

A CASE STUDY IN
MARKETING - MANUFACTURING INTERFACE

M. B. A. THESIS

DEMET EREN

August 1995

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A THESIS
SUBMITTED TO THE DEPARTMENT OF MANAGEMENT
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OF BILKENT UNIVERSITY
IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF BUSINESS ADMINISTRATION

BY
DEMET EREN
August 1995

I certify that I have read this thesis and in my opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Business Administration.

Assoc. Prof. Erdal Erel



I certify that I have read this thesis and in my opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Business Administration.

Assoc. Prof. Gökhan Çapoğlu



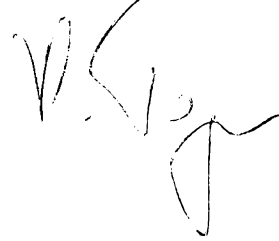
I certify that I have read this thesis and in my opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Business Administration.

Assist. Prof. Dilek Önkal



Approved for the graduate school of Business Administration

Prof. Subidey Togan



ABSTRACT

A CASE STUDY IN MARKETING-MANUFACTURING INTERFACE

DEMET EREN

M.B.A. Thesis

Supervisor: Assoc. Prof. Dr. Erdal Erel

The coordination between the marketing and manufacturing departments plays an important role in the implementation of the corporate strategy. The conflicts and gaps between these two departments impede the successful implementation of corporate strategy. Therefore understanding and managing the marketing-manufacturing interface is critical for the success of the company. This study investigates the gaps and factors affecting these gaps in the marketing-manufacturing interface and develops and uses a survey instrument in a case study.

Keywords: Marketing, Manufacturing, Interface, Survey, Case

ÖZET

PAZARLAMA VE ÜRETİMİN KARŞILIKLI GİRİŞİMLERİNDE BİR VAKA

DEMET EREN

M.B.A. Tezi

Tez Yöneticisi: Assoc. Prof. Dr. Erdal Erel

Pazarlama ve üretim bölümleri arasındaki koordinasyon şirket stratejisinin uygulanmasında önemli bir yer tutar. Bu iki bölüm arasındaki anlaşmazlıklar ve farklılıklar şirket stratejisinin başarıya ulaşmasını engeller. Bu yüzden pazarlama ve üretim bölümleri arasındaki karşılıklı girişimleri anlamak ve yönetmek şirketin başarısı için gereklidir. Bu çalışmada pazarlama ve üretimin karşılıklı girişimlerinde bulunan ayrılıklar ve bunları etkileyen faktörler araştırılmış, ayrıca bunların belirlenmesi için bir araştırma vasıtası geliştirilmiş ve deneysel bir vakada kullanılmıştır.

Anahtar kelimeler: Pazarlama, Üretim, Karşılıklı Girişim, Araştırma, Vaka

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TABLE OF CONTENTS

ABSTRACT	i
ÖZET.....	ii
ACKNOWLEDGMENTS.....	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES.....	vi
LIST OF TABLES.....	vii
I. INTRODUCTION.....	1
II. INTERFUNCTIONAL CONFLICT AREAS.....	6
III. THE CAUSES OF CONFLICT AND FACTORS AFFECTING THE INTERFACE	15
IV. COMPANIES	30
IV.1. Kavaklıdere Winery.....	30
IV.2. Atatürk Orman Çiftliği Winery	31
V. METHODOLOGY.....	32
VI. ANALYSIS	34
VI.1. Measurement of the Gaps.....	34
VI.1.1. Kavaklıdere Winery.....	34
VI.1.2. Atatürk Orman Çiftliği (A.O.Ç.) Winery.....	36
VI.2. Analysis of the Factors Affecting Interface.....	39
VI.2.1. Kavaklıdere Winery.....	39
VI.2.2. Atatürk Orman Çiftliği Winery.....	42

VII. RECOMMENDATIONS.....	44
VIII. SUMMARY AND CONCLUSIONS.....	49
REFERENCES.....	52
APPENDIX A - ORGANIZATION CHARTS OF COMPANIES.....	55
APPENDIX B - THE QUESTIONNAIRE FOR THE MARKETING DEPARTMENT.....	58
APPENDIX C - THE QUESTIONNAIRE FOR THE MANUFACTURING DEPARTMENT.....	65
APPENDIX D - RESULTS OF THE QUESTIONNAIRES	72

LIST OF FIGURES

FIGURE 1	Marketing and Manufacturing Converge on Product Decisions	4
FIGURE 2	Gaps in The Marketing and Manufacturing Interface at the Operational Level.....	14
FIGURE 3	A Framework For Assessing Marketing's Interaction With Another Functional Unit	23
FIGURE 4	Flexibility Relations.....	27

LIST OF TABLES

TABLE 1	Marketing/Manufacturing Areas of Necessary Cooperation but Potential Conflict.....	8
TABLE 2	A Typology of Conflict Areas Between Marketing and Manufacturing	9

I. INTRODUCTION

It is through the process of strategy formulation, theoretically, that managers develop and evaluate alternatives and then choose a direction or posture for their organisation. Until that strategy is implemented, however, it is an exercise and not reality (St. John, 1991). A firm's formulated strategy is implemented through the series of tactical, everyday decisions made over time at the functional or operating level of the organization. For the formulated (planned) strategy and the implemented (emergent) strategy to be one and the same, the decisions and the actions of operating level managers must be guided by the vision set forth in the plan. If operating level decisions are guided by parochial rather than organization-wide goals, the overall pattern will be inconsistent and counterproductive. According to Michael Porter (1985), "the failure of many firms' strategies stem from an inability to translate a broad competitive strategy into the specific action steps required to gain competitive advantage."

Successful strategy implementation requires input and cooperation by all players in the firm. However the competitive strategies of an industrial firm may be jeopardized by interfunctional conflict and myopic functional-level decisions. Although functional goals and strategies are supposed to be supportive of business goals and strategies, and well integrated and consistent among themselves functional level goals, strategies, and policies frequently seem to be in conflict with one another (St. John, 1991). Individual functional-level strategies resulting from departmentalization are the center of much intraorganizational conflict and the source of many strategy implementation problems (Crittenden, 1993).

Conflict and misunderstanding can be particularly intense between the marketing and manufacturing functions.

Porter (1985) argued that competitive advantage is derived from the value-adding activities: inbound logistics, operations, outbound logistics, marketing and sales, and service. In most manufacturing companies, all five of these activities are part of the marketing and manufacturing organizations. Marketing and manufacturing, therefore, oversee the critical activities of strategy implementation.

Marketing and manufacturing play important roles in the day-to-day implementation of strategy yet inconsistencies in the patterns of decisions made by these two groups seem to be particularly common. While conflict can exist between any business functions, marketing and manufacturing seem to have especially difficult relationships. This is hardly surprising given the often conflicting goals and the daily dynamics of the two functions. (Shapiro, 1977).

Hayes and Wheelwright (1984) contend that 'the marketing/manufacturing interface is the focal point of much more frequent and heated disagreement than occurs between other pairs of functions.'

Even though their activities and responsibilities seem to be very different, manufacturing and marketing exhibit "reciprocal interdependency" (Thompson, in St. John 1991) with an output from one part becoming an input to the other. In the short run, manufacturing depends on marketing for information about what, how much, and when to produce; manufacturing supplies products for marketing to price, advertise, merchandise, and distribute. In the long run, marketing and manufacturing rely on each other for information and decisions about capacity expansions and planned capacity utilization, investments in new manufacturing technology, the development and availability of new products, target quality levels,

breadth of product line, and customer service policies. The many interrelated short-run and long-run decisions ultimately determine the cost structure, quality performance, breadth of product line, and service reputation of the firm. If either marketing or manufacturing fails to support the overall business goals in its decision making, it is unlikely the organization will achieve its performance targets. Operating level agreement is essential because the pattern of decisions made over time serves to implement the firm's chosen competitive strategy.

Manufacturing capabilities determine the volume and variety of products that can be marketed and influence the speed with which the industrial marketer can respond to changing market needs or competitive challenges. For efficient operations, manufacturing, in turn, relies heavily on marketing for an accurate sales forecast for each item in the product line. While such interdependencies often contribute to conflict between the two functions, the marketing manufacturing relationship assumes a fundamental role in the development and implementation of marketing strategy (Hutt and Speh, 1984).

The two functional areas overlap on the issue of the firm's product, as portrayed in Figure 1 (Crittenden and Gardiner, 1993). Thus, the interdependence of the operational decisions appears indisputable, particularly given the simultaneous impact on the customer.

The actions taken in one department may effect the goal accomplishment of the other department-which may ultimately influence the performance of the overall business. Therefore it is desirable for manufacturing and marketing groups to agree on where the organization is trying to go (goals) and how that choice of direction should influence ongoing decision making (strategies) (St. John and Hall, 1991).

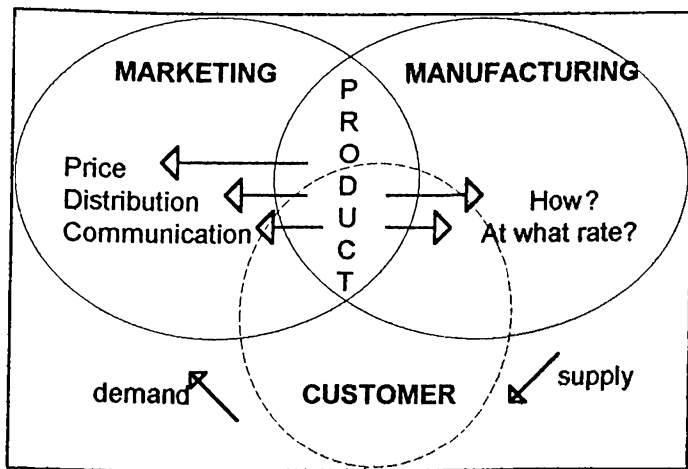


FIGURE 1
Marketing and Manufacturing Converge on Product Decisions

Source: Crittenden, Victoria L. et al., *Reducing Conflict Between Marketing and Manufacturing*, *Industrial Marketing Management*, 13, 163-169, (1984).

On a daily basis, marketing and manufacturing managers are confronted with ambiguous situations that require them to make decisions concerning trade-offs among competitive priorities. When a decision is made that is inconsistent with the organization's competitive priorities, efforts are diluted and performance may suffer (St. John and Hall, 1991).

Innovation based strategy formulation requires the simultaneous coupling of three functional components: R&D, manufacturing and marketing. Any enterprise whose growth depends on innovation must understand and be able to organize those interfaces effectively. These managers have different perspectives on innovation because their training, orientation, and work experience tends to be fundamentally different. It is important to understand these differences in order to manage innovation (Kamath et al., 1993).

Support and integration of marketing and manufacturing departments is critical to the successful implementation of a market orientation. If business level management fails to convey the direction of the organization and to encourage

operating-level managers to make decisions in light of that common direction, then patterns of contradictory decisions emerge.

The marketing literature has given little attention to the web of interrelationship that exist between marketing and manufacturing. Marketing academics have concentrated on facilitating interactions between marketing and R&D, centering on new product development. More recently, the business press has addressed interaction between R&D and manufacturing, particularly focusing on new product development and its links with modern manufacturing techniques. But interfunctional coordination is needed throughout the product life cycle. For example, as customer needs change as a product reaches maturity, the firm cannot respond appropriately without both marketing and manufacturing input.

The aim of this study is to design a survey instrument that will investigate the marketing manufacturing interface that tends to be characterized by friction, misunderstanding, and mistrust and the factors effecting the interface. Furthermore, marketing-manufacturing interface of two companies, Kavaklıdere Winery and Atatürk Orman Çiftliği Winery, will be investigated by this designed instrument, providing an empirical case study.

II. INTERFUNCTIONAL CONFLICT AREAS

The study of interfunctional conflict informs managers about conflict areas likely to be encountered in implementing proposed strategies and leads to a managerial "preparedness" should such programs arise. It is not enough to set corporate strategies; strategies are implemented through functional-level actions. The effective implementation of a corporate /business strategy depends on functional groups working in concert (Crittenden et al., 1993).

Shapiro contended that the conflict over marketing and manufacturing strategies lies with customer and product mix decisions:

The selection of which customers to serve is often left to the sales force. However, the choices among customers have a major impact on the product mix, which is usually viewed as a joint decision between marketing and manufacturing. Because different customers have different product needs and because those needs are not always easily influenced by the vendor, the choice of which customer to serve has a major impact on the product mix. Once the accounts [customers] have been chosen, the product mix, at least in terms of the maximum volume of each product that could be absorbed by the customer is set. Few companies understand the impact of account selection on product mix, and even fewer have a good mechanism for bringing together marketing, manufacturing, and sales executives to discuss these joint issues.

Shapiro (1977), elaborated on the problem of marketing-manufacturing conflict and identified several areas where the two groups need to agree but frequently do not.

As Table 1 shows each of the potential sources of conflict represents an area of interdependence between the two groups. It is in these areas of interdependence that many of the marketing manufacturing trade-off decisions occur.

Crittenden et al. (1993) found three major conflict areas between marketing and manufacturing: (1) managing diversity; (2) managing conformity; and (3) managing dependability.

Table II shows the typology within which major conflicts between marketing and manufacturing are categorized and the related operating objectives for each functional group are described.

These major conflict categories are summarized as follows:

Managing Diversity

Producing a diverse array of products is often a requirement of meeting customer demand. Products vary in shape, size, flavour, and other dimensions. The company makes decisions about the number of items in a line, the number of different product lines to offer, building to customer specification, modifying existing products, and eliminating/adding products. Hayes and Clark referred to the managerial actions related to these decisions as "confusion-engendering activities."

1. **Product Line Length/Breadth.** Marketing typically wants to sell products consisting of many models and several lines, thus allowing the firm to satisfy the various desires of many customers. Strong competitive activity generally necessitates a goal of many models and lines, since a narrow product offering often results in a loss of sales due to customers buying from a competitor with a "full line" of products.

TABLE 1
Marketing/Manufacturing Areas of Necessary Cooperation but Potential Conflict

Problem area	Typical marketing comment	Typical manufacturing comment
1 Capacity planning and long-range sales forecasting.	"Why don't we have enough capacity?"	"Why didn't we have accurate sales forecasts?"
2 Production scheduling and short-range sales forecasting.	"We need faster response. Our lead times are ridiculous."	"We need realistic customer commitments and sales forecasts that don't change like wind direction."
3 Delivery and physical distribution.	"Why don't we ever have the right merchandise in inventory?"	"We can't keep everything in inventory."
4 Quality assurance.	"Why can't we have reasonable quality at reasonable cost?"	"Why must we always offer options that are too hard to manufacture and that offer little customer utility?"
5 Breadth of product line.	"Our customers demand variety."	"The product line is too broad-all we get are short, uneconomical runs."
6 Cost control.	"Our costs are so high that we are not competitive in the marketplace."	"We can't provide fast delivery, broad variety, rapid response to change, and high quality at low cost."
7 New product introduction.	"New products are our life blood."	"Unnecessary design changes are prohibitively expensive."
8 Adjunct services such as spare parts inventory support, installation, and repair.	"Field service costs are too high."	"Products are being used in ways for which they weren't designed."

Source: Shapiro, Benson P., "Can Marketing and Manufacturing Coexist?", *Harvard Business Review*, 55 (September-October), 1977.

TABLE 2
A Typology of Conflict Areas Between Marketing and Manufacturing

Area of Conflict	Marketing Objective	Manufacturing Objective
<i>Managing Diversity</i>		
1. Product line length/breadth	Many and complex models	Few and simple models
2. Product customization	Customer specifications	"Stock" products
3. Product line changes	Product changes immediately; high risk	Planned, only necessary changes; low risk
<i>Managing Conformity</i>		
4. Product scheduling	Constant change	Inflexible
5. Capacity/facility planning	Accept all orders	Critically evaluate "fit" of orders
<i>Managing Dependability</i>		
6. Delivery	Immediate; large inventory	As soon as possible; no inventory
7. Quality control	High standards	Reasonable control

Source: Crittenden, Victoria L., Gardiner Lorraine R. and Stam Antonie, Reducing Conflict Between Marketing and Manufacturing, *Industrial Marketing Management*, 22, 299-309 (1993).

On the other hand, manufacturing tends to prefer a narrow product offering consisting of "no-frills" products. Long production runs, associated with narrow product offerings, allow manufacturing to lower costs because of economies of scale and to less time and dollars on changeovers. Long production runs, however, go against marketing's desire for variety since product variety frequently requires stopping the production process to adopt to a different design.

Offering several variations of a product, as well as many types of products, may go far in inciting demand. However, the time and dollars associated with making these products may negate any sales advantage.

2. Product Customization. Marketing's inherent desire to satisfy the customer often leads it to seek product modifications for individual customers. Manufacturing, on the other hand, generally prefers building standard products since even the smallest change affects the production process and, possibly, the equipment used.

The costs associated with product customization may outweigh the benefits. Time lost for process changes and added departmental work slow the production flow, resulting in reduced output of standard products. Attempting to produce both standard and customized products presents significant production problems for many companies.

3. Product Line Changes. Marketers often try adding or deleting products from a product line. There is usually conflict between when marketing wants these product line changes and when manufacturing provides them. Market uncertainty often forces marketing to request immediate changes. However, adding products commonly requires major technical changes, a long lead time to get the necessary raw materials, or changes in the production plan. When dropping a product, manufacturing tends to want to use all of the raw materials in stock before

suspending production. Furthermore, even when a product line change has been agreed to by both marketing and manufacturing, local decisions such as pricing may create a contradictory strategy.

Managing Conformity

While marketing stimulates demand for a product, manufacturing is responsible for making the product available. In the short run, manufacturing manages the transformation process through its production schedule. Over the long run, manufacturing manages the process with decisions concerning capacity and facility planning.

4. Production Scheduling. Conflict between the marketing group and the production scheduler is common. Marketing often thinks that output can be increased or decreased immediately and tends to submit imperfect forecasts, accept last minute orders, and promise short lead times. But the production schedule, once made, can be very inflexible.

5. Capacity/Facility Planning. At any given time, there are limits to the quantity of products a firm can produce. Yet to meet sales goal or gain market share, marketing often wants to accept all orders. However, it typically takes a significant amount of time and expense to make major changes in a firm's manufacturing capacity, thus creating potential friction between marketing and manufacturing regarding capacity issues.

Managing Dependability

Managing dependability requires actions by both marketing and manufacturing. Specifically, tension often occurs related to delivery and quality control. Marketing wants rapid delivery and high standards. However, rapid delivery may mean that

manufacturing has to maintain a large inventory. Furthermore, producing high-quality products quickly is not always possible.

6. Delivery. Marketing sees delivery as a part of customers service. Late deliveries are a sign of poor service, resulting in customer dissatisfaction and lost sales. Manufacturing, on the other hand, may think that marketing promises ridiculous delivery dates just to get the order and blames marketing for not consulting the production schedule before making delivery promises.

Problems occurring across various functional-level groups, marketing's mistrust of manufacturing's capacity forecasts, manufacturing's mistrust of marketing's sales forecasts, and unforeseen production bottlenecks invariably delay production and delivery. Preventing delays generally requires maintaining a large inventory, which is costly to manufacturing. However satisfying customers often necessitates rapid delivery.

7. Quality Control. Marketing frequently expects manufacturing to produce the "perfect" product, while manufacturing believes that it is doing the best it can given the complexity of the product, the constant production changes, and the number of products it is expected to produce.

The research by Akıncı (1993) provides a framework that identify the gaps in the interface of marketing and manufacturing at the operational level (see Figure 2).

These gaps are defined as follows:

- GAP1: The difference between the perceptions of the marketing and manufacturing departments about the order-winning dimensions of the current product profile.

- GAP2: The difference between the order-winning characteristics of the current product profile, and of the product profile that best fit to current market conditions and marketing practices.

- GAP3: The difference between the order-winning characteristics of the current product profile and of the product profile that best fit to current manufacturing capabilities.

- GAP4: The difference between the order-winning characteristics of the product profile that best fit to current manufacturing capabilities, and of the product profile that best fit to current market conditions and the marketing practices.

In this study, the framework provided by Akıncı will be used to measure the gaps in the marketing manufacturing interface of a single company.

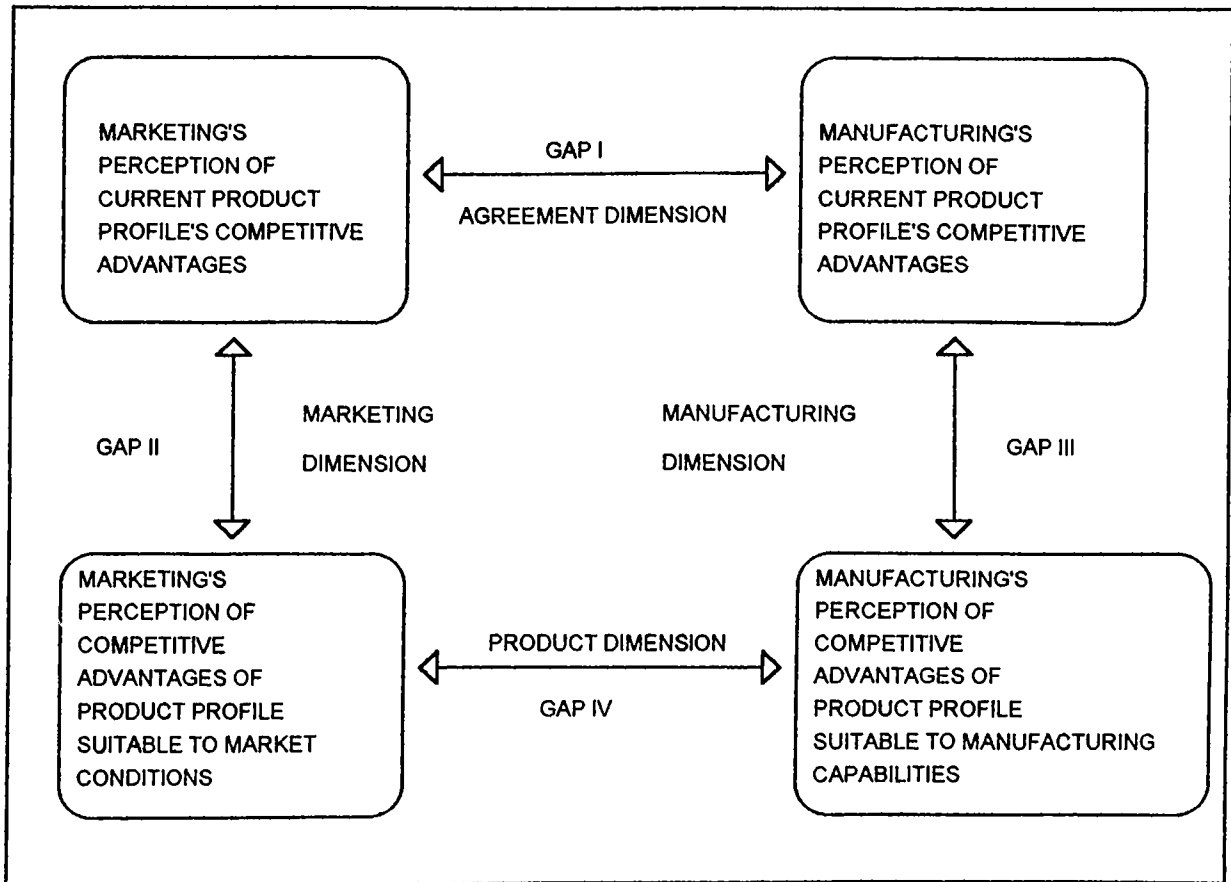


FIGURE 2
Gaps in The Marketing and Manufacturing Interface at the Operational Level

Source: Akinci, H.Burcu, Determinants of the Marketing Manufacturing Interface, MBA Thesis, Bilkent University, May 1993.

III. THE CAUSES OF CONFLICT AND FACTORS AFFECTING THE INTERFACE

According to Crittenden (1992), Interdepartmental conflict between marketing and manufacturing departments stems from the diverging philosophies of the two departments: marketing emphasizes demand stimulation and profitability, manufacturing emphasizes supply regulation and cost efficiency. Because their philosophies diverge, marketing and manufacturing have differences over goals, resource needs, reward structures, performance measures, employees, product experiences, production process experiences and customer/market experiences (Shapiro 1977, Hutt and Speh 1984).

According to Pearson (1983), moving a product serially from R&D into manufacturing and then into the market often results in important product characteristics that differ from the original market test samples. All too frequently these differences are deleterious, and result in the need for running modifications or, if the problem is severe, a halting of the marketing program while further development takes place.

With the serial process, the frustration and counterproductive rehashing is generated among different functions when the product shows deficiencies upon initial entry into the market. Each group feels let down by some imagined or real performance shortcoming in the other group. Too much effort and emotion can be spent looking at what happened and who was responsible rather than getting on with the task of being successful. The serial process builds parochial identity for the individual with the functional group rather than with the product. It accentuates the interface problem.

Outcome of the study of Clare & Sanford (1984) showed that there is clear tendency, for people to blame their counterpart functions rather than their own. An analysis of the incidents should help determine whether the problem is one of interfunctional stereotyping or has a basis in actual organizational issues, e.g., scheduling, pricing, timeliness of deliveries, or quality control.

Shapiro (1977) discussed the reasons for the conflict in marketing-manufacturing interface and identified four basic causes that can be found in almost every industrial goods producer.

(1) Evaluation and Reward:

Differences between marketing and manufacturing are due primarily to the incentive structures of the firm: On the one hand, the marketing people are judged on the basis of profitable growth of the company in terms of sales, market share, and new markets entered. On the other hand, the manufacturing people are often evaluated on running a smooth operation at minimum cost. This system of evaluation and reward means that the marketers are encouraged to generate change. But the manufacturing people are clearly rewarded for accepting change only when it is significantly lowers their costs. Because the marketers and manufacturers both want to be evaluated positively and rewarded well, each function responds as the system asks it to in order to protect its self-interest (Shapiro 1977).

The "productivity paradox" describes the position where manufacturing see its primary task as cost reduction while the remainder of the organization, led by marketing, tries to pursue a differentiation business strategy. The argument is that, left to their own devices, marketing and manufacturing will make decisions that work against each other.

There are more tales of failure than of success, says Steve Walleck, a director in Cleveland office of McKinsey & Co. "The most common, happens when the marketing people have a cost reduction task and are product line pruning, and the manufacturing people at the same time are trying to justify a flexible manufacturing system. Two sides of the business are working at direct cross-purposes." (Braham, 1987, p 42).

If manufacturing is rewarded for efficiency and marketing is rewarded for satisfying customers, and the two measures are not simultaneously maximized by a single set of actions taken by manufacturing and marketing, then it is not surprising that complaints arise (Porteus and Whang, 1991).

Research found that reward systems produce differences in product commitment, concerns about time pressures, and variations in the degree of risk taking and that reward systems often contribute to unappreciative attitudes. Reward systems that will maximize the residual return to the owner of the firm and will reflect concerns of both parties in an internal exchange relationship is suggested.

(2) Inherent Complexity:

Many of the problem areas between marketing and manufacturing cause conflict because of their complex nature. They usually need data from two different sources; "soft" (qualitative) data from marketing and "hard" (quantified) data from manufacturing. The problem areas are also complex because of the amount of organization they involve. The marketing and manufacturing operations are the line functions that support the planning, financial, control and administrative staffs. Thus any issue at this interface involves the core of the company (Shapiro 1977).

(3) Orientation and Experience:

Shapiro (1977) relates another basic cause of the conflict to the exposure, both current and past, of the managers involved. The industrial marketer is most likely to come up through sales route. His work experience always emphasize the customer. The top marketing people usually have offices near the more operationally oriented salespeople, work with them on an intimate basis, and even visit field sales locations and customers. Their counterparts in manufacturing often begin as foreman and work up through the production operation. They are aware of factory problems. they visit manufacturing operations much more frequently than they do customers. Each marketing and each manufacturing manager is more aware of his own organizational situation and problems. Each is also more tune with his own subordinates. He hires and trains them. He shares their experiences and viewpoints. He understands their orientations and attitudes.

Wickham Skinner, states that, "manufacturing is too often managed in isolation by men who are not all that close to customers and the competitive situation and who are not able to think and talk and act strategically and really relate with marketing. So you end up with a war where manufacturing will want long [production] runs, stability, continuity, few product changes, and as few products as possible-and marketing will want exactly the opposite (Braham, 1987).

The information seeking networks of managers in the functional areas are also fundamentally different. Manufacturing managers tend to be tied in to the information-seeking networks that cover the manufacturing operations of direct competitors and other rival organizations. In contrast, the information-seeking networks of marketing managers are closely tied to sources that clarify the customer's needs (Kamath et al., 1993).

One explanation for these differences is that inconsistencies between marketing and manufacturing are an inherent side-effect of departmentation; marketing and

manufacturing members identify more closely with their departments than with the organization as a whole. Over time, they make decisions and take actions that further the interests of their departments in a predictable way. Another explanation is that differences are not an inherent, predictable side-effect of departmentation but a firm-specific issue of planning and control. If business level management fails to convey the direction of the organization and to encourage operating-level managers to make decisions in light of that common direction, then patterns of contradictory decisions will emerge.

Kamath et al. (1993) investigated the influence of the functional background of executives on innovation decisions by trying to answer following questions: 1) is there a systematic difference in the correlates of innovation in the marketing and manufacturing functions? 2) how does this difference influence the management of innovation?

(4) Cultural Differences:

In most situations, the top level marketing and manufacturing managers literally live different. Marketing manager has much more greater ego drive and empathy than the manufacturing manager. They have different life styles and hobbies. These cultural differences added to other basic causes, make it hard for marketers and manufacturers to work together.

Personal values can be expected to have a major influence on interpersonal relationships. In particular, to the extent that people misperceive the values of their relevant role partners, the potential for co-operation is reduced and that for conflict increased.

By definition, company culture comprises a pattern of values, beliefs , and expectations shared by the organization's members, which produce norms that

powerfully shape the behaviour of individuals and groups. Norms are defined as expectations for appropriate/inappropriate attitudes and behaviour and socially created standards that help interpret and evaluate events. It is through norms that culture is developed and maintained.

St. John (1991) suggests that there may be particular areas that distinguish marketing from manufacturing. These include norm differences over product characteristics, production process characteristics, market characteristics, domain similarity, and conflict over such issues as goals and interpersonal orientation.

Kahn & Mentzer (1994) contends that norms vary on two dimensions: the intensity or amount of approval/disapproval attached to an expectation; and the degree of consensus or consistency with which norm is shared. A norm may be positively valued in one group (e.g., marketing) and negatively valued in another (manufacturing). This illustrates intensity with no consensus.

To establish a market orientation, a company needs norms that have both intensity and consensus across departments. Because norms underlie the actions taken by individual departments, the identification and subsequent altering of norms toward a common market orientation would facilitate a unified company effort to satisfy the customer. The first step in this process would be an "audit of the current dominant norms and the behaviours that result from such norms" and a specification of ideal norms and departmental behaviours necessary to establish a market orientation across departmental boundaries. The firm then could initiate activities, to alter current norms and behaviour toward ideal norms and behaviour (Kahn and Mentzer, 1994).

Marketing and manufacturing departments have common norm differences that cut across organizational boundaries. These norm differences may result from separate

training experiences, unique work characteristics, and the distinct personalities of individuals who pursue careers in marketing versus manufacturing.

Kahn and Mentzer (1994) investigated whether norm differences underlie marketing and manufacturing cross business organizations and, if so, whether these norm differences act as impediments to the successful implementation of a market orientation.

Empirical study found marketing/sales and production to have similar time orientations and formal structures, but the two departments differed on interpersonal orientations, goals, and perceived environment. Empirical findings also showed that the more differentiated the two departments were in terms of these areas, the greater the difficulties in achieving integration. The greater the norm differences between marketing and manufacturing, the less likely there will be an adoption of a common market orientation across these two departments.

St. John (1991) noted that although marketing and manufacturing groups appear to accept a common set of guiding precepts concerning quality, on-time performance, broad line of products, and improved profitability, the two groups disagree on the underlying approaches to instituting these precepts. Thus although marketing and manufacturing may have some consensus on key organizational factors, similar intensity across the two departments is lacking.

Ruekert and Walker (1987) developed a framework for examining how and why marketing personnel interact with personnel in other functional areas in planning, implementing, and evaluating marketing activities.

They examined the broad range of social processes involved in interfunctional relationships to overcome the limitations of the previous work on marketing's

interaction with other functional areas. Most of the previous literature on the relationships between marketing and other functions was written from a normative perspective and largely ignored or assumed away the political processes, jockeying for influence, conflicts, and communications difficulties that frequently arise during the decision process itself and particularly during the implementation of the decisions and programs formulated. Ruekert & Walker (1987) noticed that interfunctional interaction is driven by common objectives but is also a source of conflict due to differences in individual goals.

They developed a generalizable framework for explaining how, why, and with what results marketing personnel in both physical product and service businesses interact with personnel in other functional areas in carrying out marketing functions Figure 3.

In this thesis study, only four areas of the framework, which contributes most to the conflict between marketing and manufacturing interface and affect the interface is investigated.

1. Internal Environmental Conditions

Resource Dependence:

Ruekert and Walker (1987) identified resource dependence as one of the key internal variable influencing marketing's interaction with another functional area.

Study of Kahn & Mentzer (1994) found that, marketing managers perceive themselves as more dependent on manufacturing and that manufacturing is less dependent upon the marketing department. Conversely, manufacturing managers view their department as less dependent on marketing and that marketing is more dependent on their department. These findings are quite interesting because they contradict perspectives that portray marketing as the most important function within

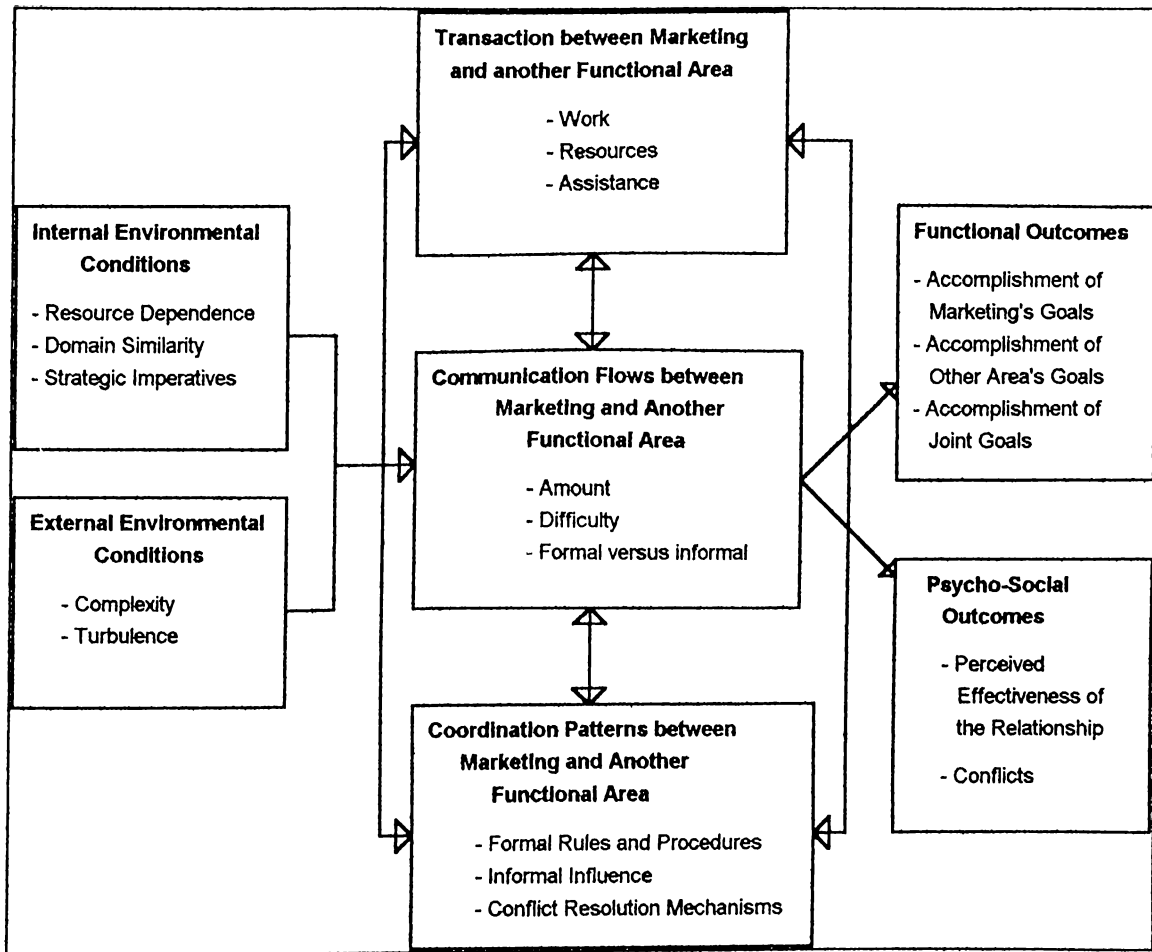


FIGURE 3
A Framework For Assessing Marketing's Interaction With Another Functional Unit

Source: Ruekert, Robert W. and Walker, Orville C., Marketing's Interaction with Other Functional Units: A Conceptual Framework and Empirical Evidence, *Journal of Marketing*, 51, 1-19, (January 1987).

the firm. It appears that marketing is perceived as but one important function within manufacturing companies.

These findings also suggest that marketing managers would be more open to a company integrated market orientation because they perceive a need to depend on other departments to serve customers. Manufacturing managers would be more resistant to a company integrated market orientations they do not see a need to depend on the marketing department.

The divergence of marketing and manufacturing on dependence within this sample also suggests that companies are not adopting a market orientation as prescribed by the literature, i.e., a market orientation where all departments work together equally to serve the customer.

It could be argued that convincing manufacturing that marketing is important would solve the discrepancy. However convincing manufacturing of marketing's importance can be difficult due to manufacturing's strong belief that marketing is dependent on manufacturing. Furthermore, efforts to emphasize marketing's importance might be seen by manufacturing managers as an attempt to supersede the manufacturing department, thereby increasing tension between marketing and manufacturing departments.

Domain Similarity:

Domain similarity was identified as an distinguishing norm between marketing and manufacturing departments. Manufacturing managers perceive themselves as more similar to marketing managers in terms of work, customer interaction, goals, employees, and reward structures. Conversely, marketing managers see themselves as less similar.

Strategic Imperatives:

If manufacturing and marketing fundamentally differ with each other, then the two groups may have different understandings of what their firm is trying to do, its goals and strategies. If the two groups disagree on the goal, then they will advocate actions that pull the firm in opposite directions.

St. John (1991) investigated the marketing and manufacturing agreement on goals and planned actions. She proposed that marketing and manufacturing departments within the same firm will exhibit different patterns of competitive priorities and decisions.

If marketing and manufacturing disagree on how these types of trade-off decisions should be made, there would seem to be two possible reasons. First, marketing and manufacturing may have different understanding of the competitive priorities of the firm. Second, marketing and manufacturing may agree on the stated competitive priorities of the firm but disagree on the operational interpretation.

If marketing and manufacturing groups do adopt postures that reflect traditional priorities rather than the specific needs of their firms, then, when faced with choices among competitive priorities, we would expect marketing groups to place more importance on market-oriented priorities while manufacturing groups placed more importance on operating efficiency.

The work found a relationship between consensus among those who implement competitive strategies and marketplace performance. The research also support that when marketing and manufacturing have a common vision (set of competitive priorities) and understand the strategic implications of their decisions (interdependent trade-offs) they will make decisions and take actions that implement a strategy that has value to customers (Porter, 1985).

2. External Environmental Conditions

Major components of the external environment include its complexity and the degree of turbulence due to changes in the behaviours of competitors, customers, and government regulators. More complex and changing environments require the organization to be flexible and innovative. This situation, in turn, creates a greater need for people in various functional areas to interact.

In today's turbulent environment, the conventional wisdom that marketing is expected to play a major role in formulating corporate strategies, with manufacturing simply reacting to those strategies is no longer affordable. With manufacturing considered as a key resource in formulating corporate strategy rather than assuming a reactive role, firms can achieve a more realistic assessment of the relative benefits provided by manufacturing flexibility (Chen et al., 1992). As Figure 4. shows, manufacturing based, marketing based, and infrastructure flexibilities together define aggregate production system flexibility. The arrows signify "necessary for". Thus, manufacturing based flexibility is necessary for marketing based flexibility. These along with infrastructure flexibility in turn influence the aggregate production system flexibility.

In an instable environment, sales forecasting is more difficult, product planning is harder, and mistakes are more costly. Mistakes also contributes to long term counterproductive antagonisms. In a rapidly changing technological environment, products more quickly become obsolete, and then processes need to be replaced. This environmental change puts burdens on both marketing and manufacturing departments.

3. Communication Flow

Flow of information can be characterized by both the amount of communication and the difficulty of communication between parties. Communication breakdowns are

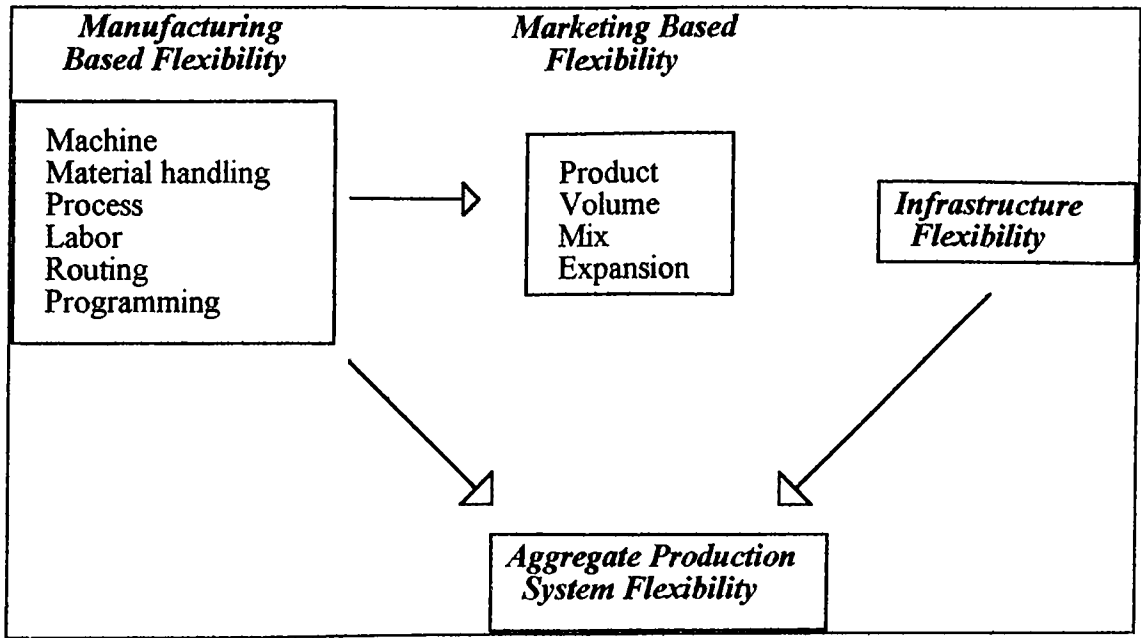


FIGURE 4
Flexibility Relations

Source: Chen, IJ, Calantone, RJ and Chung, C-H, The Marketing-Manufacturing Interface and Manufacturing Flexibility, *Omega International Journal of Management Science*, 20 (4), 431-443, 1992.

often cited as the cause for lack of integration among functional areas. In many organizations, marketing and manufacturing are not located in the same general area. Marketing may be close to customer groups, whereas the manufacturing group may be close to suppliers. The physical separation perpetuates lack of communication and understanding (Crittenden 1992).

In those areas where marketing and manufacturing groups disagree there may be a more firm-specific explanation for why marketing and manufacturing groups tend to disagree on important interdependent decisions. Disagreements may be a manifestation of poor communication of organizational priorities.

4. Coordination Patterns

The coordination dimension involves formal working rules, the amount of influences a member of one unit can exert on a member of another, and the conflict resolution mechanisms used when either formal rules or informal influence fails.

Functional groups, especially those lacking formal authority ties, tend to develop differential perceptions and orientations as well as different languages, belief systems, and ways of thinking. This differentiation tends to increase the organizational space between functions. Increased distance in organizational space can lead to reduced communications or reduced perceptions of functional dependence, either of which may lead to a deterioration of co-ordination (Clare and Sanford, 1984).

The research conducted by St John (1991) revealed that agreement between marketing and manufacturing departments will be higher in those firms where managers perceive that written strategic plans and MBO linked to performance appraisal are used frequently.

Findings further suggest that the mechanisms recommended by researchers for co-ordinating between interdependent departments do, in fact, play a role in increasing consensus between marketing and manufacturing.

Results suggest that planning processes, combined with other types of co-ordinating mechanisms, do play an important role in integrating priorities and trade-offs across the two departments.

The research (St. John and Rue, 1991) revealed that planning processes lead to consensus which leads to better performance. Planning processes play an important role in helping the two parts of the organization that are responsible for the activities that create value in the marketplace achieve consensus on competitive issues, organization goals, and trade-off decisions.

IV. COMPANIES

IV.1. Kavaklıdere Winery

The Kavaklıdere Winery was founded by a businessman in 1929 in Ankara. Following the rapid growth of Ankara, the company decided to leave its old location, and move outside the city. Since 1987, the winery has been operating under the direction of a French wine specialist, with a completely new set of wine-making equipment designed and put in place by the French engineering consultants SOGELERG. The new wine-making complex is close to Ankara's Esenboğa Airport. It is surrounded by 35 hectares of vineyards. The winery occupies a covered space of 8,000 m³, kept at constant temperatures by a special air control system. It can process 20 tons of grapes an hour during the grape harvest, has a stainless steel vat capacity of 40,000 hectolitres and its bottling lines can fill 8,000 bottles an hour. Currently, the winery produces 22 types of wines, of which 3 are sparkling wines.

The marketing department of the company separated from the facilities and a new marketing company under the name of Kavmar was established 7 months ago. The place of the marketing company is in the centre of Ankara. All sales offices and warehouses are connected to the marketing company. Other than Ankara, company has warehouses in İstanbul, İzmir, Antalya, Muğla, Aydın and İçel.

Although manufacturing and marketing operations are governed by two different companies, they are owned by the same family and the board of directors of both companies are the same. The only difference is the positions of the board members in the company management. Organization chart of the companies are given in Appendix A.1.

IV.2. Atatürk Orman Çiftliği Winery

Atatürk Orman Çiftliği (A.O.Ç.) Winery was founded in 1925 in Ankara. The cellar of the winery has a wine storage capacity of 2.000.000 lt. Annual production volume is determined by the available storage volume in the cellar. The winery is managed by a plant manager and currently has 33 workers. Winery produces four white and four red wines. All of the production is distributed and consumed in Ankara.

The winery has no sales force. Distribution of wines is handled through an authorized dealer of Atatürk Orman Çiftliği. The marketing of wines are handled by the commercial office which is directly responsible to the management of the Atatürk Orman Çiftliği. All A.O.Ç. products, such as milk, cheese, honey are marketed through the same department. Atatürk Orman Çiftliği has no sale shop currently. Two sale shops of the organization rented by management to a private organization because they were too costly.

Organization chart of the winery is given in Appendix A.2.

V. METHODOLOGY

In this thesis study, the framework provided by Akıncı (1993) will be used to investigate the gaps in the marketing-manufacturing interface. Questionnaires developed by Paşa and Karabatı (1994) will be used to collect quantitative data about the interface to measure the agreement between marketing and manufacturing departments of the company.

Another questionnaire was designed to investigate the major conflict reasons and factors affecting the conflict between marketing and manufacturing departments. Questions were designed to cover basic causes of conflict as identified by Shapiro (1977) and the framework provided by Ruekert and Walker (1987).

There will be two sets of questionnaires, one for the marketing department and one for the manufacturing department. Each set of questionnaire consists of three major parts. First two parts of the questionnaire, designed by Paşa and Karabatı (1994), will be used to measure gaps in the marketing manufacturing interface of the organization. First part aims to understand the perceptions of each department about the current product profile. In the second part marketing will state the order winning characteristics of the product profile that best fit to current market conditions and marketing practices and manufacturing will state the order winning characteristics of the product profile that best fit to current manufacturing capabilities. Third part of the questionnaire was designed to disclose the major causes of conflict between marketing and manufacturing departments of the organization. In this part a number of statements about the company and its operations is given and respondents are asked to indicate the degree of their

agreement or disagreement about the statements. Answers given in the this part shed light on the relationship between marketing and manufacturing departments in the company and the factors affecting the interface. The questionnaire for the marketing department is given in Appendix B, and the questionnaire for manufacturing department is given in Appendix C.

In calculating the gaps, for each order winning characteristic department averages are calculated and then absolute differences of the department averages are summed. This summation is divided by 60 to measure the gap in percentages. In the third part, absolute differences between the department averages is used to measure the perception differences between the departments.

VI. ANALYSIS

In this chapter findings from the questionnaires used in the Kavaklıdere and Atatürk Orman Çiftliği (A.O.Ç.) wineries will be analyzed and discussed. Gaps in the marketing-manufacturing interface of the companies will be measured.

VI.1. Measurement of the Gaps

VI.1.1. Kavaklıdere Winery

Gaps in the marketing manufacturing interface of the company were calculated as below;

GAP I	GAP II	GAP III	GAP IV
13.3 %	9.2 %	16.7 %	20%

GAP I:

Results of the questionnaires applied to the marketing and manufacturing departments of the Kavaklıdere Winery showed that (See Appendix D.1.), both groups ranked product reliability and durability as the most important order winning characteristic of the current product profile. Low cost was ranked as the least important feature of the product by both groups.

Although both groups agreed on the most important and the least important characteristics of the current product profile, they were disagree on the rank of other

competitive aspects of the product and they also differed on the importance of each characteristic.

Manufacturing thinks that currently production according to customer specifications is very important for their product to win order. They see themselves customer oriented. They rated this characteristic 1.5 point higher than marketing. On the other hand, marketing rated new product introduction 2.5 points more important than manufacturing (See Appendix D.2.).

GAP II:

Gap II was identified as the smallest gap in the marketing manufacturing interface of the Kavaklıdere Winery. According to results of the questionnaires applied to marketing department (See Appendix D.3. and D.4.), marketing thinks producing a wide range of products and ability to handle various order sizes, which were rated as third and fourth most important order winning characteristics of the current product profile, are not that important for the products that best fit to market conditions and marketing practices and rated as only seventh and eighth factors at the second part of the questionnaire. Differences between ratings is relatively small and gap is measured as 9.2%.

GAP III:

The second biggest gap is the Gap III and measured as 16.7%. Results of the questionnaire (See Appendix D.5. and D.6.) showed that manufacturing thinks currently producing a wide range of products is important as an order winning characteristic of the product profile and ranked second, however for the product profile that best fit to current manufacturing capabilities it is not an important characteristic.

GAP IV:

Gap IV was identified as the biggest gap in the marketing manufacturing interface of the company and measured as 20%. Although both departments agreed on the most important and the least important characteristics (See Appendix D.1.), they were disagree on ranking and ratings of other characteristics.

According to results of questionnaires, marketing believes wide product range and new product introduction is important to win order in the market place, on the other hand manufacturing believes new product introduction is not important. Marketing thinks that low price is important as a competitive factor, however manufacturing thinks low price has very little importance to win order.

VI.1.2. Atatürk Orman Çiftliği (A.O.Ç.) Winery

Gaps in the marketing manufacturing interface of the A.O.Ç. Winery were measured and tabulated below:

GAP I	GAP II	GAP III	GAP IV
12.5 %	25 %	16.7 %	14.2 %

GAP I:

In A.O.Ç. Winery, Gap I was identified as the smallest gap in the marketing manufacturing interface.

Both groups ranked production according to customer specifications as the least important order winning characteristic of the current product profile. Also they agreed that modern technology, wide range of products and fast lead times are important characteristics. However groups disagreed on the importance of product reliability /durability and on time delivery (See Appendix D.7 and D.8.).

GAP II:

Contrary to what was found in the Kavaklıdere Winery, Gap II is the biggest gap in the marketing manufacturing interface of the A.O.Ç. Winery.

Marketing thinks that to win order in the market place, winery should start production according to customer specifications and introduce new products. Production according to customer specifications which was ranked as the least important order winning characteristic of the current product profile increased its rating by 4.5 points and was ranked as the third most important product characteristic for the product profile that best fit to market conditions.

Marketers stated that on time delivery and production of broad range of products which are important characteristics of the current product profile are not that important for the market (See Appendix D.9. and D.10.).

GAP III:

Results of the questionnaire (See Appendix D.11 and D.12) showed that manufacturing believes low cost and wide range of products which were ranked as the third and fourth most important factors should be less important for the product profile that best fit to manufacturing capabilities.

They expressed that product reliability and durability and products with modern technology are the most important order winning characteristics both for the current product profile and the product profile that best fit to manufacturing capabilities.

They also think that more importance should be given to new product introduction and customer specifications.

GAP IV:

Gap IV which was measured as the biggest gap in the marketing manufacturing interface in Kavaklıdere Winery, was identified only as the third biggest gap in the A.O.Ç. Winery.

The most apparent difference between the perceptions of two groups is that while marketing thinks that production according to customer specifications is very important for the market, manufacturing thinks it has only a partial importance and ranked it as the seventh characteristic (See Appendix D.7. and D.8.).

Manufacturing ranked fast lead times as the fourth important attribute of the product that best fit to manufacturing capabilities, whereas marketing thinks it is the least important product characteristic for the market.

Manufacturing thinks low price should not be an important characteristic of the product and ranked it as the ninth characteristic whereas marketing thinks it is important for the market and ranked it as the fourth.

VI.2. Analysis of the Factors Affecting Interface

In this part answers given to the third part of the questionnaire will be used to understand the terms of the relationship and norm differences between two departments in each organization and to investigate the effects of these differences on the interface.

VI.2.1. Kavaklıdere Winery

Answers given to the questionnaire revealed that in Kavaklıdere Winery, many causes of conflict exist.

One of the causes of conflict is the difference between the orientations and experience of employees. According to the results of the survey, employees at marketing work with sales people more frequently than they work with manufacturers. They visit sales offices and customers more frequently than factory. Employees at manufacturing stated that they work frequently with sales people but not with the marketing department. Results also revealed that manufacturers visit neither sales offices nor the marketing department frequently. Manufacturing thinks they are aware of the problems in the factory but they are not close to the problems in the market. On the other hand marketing agreed that they know the problems in the market but not the problems in the factory.

In the company, there are also communication problems between two departments. Results of the questionnaires showed that employees of both departments experience difficulty in getting ideas when communicating with people from the other department. they further explained that they experience difficulty in understanding language used by the other department.

In both departments some employees expressed that they experience difficulty when want to communicate with people from other department and some expressed that they do not experience any difficulty, therefore an agreement on the subject could not be attained. Marketing agreed that they communicate with manufacturing frequently, however manufacturing believes that they do not communicate with marketing frequently. Both departments agreed that they listen and understand the other department's point of view.

Employees at marketing and manufacturing departments think that both departments strive to maintain a good working relationship with the other department. Manufacturing stated that they cooperate with marketing frequently, on the other hand marketing believes that the degree of cooperation between two departments is not sufficient. In both department employees agreed that working closely with the other department increase the quality of decisions made by each department. Also both departments agree that each department need support of other department to achieve its goals and responsibilities.

Generally employees at marketing department agreed that they work with employees at manufacturing frequently, on the other hand manufacturers believe in the contrary.

Results of the questions about domain similarity showed that, both departments agree that marketing department is not similar to the manufacturing department, the only similar point is that both departments obtain its funding from the same source. Employees at the marketing department think that both departments have the same customer interaction, however manufacturers think they have different customer interaction. Manufacturers think that marketing has the same reward structure with manufacturing, whereas marketers think the opposite.

Results of the survey showed that marketing and manufacturing departments receive reward for different activities, which is identified as one of the basic causes of conflict by Shapiro (1977).

There are also differences in the perceptions of each department about the employees of other department. Employees at marketing clearly distinguish themselves from the employee of manufacturing and state that manufacturers are different from marketers, however employees at manufacturing think relatively moderate and believe that employees of each department is not that different. Yet, at both departments employees feel people from the same department closer to them when compared to people from other department.

Both departments agreed that their primary market is relatively easy to predict and is a stable market. However as manufacturing strongly agrees that their primary market has a constant demand, marketing strongly disagrees.

Questions that intended to measure degree of formalization in the company received answers at extreme ends, and showed that employees do not have a common opinion about the subject. Even if there are some written documents covering the terms of relationship between marketing and manufacturing and standard operating procedures, it is understandable that these are not well known by the employees and not used efficiently. The only indicator of the formalization was the use of formal communication channels between the departments.

In the company, there are control mechanisms and planning processes to coordinate the activities between the marketing and manufacturing departments. However they lack committees and task forces involving members from both departments. Employees from both departments do not meet and discuss the problems regularly.

VI.2.2. Atatürk Orman Çiftliği Winery

Results of the questionnaire revealed that degree of departmentation is high in A.O.Ç. Perception and norm differences between employees of both departments is highly apparent.

Amount of cooperation between two departments is not sufficient. Although both groups agreed that working closely with other department help their department achieve its goals and increase the quality of decisions made by the department, employees at both departments agreed that they do not work with people from the other department frequently.

In A.O.Ç. employees of two departments differ in their orientations and experiences. Employees at marketing stated that they visit sales offices and customers frequently. They also admitted that they do not visit factory frequently and they are aware of the problems in the market more than the problems in the factory. Employees at manufacturing accepted that they neither visit sales offices nor the marketing department, but they are well aware of the problems in the market and in the factory.

Since A.O.Ç. Winery is a State Economic Enterprise, employees of the winery are civil servants. There is no reward system in the organization and all employees are evaluated on the same basis.

While marketing thinks that they can not communicate with people from manufacturing easily and also experience difficulty in getting ideas when communicating with manufacturers, manufacturing thinks although communication between two groups is not frequent, neither department experience any difficulty in communication and getting the ideas. Employees at marketing expressed that they

experience difficulty in understanding language used by manufacturing, manufacturing stated they do not experience such a difficulty.

Marketing believes that while they strive to maintain a good working relationship with manufacturing, manufacturing does not show the same effort.

Manufacturing thinks marketing and manufacturing is completely different, they do different works, they have different customer interaction and operating goals and their employees have different skills. On the other hand, marketing believes in the contrary. Marketing thinks two departments have different cultures. Employees at both departments feel people from the same department closer to them compared to people from the other department.

Perceptions of marketing and manufacturing about market also differed. Manufacturing believes their primary market is a stable, easy to predict market with a constant demand, marketing stated that market conditions are completely different.

In the winery terms of the relationship between departments was not discussed and whether it is written down or not employees do not have sufficient information. Also company lacks task forces and committees involving members from both departments.

VII. RECOMMENDATIONS

Results of this study showed that marketing manufacturing interface in A.O.Ç. and Kavaklıdere wineries show differences. In Kavaklıdere Winery the gap between the perceptions of marketing and manufacturing departments constitute the major conflict area, in A.O.Ç. Winery on the other hand intradepartmental gaps are bigger compared to gaps between perceptions of marketing and manufacturing.

In Kavaklıdere Winery the biggest gap is Gap IV, the gap between perceptions of manufacturing about the order winning characteristics of the product profile that best fit to current manufacturing capabilities and perception of marketing about the order winning characteristics of the product profile that best fit to current market and marketing practices. This shows that there is a great potential of conflict between two departments. Currently the gap between the departments is relatively small because until now top management was successful to convey the direction of the organization and encouraged both departments to make decisions in light of that common direction. Current direction of the company is to produce the highest quality wines and offer a broad product line. They do not compete on price. This direction is also observable in the answers given to the questionnaire. However if management fails to convey the direction of the company, contradictory decisions may emerge.

In A.O.Ç. Winery intradepartmental gaps are bigger and the biggest gap in the company is the Gap II, the gap between perception of marketing about the order winning characteristics of the current product profile and the product profile that best fit to market conditions. Bigger intradepartmental gaps mean that at the current

situation the biggest problem is that both departments think current product profile has some weak points and other product characteristics should be given to produce the product profile that best fit to market conditions and manufacturing capabilities.

One of the causes of these intradepartmental gaps is the limitations of Atatürk Orman Çiftliği. Although both departments agreed that production according to customer specifications and introduction of new products should be given more importance, financial and other limitations faced by the A.O.Ç. management and bureaucracy in the public sector limit the flexibility of winery and impede making successful changes. In A.O.Ç. even changing the labeling of a wine requires too much effort to overcome difficulties. Firstly company management have to use all the stocks at hand and while private sector can use up such stock excesses by special campaigns, promotions and price reductions, A.O.Ç. does not have such opportunities. They are not flexible in pricing and bounded by a fixed price, they can not offer special prices or start promotion campaigns neither.

In Kavaklıdere Winery both departments agreed that currently product reliability and durability is the single most important characteristic of the product and rated 7, and stated that it would be important to the same degree for the product that best fit to market and manufacturing capabilities. Similarly in A.O.Ç., product reliability and durability and modern technology were ranked as the most important product characteristics for the best fit product profile. However as manufacturing believes that at the time being their products win order because of its reliability and durability, marketing thinks they win order because they deliver products on time.

In Kavaklıdere Winery marketing place more importance on new product introduction and rate this characteristic as important, whereas manufacturing believes it is not an important order winning characteristic and give only 1 out of 7 to indicate its importance. Interestingly in A.O.Ç., although both groups agreed that

new product introduction is important, manufacturing ranked this characteristic higher compared to marketing. Marketing thinks there are more important product characteristics.

In both organizations, employees of both departments agreed that currently wide range of products is very important as an order winning characteristic, however it would not be as important for the product profile that best fit to current market and manufacturing capabilities.

In both companies marketing place more importance on whereas manufacturing thinks low price should not be an important product characteristic. Marketing department of A.O.Ç. Winery attaches more importance on low price in comparison to marketing department of Kavaklıdere Winery.

These conflicts between marketing and manufacturing may result in contradictory departmental decisions that may cause strategy implementation problems and influence the performance of the overall business. Management should be alert to these conflict areas and make the corporate strategy clear.

In Kavaklıdere Winery both departments receive reward for different activities which may result in conflict between two departments. To remove the conflict between departments, it is advisable for management to establish a reward system that will measure the performance of departments by a common single set of action. In the A.O.Ç. however since there is no evaluation and reward system and employees receive the same salary no matter whether they are successful or not, they are not encouraged to work better.

Differences in the orientation and experience of employees, which is identified as one of the four basic causes of conflict between the marketing and manufacturing

departments is clearly observable in both wineries. These differences affect the understanding between departments and may result in departmentation, where employees identify themselves more closely with their department as already happened in the companies, particularly in A.O.Ç. Winery. This departmentation affect the implementation of corporate strategy. Management should take actions to remove these differences between orientation and experience of employees of two departments. Interdepartmental training of employees can be a solution.

There is also difference between the perceptions held by employees of two departments. In Kavaklıdere Winery manufacturers believe that they neither work with employees at marketing nor communicate with them frequently, however marketing stated that they work and communicate with employees at manufacturing frequently. This result may suggest two things, manufacturing may think that their work is not related with marketing or they may believe that the amount of cooperation and communication between two departments is not sufficient. The important thing is that in both organizations there is difference between the perceptions of two departments and needed to be removed.

In both wineries communication problems exist between two departments. In the wineries, communication with people from other department is difficult. In case of Kavaklıdere Winery physical separation of two departments and the distance between two departments is an important factor affecting this problem. Employees also expressed that they experience difficulty in getting ideas when communicating with people from other department and also admit that they experience difficulty in understanding the language used by other department. An interesting finding is that although employees of both departments declare that they have some communication problems, they stated that they listen and understand the other department's point of view.

To overcome these difficulties in communication, management should take some actions. Regular meetings between members of two department can be a way to increase the flow of information between departments.

Results also showed that, employees of each department distinguish themselves from other department. This may result in an increase in the negative effects of departmentation. Both departments believe that employees of each department has different life styles, hobbies and values. These cultural differences make it hard for marketer and manufacturer to work together. Increasing the social interaction between departments may positively affect the understanding between employees and diminish the cultural differences.

Another common perception difference between two departments is that manufacturing believes market is a stable market with a constant demand, whereas marketing strongly disagrees. This is another indicator of lack of communication and cooperation between two departments.

Formal coordination patterns between departments is not sufficient and not used efficiently. This may result in perception differences between departments. Committees and task forces involving members from both departments is one of the ways to coordinate activities between these departments.

VIII. SUMMARY AND CONCLUSIONS

In this study, a quantitative research tool was used to investigate the marketing manufacturing interface. The questionnaire was applied to marketing and manufacturing departments of two wine manufacturing companies to provide an empirical case study.

First two parts of the questionnaire, developed by Paşa and Karabatı (1994), were used to measure the gaps in the interface of marketing and manufacturing at the operational level as identified in the framework developed by Akıncı (1993).

These gaps are;

- GAP1: The difference between the perceptions of the marketing and manufacturing departments about the order-winning dimensions of the current product profile.

- GAP2: The difference between the order-winning characteristics of the current product profile, and of the product profile that best fit to current market conditions and marketing practices.

- GAP3: The difference between the order-winning characteristics of the current product profile and of the product profile that best fit to current manufacturing capabilities.

- GAP4: The difference between the order-winning characteristics of the product profile that best fit to current manufacturing capabilities, and of the product profile that best fit to current market conditions and the marketing practices.

Third part of the questionnaire was designed to investigate the factors that affect the interface. Results of the questionnaire was used to explain the causes and major factors affecting the gaps in the marketing manufacturing interface of the companies.

Findings of the study revealed that marketing and manufacturing departments of the companies face some of conflicts identified in the literature. In Kavaklıdere Winery major conflict areas were breadth of product line and new product introduction. In Atatürk Orman Çiftliği (A.O.Ç.) Winery the most apparent conflict areas were production according to customer specifications, fast lead times and low price.

Gaps in the marketing manufacturing interface of two companies showed differences. While the gap between the perceptions of marketing and manufacturing departments constituted the biggest gap in Kavaklıdere Winery, in A.O.Ç. Winery intradepartmental gaps were bigger compared to gaps between perceptions of marketing and manufacturing. One of the apparent causes of this difference was identified as the organizational and operational differences between two wineries, while Kavaklıdere Winery is a private organization, A.O.Ç. is a governmental institution.

Some common causes of conflict were identified as difference in orientations and experiences of employees of two marketing and manufacturing departments, communication problems and perception differences between departments and lack of coordinating mechanisms. Effects of departmentation such as accusation of

employees of other department were higher in A.O.Ç. Winery. Some actions were recommended to reduce the conflict between departments.

This study has some limitations. Since marketing manufacturing interface of only two wineries were investigated, findings are not generalizable to provide information about the marketing manufacturing interface of the companies in the wine sector. For further studies it is suggested to investigate all the companies in the sector. Another limitation of the study was the number of employees involved in the study. White collared employees in both departments were very few, only six employees (four in marketing department and two in manufacturing department) in Kavaklıdere Winery and four employees (two from marketing department and two from manufacturing department) in A.O.Ç. Winery filled out the questionnaire. This number is very few to make conclusions in a statically acceptable manner.

REFERENCES

Akıncı, H. Burcu, Determinants of the Marketing Manufacturing Interface, MBA Thesis, Bilkent University, May 1993.

Braham, James, The Marriage of Marketing & Manufacturing, Industry Week, June 1, 1987.

Chen, IJ, Calantone, RJ and Chung, C-H, The Marketing-Manufacturing Interface and Manufacturing Flexibility, Omega International Journal of Management Science, 20 (4), 431-443, 1992.

Clare, Donald A. and Sanford, Donald G., Cooperation and Conflict Between Industrial Sales and Production, Industrial Marketing Management, 13, 163-169 (1984).

Crittenden, Victoria L., Gardiner Lorraine R. and Stam Antonie, Reducing Conflict Between Marketing and Manufacturing, Industrial Marketing Management, 22, 299-309 (1993).

Crittenden, Victoria L., Close the Marketing Manufacturing Gap, Sloan Management Review, Spring, 41-51, (1992).

Hayes, Robert H. and Wheelwright, Steven C., Restoring Our Competitive Edge: Competing Through Manufacturing, John Wiley & Sons, New York, 1984.

Hutt, Micheal D. and Speh, Thomas W., The Marketing Strategy Center: Diagnosing the Industrial Marketer's Interdisciplinary Role, *Journal of Marketing*, 48, 53-61, (Fall 1984).

Kahn, Kenneth B. and Mentzer, John T., Norms that Distinguish Between Marketing and Manufacturing, *Journal of Business Research*, 30, 111-118, (1994).

Kamath, Rajan R., Mansour-Cole, Dina M. and Apana, R., Functional Perspective on Innovation: The Correlates of Innovation in the Marketing and Manufacturing Functions, *IEEE Transactions on Engineering Management*, 40 (3), 293-299, August 1993.

Paşa, Mehmet and Karabatı, Selçuk, Pazarlama ve Üretim Birimlerinin Karşılıklı Uyumu, September 1994.

Pearson, John W., Organizing the R&D-Manufacturing-Marketing Interface, *Chemtech*, August 1983.

Porter, Michael E., *The Competitive Advantage*, Free Press, New York, 1985.

Porteus, Evan L. and Whang, Seungjin, On Manufacturing/Marketing Incentives, *Management Science*, 37 (9), 1166-1181, September 1991.

Ruekert, Robert W. and Walker, Orville C., Marketing's Interaction with Other Functional Units: A Conceptual Framework and Empirical Evidence, *Journal of Marketing*, 51, 1-19, (January 1987).

Shapiro, Benson P., Can Marketing and Manufacturing Coexist?, *Harvard Business Review*, 55 (September-October), 104- 114, 1977.

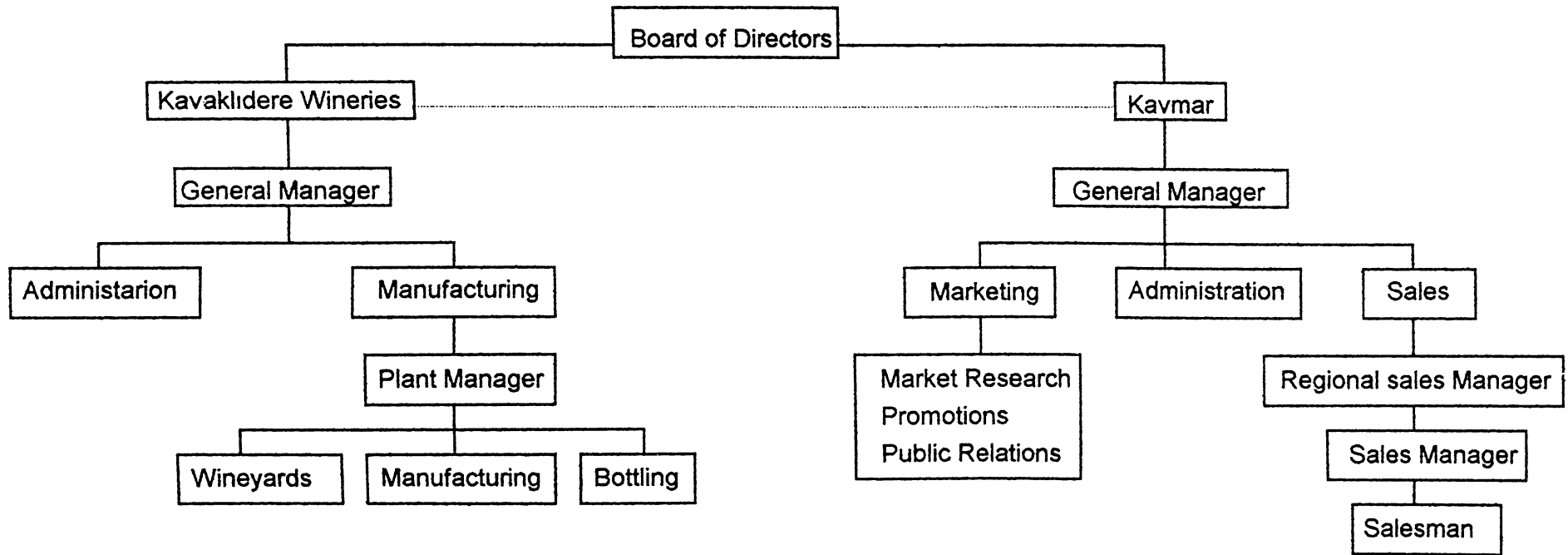
St. John, Caron H., Marketing and Manufacturing Agreement on Goals and Planned Actions, *Human Relations*, 44 (3), 211-229, 1991.

St. John, Caron H. and Hall, Ernest H., The Interdependency Between Marketing and Manufacturing, *Industrial Marketing Management*, 20, 223-229, (1991).

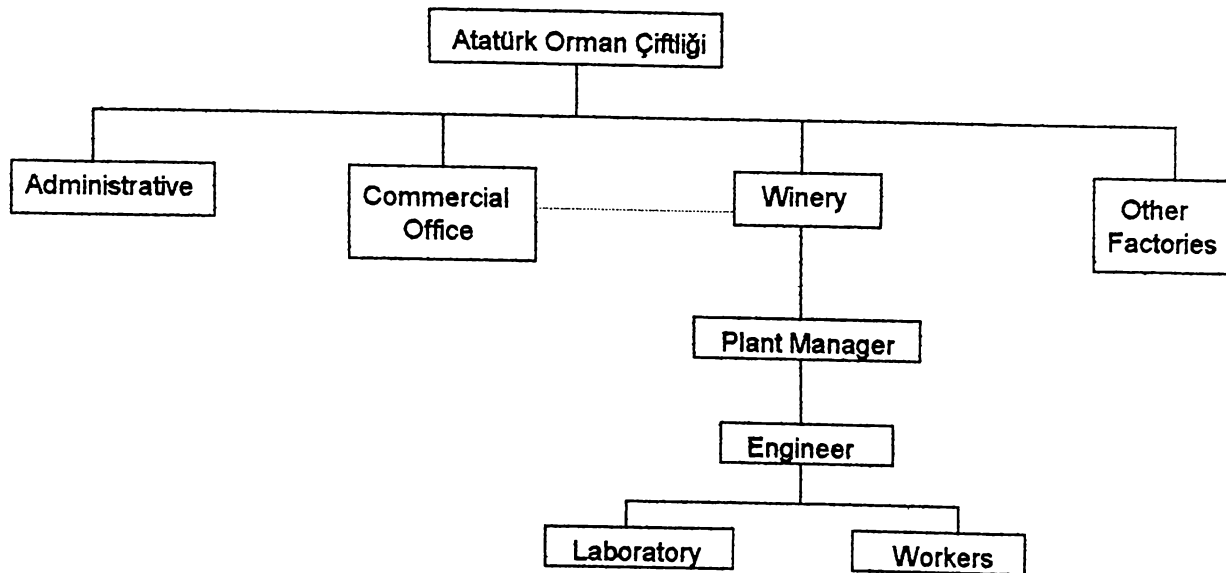
St. John, Caron H. and Rue, Leslie W., Research Notes and Communications Coordinating Mechanisms, Consensus Between Marketing and Manufacturing Groups, and Marketplace Performance, *Strategic Management Journal*, 12, 549-555, (1991).

APPENDIX A
ORGANIZATION CHARTS OF COMPANIES

APPENDIX A.1.
Organization Charts of Kavaklıdere Wineries and Kavmar



APPENDIX A.2.
Organization Chart of the Atatürk Orman Çiftliği Winery



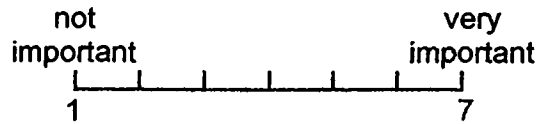
APPENDIX B
THE QUESTIONNAIRE FOR THE MARKETING DEPARTMENT

Part 1

Directions: This questionnaire is designed to understand how you perceive the order winning characteristics of the current product profile. Please do the following two operation.

1. Please rank the following characteristics according to their importance. The most important characteristic will be ranked as (1), and the least important characteristic will be ranked as (10).

2. Please indicate the degree to which each characteristic is important by checking one of the seven places next to each statement. If you think that particular characteristic is very important, check (7). If you think that particular characteristic is not important check (1). If your thoughts are not strong please check one of the places in the middle. There are no right or wrong answers. Please tell us honestly how you feel.



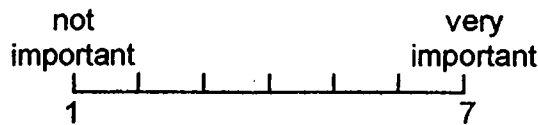
Rank	
___ Production according to customer specifications	
___ wide range of products	
___ new product introduction	
___ fast lead times	
___ product reliability and durability	
___ on time delivery	
___ low price	
___ after sales service	
___ product with modern technology	
___ ability to handle various order sizes	

Part 2

Directions: This questionnaire is designed to understand how you perceive the order winning characteristics of the product profile that best fit to characteristics of the market and your marketing practices. Please do the following two operation.

1. Please rank the following characteristics according to their importance. The most important characteristic will be ranked as (1), and the least important characteristic will be ranked as (10).

2. Please indicate the degree to which each characteristic is important by checking one of the seven places next to each statement. If you think that particular characteristic is very important, check (7). If you think that particular characteristic is not important check (1). If your thoughts are not strong please check one of the places in the middle. There are no right or wrong answers. Please tell us honestly how you feel.

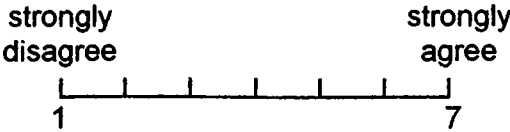


Rank

___	Production according to customer specifications		1	7
___	wide range of products		1	7
___	new product introduction		1	7
___	fast lead times		1	7
___	product reliability and durability		1	7
___	on time delivery		1	7
___	low price		1	7
___	after sales service		1	7
___	product with modern technology		1	7
___	ability to handle various order sizes		1	7

Part 3

Directions: Listed below are a number of statements about your company and its operations. Please indicate the extent to which you disagree or agree with each statement by checking one of the seven places next to each statement. If you strongly agree check (7), if you strongly disagree check (1). If your feelings are not strong check one of the places in the middle. There are no right or wrong answers. Please tell us honestly how you feel.



- marketing and manufacturing departments are evaluated on the same basis.

- for manufacturing to accomplish its goals and responsibilities it need support from marketing

- for marketing to accomplish its goals and responsibilities it need support from manufacturing

- employees at marketing department work with sales people frequently

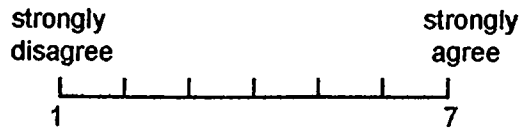
- employees at marketing department work with employees at manufacturing frequently

- employees at marketing department visit sales office and customers frequently

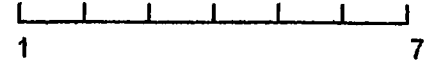
- employees at marketing department visit manufacturing department frequently

- employees at marketing department are aware of problems in the factory

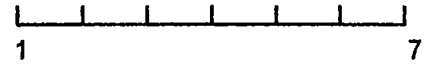
- employees at marketing department are aware of problems in the market



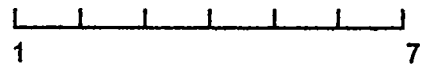
employees at marketing department experience difficulty in getting ideas when communicating with people from manufacturing



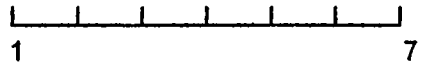
employees at manufacturing department experience difficulty in getting ideas when communicating with people from marketing



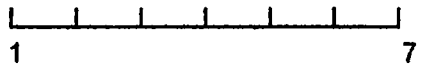
employees at marketing department experience difficulty when want to communicate with people from manufacturing



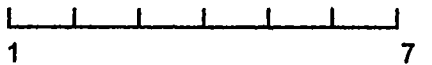
employees at manufacturing department experience difficulty when want to communicate with people from marketing



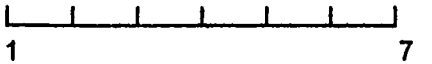
employees at marketing department communicate with manufacturing frequently



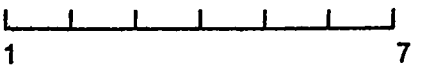
marketing department strives to maintain a good working relationship with manufacturing.



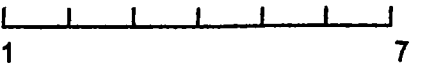
manufacturing department strives to maintain a good working relationship with marketing.



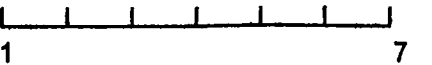
manufacturing department does the same kind of work as marketing department does



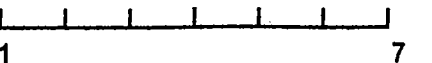
manufacturing department has the same customer interaction as marketing department



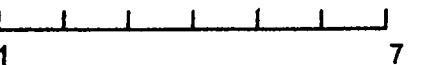
manufacturing department has operating goals similar to marketing department's goals

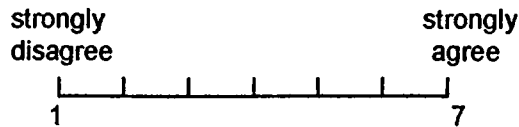


manufacturing department has employees with similar skills as those required by personnel in marketing department

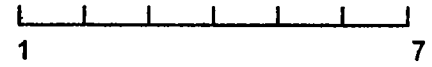


manufacturing department has the same reward structure as marketing department

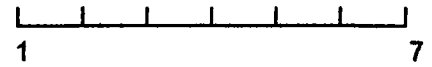




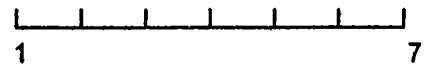
marketing people listen & understand manufacturing's point of view



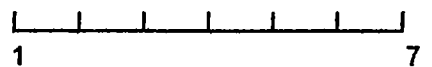
marketing people has the same life goals with manufacturing people and give same importance to these goals



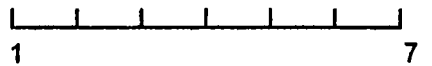
marketing people has the same hobbies with manufacturing people



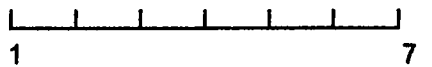
marketing people has the same life style with manufacturing people



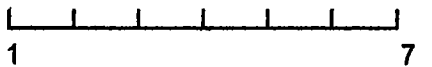
marketing people has the same values with manufacturing people



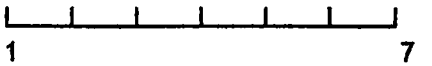
I feel people from marketing closer to me than people from manufacturing



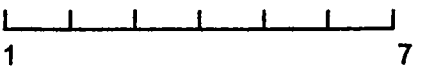
employees at marketing department cooperate with manufacturing people frequently



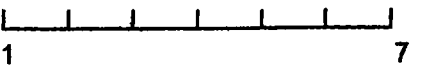
working closely with manufacturing often help marketing department achieve its goals.



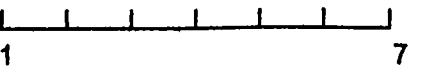
working closely with marketing often help manufacturing department achieve its goals.



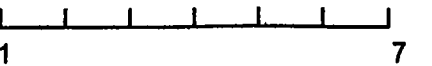
working closely with manufacturing often improves the quality of decisions made by marketing department.



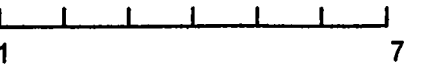
working closely with marketing often improves the quality of decisions made by manufacturing department.



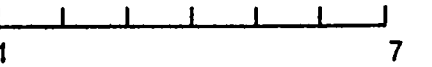
our primary market is easy to predict

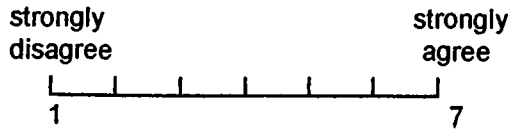


our primary market is a stable market

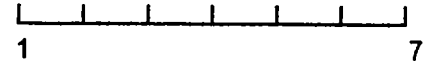


our primary market has a constant demand

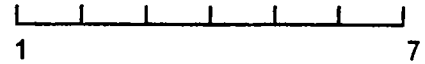




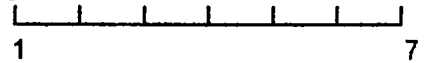
manufacturing department obtain its funding from the same source as marketing department does



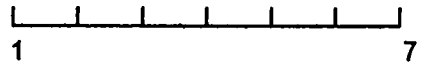
terms of the relationship between marketing and manufacturing has been explicitly verbalized and discussed



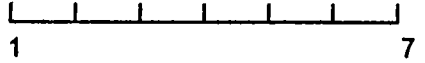
terms of the relationship between marketing and manufacturing has been written down in detail



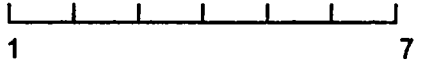
we have standard operating procedures to coordinate activities between marketing and manufacturing



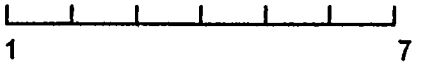
we follow formal communication channels to coordinate activities between marketing and manufacturing



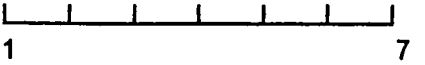
we have control mechanisms to coordinate activities between marketing and manufacturing



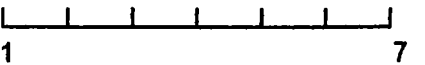
we have planning processes to coordinate activities between marketing and manufacturing



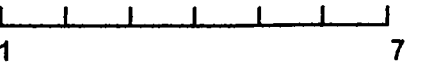
in our company we have committees and task forces involving members from both departments



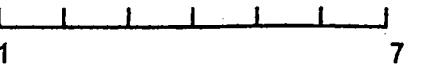
employees at marketing department experience difficulty in understanding language used by manufacturing



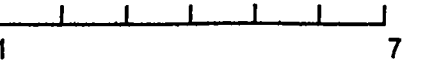
culture of marketing department is different from culture of manufacturing



marketing and manufacturing receive reward for different activities



employees from marketing and manufacturing departments meet and discuss the problems frequently



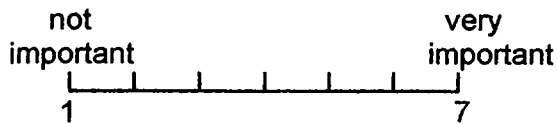
APPENDIX C
THE QUESTIONNAIRE FOR THE MANUFACTURING DEPARTMENT

Part 1

Directions: This questionnaire is designed to understand how you perceive the order winning characteristics of the current product profile. Please do the following two operation.

1. Please rank the following characteristics according to their importance. The most important characteristic will be ranked as (1), and the least important characteristic will be ranked as (10).

2. Please indicate the degree to which each characteristic is important by checking one of the seven places next to each statement. If you think that particular characteristic is very important, check (7). If you think that particular characteristic is not important check (1). If your thoughts are not strong please check one of the places in the middle. There are no right or wrong answers. Please tell us honestly how you feel.



Rank

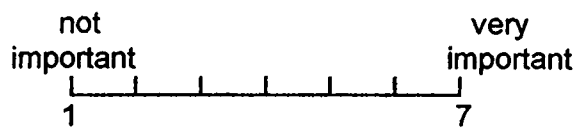
<p>___ Production according to customer specifications</p> <p>___ wide range of products</p> <p>___ new product introduction</p> <p>___ fast lead times</p> <p>___ product reliability and durability</p> <p>___ on time delivery</p> <p>___ low price</p> <p>___ after sales service</p> <p>___ product with modern technology</p> <p>___ ability to handle various order sizes</p>	<p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p> <p>1 7</p>
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Part 2

Directions: This questionnaire is designed to understand how you perceive the order winning characteristics of the product profile that best fit to capabilities of the manufacturing facilities. Please do the following two operation.

1. Please rank the following characteristics according to their importance. The most important characteristic will be ranked as (1), and the least important characteristic will be ranked as (10).

2. Please indicate the degree to which each characteristic is important by checking one of the seven places next to each statement. If you think that particular characteristic is very important, check (7). If you think that particular characteristic is not important check (1). If your thoughts are not strong please check one of the places in the middle. There are no right or wrong answers. Please tell us honestly how you feel.

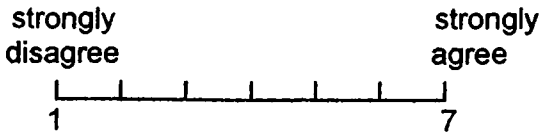


Rank

___	Production according to customer specifications		1	7
___	wide range of products		1	7
___	new product introduction		1	7
___	fast lead times		1	7
___	product reliability and durability		1	7
___	on time delivery		1	7
___	low price		1	7
___	after sales service		1	7
___	product with modern technology		1	7
___	ability to handle various order sizes		1	7

Part 3

Directions: Listed below are a number of statements about your company and its operations. Please indicate the extent to which you disagree or agree with each statement by checking one of the seven places next to each statement. If you strongly agree check (7), if you strongly disagree check (1). If your feelings are not strong check one of the places in the middle. There are no right or wrong answers. Please tell us honestly how you feel.



manufacturing and marketing departments are evaluated on the same basis. 1 7

for marketing to accomplish its goals and responsibilities it need support from manufacturing 1 7

for manufacturing to accomplish its goals and responsibilities it need support from marketing 1 7

employees at manufacturing department work with sales people frequently 1 7

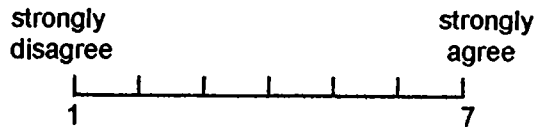
employees at manufacturing department work with employees at marketing frequently 1 7

employees at manufacturing department visit sales office and customers frequently 1 7

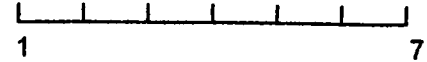
employees at manufacturing department visit marketing department frequently 1 7

employees at manufacturing department are aware of problems in the factory 1 7

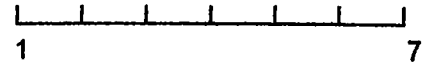
employees at manufacturing department are aware of problems in the market 1 7



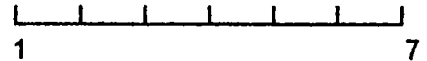
manufacturing people listen & understand marketing's point of view



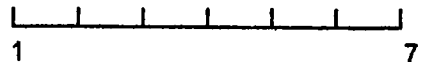
manufacturing people has the same life goals with marketing people and give same importance to these goals



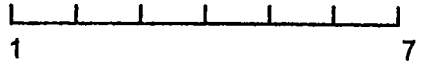
manufacturing people has the same hobbies with marketing people



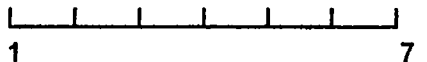
manufacturing people has the same life style with marketing people



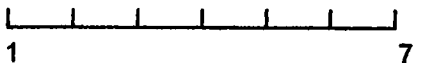
manufacturing people has the same values with marketing people



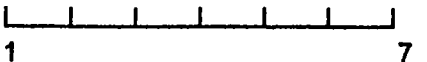
I feel people from manufacturing closer to me than people from marketing



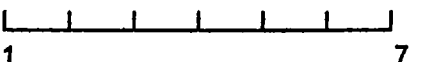
employees at manufacturing department cooperate with marketing people frequently



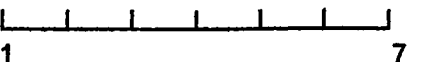
working closely with marketing often help manufacturing department achieve its goals.



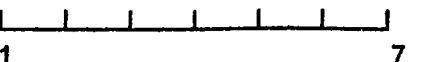
working closely with manufacturing often help marketing department achieve its goals.



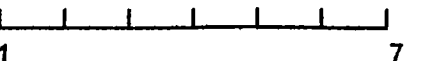
working closely with marketing often improves the quality of decisions made by manufacturing department.



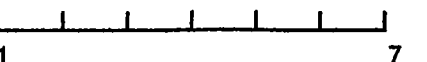
working closely with manufacturing often improves the quality of decisions made by marketing department.



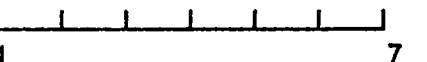
our primary market is easy to predict

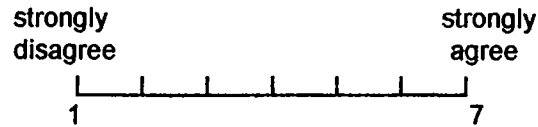


our primary market is a stable market



our primary market has a constant demand





marketing department obtain its funding from the same source as manufacturing department does

1 7

terms of the relationship between manufacturing and marketing has been explicitly verbalized and discussed

1 7

terms of the relationship between manufacturing and marketing has been written down in detail

1 7

we have standard operating procedures to coordinate activities between manufacturing and marketing

1 7

we follow formal communication channels to coordinate activities between manufacturing and marketing

1 7

we have control mechanisms to coordinate activities between manufacturing and marketing

1 7

we have planning processes to coordinate activities between manufacturing and marketing

1 7

in our company we have committees and task forces involving members from both departments

1 7

employees at manufacturing department experience difficulty in understanding language used by marketing

1 7

culture of manufacturing department is different from culture of marketing

1 7

manufacturing and marketing receive reward for different activities

1 7

employees from manufacturing and marketing departments meet and discuss the problems frequently

1 7

APPENDIX D
RESULTS OF THE QUESTIONNAIRES

APPENDIX D.1.

Results of the Survey (ranking of order winning characteristics)

PC	MC	PS	MS
v5	v5	v5	v5
v2	v9	v6	v9
v9	v2	v4	v8
v6	v10	v9	v6
v4	v8	v8	v4
v10	v6	v10	v2
v1	v4	v2	v1
v8	v1	v1	v10
v3	v3	v7	v7
v7	v7	v3	v3

PC: Manufacturing's perception of the current product profile's order winning characteristics

MC: Marketing's perception of the current product profile's order winning characteristics

PS: Manufacturing's perception of order winning characteristics of the product profile that best fit to current manufacturing capabilities

MS: Marketing's perception of order winning characteristics of the product profile that best fit to current market conditions

v1: Production according to customer specifications

v2: Wide range of products

v3: New product introduction

v4: Fast lead times

v5: Product reliability and durability

v6: On time delivery

v7:Low price

v8:After sales service

v9:Product with modern technology

v10:Ability to handle various order sizes

APPENDIX D.2.**Results of the Survey (average ratings)**

	<u>PC</u>	<u>MC</u>	<u>PS</u>	<u>MS</u>
Production according to customer specifications	6,0	5,0	5,0	5,0
Wide range of products	6,0	5,3	3,0	4,8
New product introduction	2,5	5,0	1,0	4,8
fast lead times	5,5	5,5	6,5	5,0
Product reliability and durability	7,0	7,0	7,0	7,0
On time delivery	6,5	6,0	7,0	6,5
Low price	2,0	3,3	2,0	4,8
After sales service	5,0	5,5	6,5	6,3
Product with modern technology	6,0	6,8	6,0	6,3
Ability to handle various order sizes	5,5	6,3	4,0	5,3

PC: Manufacturing's perception of the current product profile's order winning characteristics

MC: Marketing's perception of the current product profile's order winning characteristics

PS: Manufacturing's perception of order winning characteristics of the product profile that best fit to current manufacturing capabilities

MS: Marketing's perception of order winning characteristics of the product profile that best fit to current market conditions

APPENDIX D.3.

Marketings Perception about the Order Winning Characteristics of the Current Product Profile

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	5	0,5	4	5	6,75	1,71	5	9
Wide range of products	5,25	0,96	4	6	5	1,63	3	7
New product introduction	5	0,82	4	6	6,75	2,21	4	9
fast lead times	5,5	1,29	4	7	6,5	1,73	4	8
Product reliability and durability	7	0	7	7	1,5	0,57	1	2
On time delivery	6	0,96	5	7	6	2,94	3	9
Low price	3,25	0,96	2	4	10	0	10	10
After sales service	5,5	1,29	4	7	5,75	3,2	3	9
Product with modern technology	6,75	0,5	6	7	1,5	0,57	1	2
Ability to handle various order sizes	6,25	0,96	5	7	5,25	0,96	4	6

APPENDIX D.4.

Marketings Perception about the Order Winning Characteristics of the Product Profile that Best Fit to Current Market Conditions

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	5	0,82	4	6	6,75	2,63	3	9
Wide range of products	4,75	0,95	4	6	6,5	1,29	5	8
New product introduction	4,75	0,5	4	5	8	2,16	5	10
fast lead times	5	1,82	3	7	5,5	3,1	3	10
Product reliability and durability	7	0	7	7	1,25	0,5	1	2
On time delivery	6,5	0,57	6	7	5,25	2,5	4	9
Low price	4,75	1,71	3	7	7,25	3,77	2	10
After sales service	6,25	0,96	5	7	5	2,45	3	8
Product with modern technology	6,25	0,96	5	7	2,5	1,73	1	5
Ability to handle various order sizes	5,25	1,25	4	7	7	1,41	6	9

APPENDIX D.5.

Manufacturings Perception about the Order Winning Characteristics of the Current Product Profile

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	6	1,41	5	7	5,5	3,54	3	8
Wide range of products	6	1,41	5	7	3,5	0,71	3	4
New product introduction	2,5	0,71	2	3	9	1,41	8	10
fast lead times	5,5	0,71	5	6	5	1,41	4	6
Product reliability and durability	7	0	7	7	1,5	0,71	1	2
On time delivery	6,5	0,71	6	7	4,5	3,54	2	7
Low price	2	1,41	1	3	9,5	0,71	9	10
After sales service	5	1,41	4	6	7	2,83	5	9
Product with modern technology	6	1,41	5	7	4	4,24	1	7
Ability to handle various order sizes	5,5	0,71	5	6	5,5	0,71	5	6

APPENDIX D.6.

Manufacturings Perception about the Order Winning Characteristics of the Product Profile that Best Fit to Current Manufacturing Capabilities

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	5	0	5	5	7	1,41	6	8
Wide range of products	3	2,83	1	5	7	1,41	6	8
New product introduction	1	0	1	1	9,5	0,71	9	10
fast lead times	6,5	0,71	6	7	3	0	3	3
Product reliability and durability	7	0	7	7	1,5	0,71	1	2
On time delivery	7	0	7	7	3	1,41	2	4
Low price	2	1,41	1	3	9,5	0,71	9	10
After sales service	6,5	0,71	6	7	4,5	0,71	4	5
Product with modern technology	6	1,41	5	7	4	4,24	1	7
Ability to handle various order sizes	4	2,83	2	6	6	1,71	5	7

APPENDIX D.7.

Results of the Survey (average rankings)

PC	MC	PS	MS
v5	v6	v5	v9
v9	v9	v9	v5
v7	v2	v3	v1
v2	v7	v6	v7
v6	v5	v4	v6
v4	v10	v10	v3
v10	v8	v1	v8
v3	v4	v2	v2
v8	v3	v7	v10
v1	v1	v8	v4

PC: Manufacturing's perception of the current product profile's order winning characteristics

MC: Marketing's perception of the current product profile's order winning characteristics

PS: Manufacturing's perception of order winning characteristics of the product profile that best fit to current manufacturing capabilities

MS: Marketing's perception of order winning characteristics of the product profile that best fit to current market conditions

v1: Production according to customer specifications

v2: Wide range of products

v3: New product introduction

v4: Fast lead times

v5: Product reliability and durability

v6: On time delivery

v7:Low price

v8:After sales service

v9:Product with modern technology

v10:Ability to handle various order sizes

APPENDIX D.8.**Results of the Survey (average ratings)**

	<u>PC</u>	<u>MC</u>	<u>PS</u>	<u>MS</u>
Production according to customer specifications	2,0	1,5	4,5	6,0
Wide range of products	5,5	6,5	4,5	4,0
New product introduction	3,5	2,0	5,5	5,5
fast lead times	4,0	4,5	5,5	3,5
Product reliability and durability	7,0	6,0	7,0	6,5
On time delivery	5,5	6,5	6,5	6,5
Low price	5,0	6,0	4,5	6,5
After sales service	4,0	4,0	5,0	5,0
Product with modern technology	5,5	6,5	6,0	7,0
Ability to handle various order sizes	5,0	5,0	5,0	4,0

PC: Manufacturing's perception of the current product profile's order winning characteristics

MC: Marketing's perception of the current product profile's order winning characteristics

PS: Manufacturing's perception of order winning characteristics of the product profile that best fit to current manufacturing capabilities

MS: Marketing's perception of order winning characteristics of the product profile that best fit to current market conditions

APPENDIX D.9.

Marketings Perception about the Order Winning Characteristics of the Current Product Profile

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	1,5	0,71	1	2	9,5	0,71	9	10
Wide range of products	6,5	0,71	6	7	3	2,83	1	5
New product introduction	2	1,41	1	3	9	1,41	8	10
fast lead times	4,5	2,12	3	6	7	2,83	5	9
Product reliability and durability	6	0	6	6	5	1,41	4	6
On time delivery	6,5	0,71	6	7	2,5	0,71	2	3
Low price	6	1,41	5	7	4,5	3,53	2	7
After sales service	4	1,41	3	5	7	1,41	6	8
Product with modern technology	6,5	0,71	6	7	2,5	2,12	1	4
Ability to handle various order sizes	5	1,41	4	6	5	2,83	3	7

APPENDIX D.10.

Marketings Perception about the Order Winning Characteristics of the Product Profile that Best Fit to Current Market Conditions

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	6	1,41	5	7	3,5	2,12	2	5
Wide range of products	4	1,41	3	5	8,5	2,12	7	10
New product introduction	5,5	0,71	5	6	6	2,83	4	8
fast lead times	3,5	0,71	3	4	9	0	9	9
Product reliability and durability	6,5	0,71	6	7	3,5	0,71	3	4
On time delivery	6,5	0,71	6	7	4,5	2,12	3	6
Low price	6,5	0,71	6	7	3,5	2,12	2	5
After sales service	5	0	5	5	7	1,41	6	8
Product with modern technology	7	0	7	7	1	0	1	1
Ability to handle various order sizes	4	1,41	3	5	8,5	2,12	7	10

APPENDIX D.11.

Manufacturings Perception about the Order Winning Characteristics of the Current Product Profile

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	2	0	2	2	10	0	10	10
Wide range of products	5,5	0,71	5	6	4,5	0,71	4	5
New product introduction	3,5	2,12	2	5	8,5	0,71	8	9
fast lead times	4	1,41	3	5	6	1,41	5	7
Product reliability and durability	7	0	7	7	1	0	1	1
On time delivery	5,5	0,71	5	6	4,5	2,12	3	6
Low price	5	0	5	5	3	1,41	2	4
After sales service	4	1,41	3	5	8,5	0,71	8	9
Product with modern technology	5,5	0,71	5	6	2,5	0,71	2	3
Ability to handle various order sizes	5	0	5	5	6,5	0,71	6	7

APPENDIX D.12.

Manufacturing's Perception about the Order Winning Characteristics of the Product Profile that Best Fit to Current Manufacturing Capabilities

	Rating				Ranking			
	Mean	Std. dev	Min	Max	Mean	Std. dev	Highest	Lowest
Production according to customer specifications	4,5	0,71	4	5	7,5	0,71	7	8
Wide range of products	4,5	0,71	4	5	8	1,41	7	9
New product introduction	5,5	0,71	5	6	2,5	0,71	2	3
fast lead times	5,5	0,71	5	6	5	1,41	4	6
Product reliability and durability	7	0	7	7	1	0	1	1
On time delivery	6,5	0,71	6	7	4,5	0,71	4	5
Low price	4,5	0,71	4	5	9	1,41	8	10
After sales service	5	1,41	4	6	9,5	1,41	9	10
Product with modern technology	6	0	6	6	2,5	0,71	2	3
Ability to handle various order sizes	5	0	5	5	5,5	0,71	5	6