordance with "the real world". However, complexity has to be balanced with suitability and «parsimony». Besides, it is highly desirable that more studies are carried out according to the models related to customer relationships and preferably also before the actual variables are incorporated into more com-plex models.

VIII. CONCLUSION.

Customer relationship orientation is based on conceptions about positive cause- and effect relationships between the following main variables : (1) antecedents of customer satisfaction, (2) customer satisfaction, (3) customer loyalty, and (4) customer profitability, cf. exhibit 1. Even if the number of customer relationship oriented studies have increased enormously dur-ing the last decade, the attention has for the most part been devoted to concepts and relation-ships which may explain variations in customer loyalty. Only a few studies are considering consequences of customer satisfaction and customer loyalty on profitability. Furthermore, the few publications that exist are for the most part preoccupied with analyses of customer bases and are using measures of average costs related to the customers when estimating customer profitability.

In this working paper the last two relationships (cf. exhibit 1) have been analyzed at the individual customer level. The context is taken from a sample of Norwegian exporters of fish products (klipfish and frozen fish) and their customers almost world-wide. Positive correla-tion coefficients have been found between the variables, but in such a way that the relation-ships seem to have degressive shapes. Thus, the findings suggest that customers probably do place more orders to suppliers they are satisfied with. The customers are most likely to strengthen their loyalty to these suppliers. Furthermore, customer profitability seems to in-crease with increasing levels of customer loyalty. Meeting the needs, desires and requests of customers and thus increasing their satisfaction is the first principle aim of market orientation.

According to this perception it is therefore of great importance to reveal which ones of the antecedents of customer satisfaction that have the strongest impact on customer satisfaction. In addition, the estimates also suggest that satisfied customers are more profitable than other customers. Thus, also the second principle aim of market orientation is justified. Taking into consideration the statistical conclusive validity of the findings, it may be maintained that the study has put forward evidence for the "much talked about relationship", i.e. "the customer satisfaction paradigm" which forms the cornerstone of the marketing concept. But, of course, more studies are highly recommended.

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