ELSEVIER

Journal of Business Research 55 (2002) 451–465

JOURNAL OF BUSINESS RESEARCH

Should marketing be cross-functional? Conceptual development and international empirical evidence

Harley Krohmer[a,1], Christian Homburg[a], John P. Workman[b,*]

[a]*Marketing Department, University of Mannheim, L5, 1, D-68131 Mannheim, Germany*
[b]*Department of Marketing, College of Business Administration, Creighton University, 2500 California Plaza, Omaha, NE 68178, USA*

Received 28 August 1998; received in revised form 15 November 1999; accepted 31 January 2000

Abstract

While it has frequently been stated that decisions on marketing activities should be made cross-functionally, there is no empirical evidence that shows benefits of performing marketing activities in this way. This paper examines the link between the cross-functional dispersion of influence on marketing activities and performance at the SBU level and considers dynamism of the market, which may moderate the strength of this relationship. Using data from a cross-national study in three industry sectors, the authors find that cross-functional dispersion of influence on marketing activities increases the performance of the SBU. They also find that the relationship between the cross-functional dispersion of influence on marketing activities is negatively influenced by dynamism of the market. This research thus provides empirical evidence for the positive performance implications of cross-functional interaction in the context of marketing activities.

Keywords: Cross-functional interaction; Marketing; Cross-functional dispersion of influence; Marketing organization; Marketing performance

One of the more widely discussed business trends in the 1990s is the need to restructure organizations in order to be more flexible and to share information across functional group and organizational boundaries. Adjectives such as lean, downsized, agile, flat, networked, reengineered, boundaryless, and virtual have been widely used in describing ideal organizational forms. Within the context of marketing, it has been claimed that organizations should structure themselves in order to be more market-oriented and responsive to changing customer needs and market conditions (e.g., Day, 1994; Slater and Narver, 1995). The importance of this topic is highlighted by a summary of a conference on interfunctional interfaces sponsored by the Marketing Science Institute, in which Montgomery and Webster (1997, p. 15) note that "there was a strong consensus that issues at the interface of marketing with other management processes, functions, and disciplines are among the most important managers are dealing with."

In this article, we address the question of whether marketing should be cross-functional and, more specifically, whether those firms that have greater influence of functional groups outside of marketing in the firm's marketing activities achieve better performance in the market. While many researchers have argued for positive performance implications of cross-functional interaction in the decision process such as improved coordination and integration, improved learning, spanning of organizational boundaries, reduced cycle times, and enhanced new product development (Denison et al., 1996; Griffin and Hauser, 1996), there are also possible dysfunctional effects of such a cross-functional approach. Specifically, decisions could be slowed down since more people with different interests are involved in the decision process (Cespedes, 1995) and even though different functional groups interact, there might be detrimental disharmony (Souder, 1988) and conflict (Weinrauch and Anderson, 1982) between them. Additionally, persons outside of marketing with less expertise in marketing issues get involved in the decision process concerning marketing activities. Therefore, the quality of decisions might decrease. Thus, given potential beneficial and dysfunctional effects, the important question arises if decisions on marketing activities should be made cross-functionally. No prior

* Corresponding author. Tel.: +1-402-280-2394.
E-mail address: workman@creighton.edu (J.P. Workman).
[1] Tel.: +49-621-181-1558; fax: +49-621-181-1556.
E-mail address: krohmer@uni-mannheim.de (H. Krohmer).

0148-2963/02/$ – see front matter
PII: S0148-2963(00)00176-4

empirical research has investigated this question nor demonstrated that performing marketing activities cross-functionally increases bottom-line performance. In addition to examining direct effects of cross-functional dispersion of influence on marketing activities and performance at the SBU level, we examine the moderating effect of market related dynamism.

Workman et al. (1998) classify prior conceptual and empirical research on marketing organization based on whether the study addresses marketing as a distinct functional entity (the group called marketing), as a set of activities, or in an integrative way considering both activities and organizational entities. They note that all of the definitions of marketing provided by the American Marketing Association over the past 40 years have treated marketing as a set of activities. In this paper, we follow this activity-based approach to defining marketing and thus address the question of whether greater cross-functional influence of non-marketing groups over traditional marketing activities (e.g., pricing, distribution, promotion, product development, customer service) increases business performance.

Research of this type is highly relevant from a managerial perspective. A fundamental issue within organizational design is which activities should be controlled by which functional units. More specifically, general managers need to decide whether the marketing group should have a lot of decision authority on marketing issues or whether team-based decision making on marketing activities should be emphasized. Although it has been argued that functional boundaries are disappearing (Montgomery and Webster, 1997), research by Workman et al. (1998) indicated that most firms still retain functional groups. Thus, studying the distribution of influence among functional units is a relevant research topic.

This paper is organized as follows. First, we review prior research related to cross-functional participation in key business decisions and whether this affects business performance. Next, we introduce our key constructs and hypotheses. This is followed by a discussion of our methodology and then a discussion of our empirical results. We conclude with a discussion of theoretical and managerial implications including directions for future research.

1. Literature review

There has been a significant amount of research interest in the topics of cross-functional teams (e.g., Ancona, 1990; Ancona and Caldwell, 1992; Denison et al., 1996; Dougherty, 1992) and marketing's cross-functional interfaces (e.g., Griffin and Hauser, 1996; Karmarkar, 1996; Montgomery and Webster, 1997; Workman, 1993). Given our research interest in the question of whether decisions on marketing activities should be made cross-functionally, we see three areas of related research. First, the new product literature has tended to look at group interactions in the context of whether such interactions affect the performance of new product teams. Second, research on market orientation has focused on information dissemination and has considered performance impacts of this information sharing. Third, Total Quality Management (TQM) literature has recently explored in greater depth the performance implications of cross-functional interaction. In the remainder of this section, we focus on each of these three areas of research and consider their implications concerning our research question.

1.1. Cross-functional interaction in new product development

There has been extensive study of interaction between marketing and other parts of the firm in the context of product development. Much of this research has shown that successful product development comes when a clear understanding of customer needs is integrated with a clear understanding of R&D and production resources (cf., Griffin and Hauser, 1996). Some studies have been more specific than the general notion of integration and have looked at the extent of interaction and participation of various groups in the product development process (e.g., Menon et al., 1997). They have tended to show that when there is more interaction between the groups, this tends to lead to more success. Recently, Kahn (1996) and Kahn and Mentzer (1998) considered the specific construct of integration between marketing and other units and made a distinction between interdepartmental interaction (which is related to information dissemination) and interdepartmental collaboration (which is defined as mutual understanding between departments having a common vision and shared resources to achieve common goals). They found that interdepartmental collaboration showed stronger performance implications than the cross-functional interaction aspect. The implication for our study is that a cross-functional approach requires more than simple interaction between people in order to increase performance.

Returning to our question of whether marketing should be cross-functional, the new product development research has shown that joint involvement, participation of groups, and particularly collaboration leads to better success. However, there are several limitations given our research question. First, much of this research has focused on marketing's dyadic interaction with other functional groups such as R&D (e.g., Gupta et al., 1986) or manufacturing (e.g., Crittenden, 1992; Karmarkar, 1996) and has not looked at the joint participation of multiple groups. Second, their focus has been on the context of new product development and they have not looked at more general issues beyond that context. Not only product development but a number of other different marketing activities require interactions with multiple functions (Maltz, 1997). Third, prior research has typically focused on interaction between functional groups but has not addressed our research question of influence of

other functional groups in decisions on marketing activities. Finally, they focused on intermediate types of outcomes typically at the level of product development (such as new product success and team satisfaction) but have not considered bottom-line performance outcomes at the business unit level.

1.2. Market orientation

Market orientation has been studied extensively over the past 10 years with general consensus that market orientation is positively related to business performance (e.g., Deshpandé et al., 1993; Jaworski and Kohli, 1993; Narver and Slater, 1990; Slater and Narver, 1994). Additionally, these findings have been robust when testing for moderating effects of variables like technology turbulence and competitive intensity.

Cross-functional interaction is a central aspect of the market orientation but is handled in somewhat different ways by the various definitions put forth. Narver and Slater's (1990, p. 21) define market orientation as "the organization culture . . . that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers". In their conceptualization, "interfunctional coordination" is one of three components of market orientation. In Jaworski and Kohli's (1993) conceptualization, the emphasis is on behaviors in regard to market information and cross-functional activities fall within the intelligence dissemination part of their model.

In regard to our interest in whether marketing should be cross-functional, there is a fundamental limitation to the market orientation research. Specifically, the focus has been on market information, but not on decisions on marketing activities. For example, Narver and Slater (1990, p. 21) state that:

> Customer orientation and competitor orientation include all of the activities involved in *acquiring information* about the buyers and competitors in the target market and disseminating it throughout the business(es). The third hypothesized behavioral component, *interfunctional coordination, is based on* the *customer and competitor information* and comprises the business's coordinated efforts, typically involving more than the marketing department, to create superior value for the buyers. (emphasis added)

Additionally, it is important to note that neither the Narver and Slater (1990) nor Jaworski and Kohli (1993) conceptualization of market orientation consider functional group boundaries or the participation of other functional groups in marketing activities. Rather, they focus on the more general issue of whether entire business units are oriented toward issues and concerns of customers and the market. In summary, the market orientation literature has been focused on the flow of information and knowledge within the business unit, particularly as it relates to strategic positioning and the creation of new products. Despite these differences to our approach, the market orientation literature supports our basic contention that a cross-functional view of business increases performance. We are therefore building on this research by looking at influence on decisions on marketing activities rather than flow of information.

1.3. Total Quality Management

One important motivation to take a cross-functional view comes from the world of practice, where firms have implemented TQM programs. TQM methods, by asking firms to identify the customer at every step of the value chain, connect each task with the customer and the marketplace. This is achieved through cross-functional processes that blur the traditional boundaries of firms. The management and academic literature have reflected and influenced the importance of TQM.

The logic and support for implementing TQM developed in several phases. Initially, the potential benefits of TQM were stated conceptually and used to justify the implementation of TQM. Textbooks from practitioners (Crosby, 1979; Feigenbaum, 1991; Juran, 1989) emphasized general concepts that quality is important. The objective was to improve the firm's competitive advantage and profitability. However, this conceptual literature did not systematically and empirically investigate the performance implications of TQM, but rather illustrated the benefits of TQM with case studies and anecdotes.

The initially strong acceptance of TQM in practice was followed by a more detailed empirical inquiry by academics, consulting firms, and quality associations. They focused on general issues like definitions of TQM and the identification and quantification of the benefits of TQM. A central issue was how to successfully implement TQM (e.g., Hunt, 1992; Reger et al., 1994). The implementation of TQM is perceived as difficult, as it requires the firm to move from its traditional hierarchical and functional organization to horizontal, cross-functional processes. The earlier studies generally showed that TQM produces value by generating improved products and services, reduced costs, more satisfied customers and employees, and finally improved bottom-line performance. However, most of the studies were conducted by consulting firms and quality associations with vested interests in their outcomes and most did not conform with generally accepted standards of methodological rigor. As an example, they did not usually test for the statistical significance of the improvements in performance (see Haim, 1993; Powell, 1995 for a review of these earlier empirical studies).

The most recent academic articles have found positive outcomes of TQM by more rigorously using dynamic time series data and examining success of implementation as a moderator that affects performance outcomes of TQM programs (Hendricks and Singhal, 1997). Powell (1995) found that the positive performance implications of TQM do

not come from TQM tools and techniques such as benchmarking, training, flexible manufacturing, and process improvement, but rather from certain tacit, behavioral features such as open organization (including the frequent use of cross-departmental teams), employee empowerment, and executive commitment. Conceptual research focuses on this aspect by drawing the attention to the different content dimensions of TQM and their relationship with performance (Reed et al., 1996).

In summary, prior research on TQM generally did not analyze the isolated effect of the cross-functional involvement aspect of TQM on performance. Instead, the focus was at a more general level on the performance implications of TQM as a holistic strategic program. Additionally, studies in the TQM literature have not examined cross-functional issues in the context of marketing activities, but have considered SBU or organizational adaptation in order to implement TQM. Thus, the TQM literature cannot provide explicit empirical evidence for the benefits of cross-functional participation in marketing activities. However, at a higher level, it can support the idea that a cross-functional view of business may increase performance.

1.4. Summary

Returning to our question of whether marketing should be cross-functional, we find only indirect evidence. We see five limitations in prior research. First, while there is a significant amount of research on marketing's involvement in topics or programs that require cross-functional involvement (e.g., new product development, TQM), there is relatively little research on other functional groups' involvement in marketing activities. That is, within marketing, there has been more of an outbound than an inbound focus on cross-functional interaction. Ruekert and Walker (1987, p. 15) note that "so little is known about how marketing employees interact with those in other functional areas" that additional research is needed on this topic "especially given the importance of such interaction to the effective implementation of marketing programs and to the performance of organizations as a whole." Second, there has often been a focus on dyadic relationships between marketing and one other department (such as R&D) rather than a more general examination of distribution of involvement or influence across a set of functional groups. Third, much of the research has not considered SBU level performance outcomes. Thus, while many studies have focused on intermediate level outcomes like group satisfaction, trust, or communication, there is relatively little focus on marketing-related performance outcomes. Fourth, while the market orientation literature has addressed performance outcomes of a cross-functional flow of market-related information, it has not considered the extent of participation or influence of other functional groups on marketing activities. To investigate the role of influence of other functional groups on marketing activities is in line with Menon et al. (1997, p. 195) who call for investigations of the role of aspects of interdepartmental interactions which are different from cross-functional contact and exchange of information. Finally, while the TQM literature has demonstrated positive performance implications of adapting and successfully implementing TQM programs, these studies do not consider a marketing context and do not consider distribution of influence of multiple functional groups over key strategic issues.

In this paper, we utilize data from a cross-national survey that measures the extent of influence of five functional groups over key marketing issues and relate our cross-functional measure to key marketing outcomes. We now define our key constructs and develop our hypotheses.

2. Construct definitions and hypotheses

Our conceptualization of cross-functional dispersion of influence on marketing activities is based on the distribution of power of different functional groups over decisions in different marketing areas. More specifically, we define it as the degree of coherence with an identical influence distribution across all the functional groups. This means that cross-functional dispersion of influence is maximal when influence is distributed equally across all the functional groups and minimal if influence is completely concentrated in one functional group.

It is worth emphasizing that this conceptualization is distinct from cross-functional involvement. As an example, we can observe a high degree of cross-functional involvement if functional groups like sales or R&D are involved in the decision process for example by delivering information. However, they may not be able to influence the outcome of the decision process, which indicates a low level of dispersion of influence.

Concerning the outcome dimensions of our study, we used a three-dimensional conceptualization of performance consisting of effectiveness, efficiency, and adaptiveness (Ruekert et al., 1985). This conceptualization seems to be commonly accepted in the literature and is defined as follows:

> Effectiveness involves the degree to which organizational goals are reached, efficiency considers the relationship between organizational outputs and the inputs required to reach those outputs, and adaptiveness reflects the ability of the organization to adapt to changes in its environment (Ruekert et al., 1985, p. 15).

With respect to the environmental dimension of our study, we examine uncertainty. Duncan (1972) identifies dynamism as a major source of uncertainty. We therefore concentrate on dynamism and conceptualize the construct of market-related dynamism as the frequency of major market-related changes (Child, 1972; Duncan, 1972).

As shown in our literature review, a lot of potential benefits of cross-functional interaction are stated conceptually, but bottom-line outcomes have not been investigated

empirically. Our first set of hypotheses pertains to the performance implications of cross-functional dispersion of influence on marketing activities. The basic argument is that a higher degree of dispersion of influence on marketing activities across different functional groups increases performance. That proposition is consistent with prior empirical findings which at a more general level found positive performance implications of activities related to cross-functional interaction and different constructs related to performance (e.g., Griffin and Hauser, 1992; Kahn and Mentzer, 1998; Maltz and Kohli, 1996; Powell, 1995). More specifically, we hypothesize positive effects of the degree of cross-functional dispersion of influence on marketing activities on each of our three performance components.

Our first hypothesis is related to the effectiveness of the SBU. If several functional groups can actively influence decisions on marketing activities, they will show a higher commitment to the decisions reached and contribute more to the successful implementation of marketing activities. In addition, by the participation of several functional groups in the decision process, the voice of the customer (Griffin and Hauser, 1993) is not only heard in the marketing department but communicated to different functional groups at different steps of the value chain such as R&D and manufacturing. These different functional groups are required to successfully implement marketing activities. Marketing activities that are selected and implemented with such a background will increase the value for customers, as well as customer satisfaction and loyalty. New customers will be attracted by multiplier effects and growth will lead to a higher market share. Thus, we hypothesize:

Hypothesis 1a: The degree of cross-functional dispersion of influence on marketing activities has a positive effect on the effectiveness of the SBU.

Second, if all functional groups relevant for the successful implementation of marketing activities participate in the decision process, marketing activities can be performed right the first time as no important aspects are overlooked. This leads to a more efficient use of resources such as managerial time and financial resources. As an example, wrong pricing decisions can be avoided if the voices of marketing, sales and finance are all taken into consideration. Hence, we hypothesize:

Hypothesis 1b: The degree of cross-functional dispersion of influence on marketing activities has a positive effect on the efficiency of the SBU.

Third, the adaptiveness of the SBU can be increased if different functional groups share their influence on marketing activities. An active participation of different functional groups helps to better adapt to a changing environment. Different perspectives of the environment, as well as interpretations of organizational strengths and weaknesses, can be exchanged and will be taken into consideration, if managers from different functions can influence the decision process concerning marketing activities. Consequently, the organization can successfully adapt to new market threats or to changing customer needs. This leads to the following hypothesis:

Hypothesis 1c: The degree of cross-functional dispersion of influence on marketing activities has a positive effect on the adaptiveness of the SBU.

A second issue in our hypothesis development is the investigation of moderating effects of environmental variables on the relationship between cross-functional dispersion of influence on marketing activities and performance. When considering moderators of the relationship between some organizational dimension and performance, it is common to consider the role of environmental uncertainty. One important dimension of uncertainty is dynamism (Duncan, 1972).

When coping with environmental uncertainty, a number of researchers have focused on the need to gather information from different sources and perspectives as well as to disseminate information across functional boundaries. They therefore hypothesize a direct effect of environmental dynamism on constructs representing cross-functional interaction (e.g. Maltz and Kohli, 1996). In addition, prior research found that the greater the market turbulence, the stronger the relationship between the degree of direct contact among employees across departments and product quality (Menon et al., 1997). However, we take a different approach, as we focus on the cross-functional dispersion of influence and not on cross-functional involvement. Dispersion of influence implies a more active participation of the different functional groups in the decision process concerning marketing activities than just the generation and dissemination of information. Given this more active participation of different functional groups, it takes time and managerial effort to come to a decision concerning marketing activities (Cespedes, 1995). Therefore, dispersion of influence may not be worth the cost when there is rapid change in the market. Thus, we hypothesize for the three relationships between cross-functional dispersion of influence on marketing activities and the different performance dimensions:

Hypothesis 2a: The relationship between cross-functional dispersion of influence on marketing activities and effectiveness of the SBU is negatively moderated by market-related dynamism.

Hypothesis 2b: The relationship between cross-functional dispersion of influence on marketing activities and efficiency of the SBU is negatively moderated by market-related dynamism.

Hypothesis 2c: The relationship between cross-functional dispersion of influence on marketing activities and adaptiveness of the SBU is negatively moderated by market-related dynamism.

The relationships between the constructs used are summarized in the conceptual framework shown in Fig. 1.

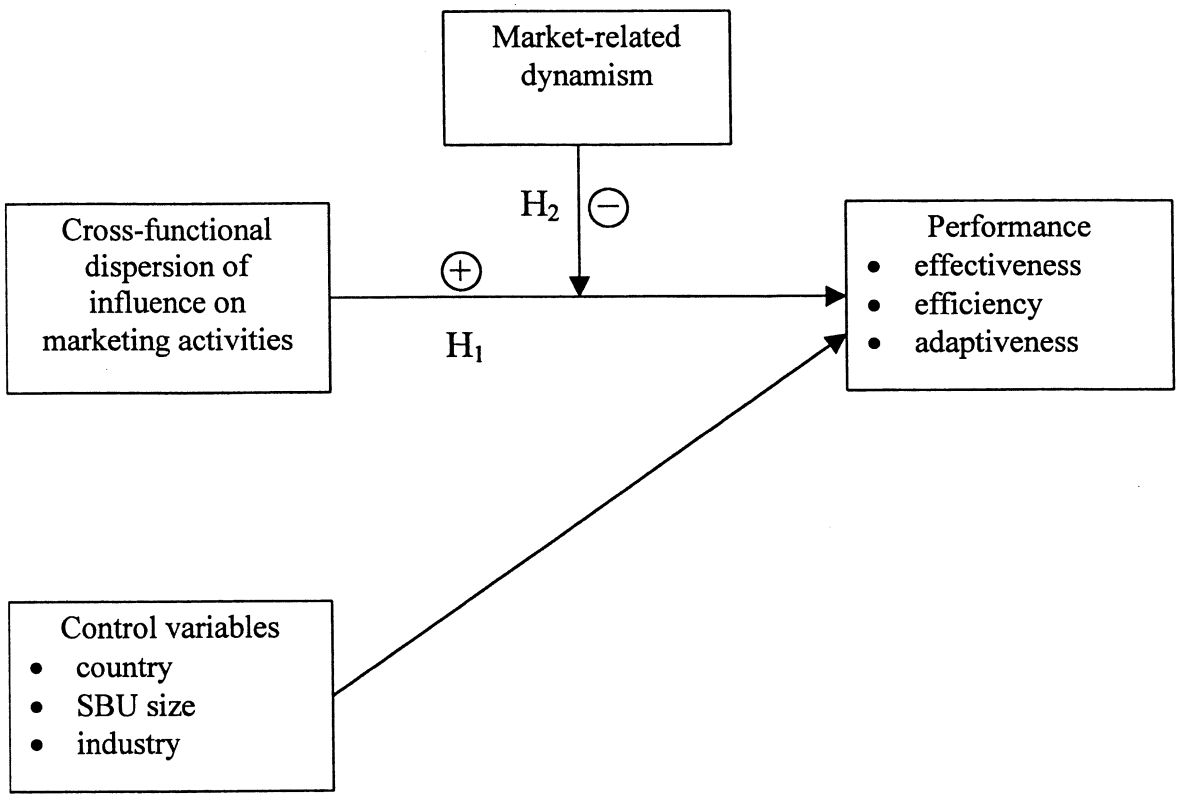

Fig. 1. Conceptual framework linking cross-functional dispersion of influence on marketing activities and performance.

Cross-functional dispersion of influence on marketing activities has a positive impact on each of the three performance dimensions effectiveness, efficiency, and adaptiveness. These relationships are negatively moderated by market related dynamism. Additionally, country, SBU size, and industry are used as control variables.

3. Methodology

3.1. Sample

Data for our study was obtained from managers responsible for marketing in SBUs in three industry sectors in the United States and Germany: consumer packaged goods, electrical equipment and components, and mechanical machinery. The choice of Germany was prompted for the following reasons. The majority of the prior empirical work on cross-functional interaction is based on US samples. In order to increase the generalizability of our findings, a country outside of the US was selected. Specifically, a European country was selected as Europe has become a more important player in the world economy given its economic and political unification process. Due to limited resources, only one country in Europe was selected. Germany was chosen as it is one of the economically most important countries in Europe. Furthermore, Germany was selected for convenience reasons, as two of the authors are based in Germany. Additionally, there are significantly different styles of management and attitudes towards marketing in the US and Germany (Workman et al., 1998), allowing us to better see if the hypothesized relations generalize across cultural settings.

We defined the business unit as a relatively autonomous unit with the manager having control of at least three of the following functional groups: marketing, sales, manufacturing, R&D, finance, and human resources. The names of the SBUs included in our sample were derived from firm names obtained from Dun and Bradstreet in both the United States and in Germany. Because firm size has been shown to affect organizational dimensions (Pugh et al., 1968), we asked for equal numbers of firms in each industry sector in each country for each of four annual revenue size categories (US$25 million to US$67 million, US$67 million to US$333 million, US$333 million to US$1.3 billion, and over US$1.3 billion). The name of the person responsible for marketing in a specific SBU within the firm was identified from industry directories and telephone calls to the SBU. Thus, the names of 1500 US and 1284 German managers responsible for the marketing in 2784 SBUs were obtained (less in Germany due to smaller number of firms with sales over DM 2 billion). The surveys were mailed to those individuals and a second survey was sent to non-respondents four weeks after the first survey. Ninety-four of

Table 1
Positions of respondents

Position of respondent	Percentage of respondents (%)
CEO/president/vice president/general manager	14.9
Marketing vice president/director/manager	49.0
Sales and marketing vice president/director/manager	11.2
Sales vice president/director/manager	12.0
Product marketing vice president/director/manager	5.2
Marketing specialist	4.4
Business development vice president/director/manager	3.3

the US and 80 of the German surveys were undeliverable, resulting in 2610 delivered. Usable responses were received from 280 US and 234 German managers, a response rate of 19.9% in the US and 19.4% in Germany and a total response rate of 19.7%. Given the length of our survey and the high-level managers targeted, we believe that our response rate is in line with those of other researchers studying complex marketing phenomena.

The resulting sample consisted of SBUs, which were divisions and subsidiaries of firms with multiple SBUs (69.1%), as well as smaller firms with only one SBU (30.9%). More detailed information on the positions of the respondents and on the firm characteristics is provided in Tables 1 and 2.

To detect possible problems with non-response error, two methods were used. First, the dataset was divided into thirds within each country according to the number of days from initial mailing until receipt of the returned questionnaire (Armstrong and Overton, 1977). Non-response bias was assessed by an analysis of variance (ANOVA) that modeled the seven key constructs (cross-functional dispersion of influence, size, consumer packaged goods industry, electrical equipment and components, effectiveness, efficiency, and adaptiveness) as the dependent variables and the indexed third as the independent variable. The results indicated no significant univariate relationships ($P < .05$). In this context, we further tested for the stability of relationships that were hypothesized in the hypotheses by running regression analyses, as well as moderated regression analyses for the three different subsamples. Here, we found that most of the relationships were reproducible in the different subsamples and there were no statistically significant results that were inconsistent with our hypotheses for the three subsamples. Second, before sending the first mailing, we randomly selected 100 of the 1500 US SBUs and made special efforts to increase the response rate from that group. The assumption was that responses from the random sample with the higher response rate would be more representative of the true population. We attempted to make telephone contact with the manager responsible for marketing in each of those SBUs and obtained a verbal commitment either to fill out the survey or at least to look at it carefully. In addition, we sent two follow-up surveys to non-respondents, as well as two follow-up postcards to everyone in the group, to emphasize the importance of their responding to the survey. The net result was that we obtained a response rate of 45% in contrast to a response rate of 18.5% for firms not in the random sample. We then did a *t* test comparing the means of all variables for the random sample vs. all other respondents and found no statistically significant differences ($P < .05$). Hence, on an overall basis, non-response bias was not an issue in our study.

3.2. Measure development and assessment

3.2.1. Cross-functional dispersion of influence on marketing activities

This measure was developed by first assessing the influence of five functional groups (marketing, sales, R&D, manufacturing, finance/accounting) over eight strategic decisions on marketing activities by using a 100-point constant-sum scale (see Table 3 for an illustration of this procedure): (1) pricing decisions; (2) distribution strategy decisions; (3) decisions on advertising messages; (4) decisions on expansions into new geographic markets; (5) new product development decisions; (6) decisions on procedures

Table 2
Firm characteristics

	Firm level		SBU level	
Sales category	United States (%)	Germany (%)	United States (%)	Germany (%)
US$25 million to US$67 million	12.5	17.0	23.7	30.9
US$67 to million US$333 million	33.3	27.5	50.4	33.3
US$333 million to US$1.333 billion	26.9	25.0	21.1	29.0
Over US$1.333 billion	27.3	30.5	4.8	6.8
Industry grouping	United States	Germany		
Consumer packaged goods	27.9%	32.9%		
Electrical equipment and components	32.1%	31.6%		
Mechanical machinery	40.0%	35.5%		
Usable responses	280 business units	234 business units		
Response rate	19.9%	19.4%		

Table 3
Influence of different functional groups on marketing activities[a]

Marketing activities	Influence of functional group						Issue-specific cross-functional dispersion of influence[b]
	Marketing	Sales	R&D	Manufacturing	Finance/ accounting	Sum of influence	
New product development decisions	32	23	29	9	7	100	54.8
Pricing decisions	30	41	4	9	16	100	45.9
Decisions on programs for improving customer satisfaction	40	37	7	10	6	100	45.4
Decisions on design of customer service and support	31	47	5	10	7	100	40.3
Decisions on procedures for measurement of customer satisfaction	48	35	5	8	4	100	35.9
Decisions on expansions into new geographic markets	39	45	3	3	10	100	35.3
Distribution strategy decisions	34	52	12	6	6	100	34.9
Decisions on advertising messages	65	29	3	1	2	100	25.4

[a] Decisions on marketing activities are sorted by the degree of cross-functional dispersion of influence on marketing activities; in the questionnaire, a different order was given.

[b] This measure is based on the mean of the standard deviations of influence across the five functional groups that were calculated for each of the business units surveyed. This mean was then rescaled so that 0 equals minimal issue-specific cross-functional dispersion of influence and 100 maximal dispersion.

for measurement of customer satisfaction; (7) decisions on programs for improving customer satisfaction; and (8) decisions on design of customer service and support. While much of the earlier writing on marketing organization implied that sales should be a part of marketing (e.g., Lazo and Corbin, 1968; Weitz and Anderson, 1981), we decided to treat marketing and sales as separate functional units in the design of our studying since recent research has shown that they are distinct functional units (Cespedes, 1995). Research by Workman et al. (1998) showed that in 47 firms studied, not a single sales manager reported to a marketing manager. This result was confirmed in our study: Only in 5.7% of the business units surveyed, marketing reported to the sales manager, and only in 2.8% of the cases, sales reported to the business unit general manager. This supports the idea that marketing and sales are two distinct organizational units.

The approach of measuring sub-unit influence over specific issues was chosen based on the research of Enz (1986), Hinings et al. (1974), and Pfeffer (1981). A distinction was made between a functional group having no influence and the absence of a functional group. If the firm lacked a particular functional group, respondents were asked to give it no points and allocate 100 points among the other groups.

Second, the standard deviations of these influence ratings of functional groups were calculated for each of the eight strategic decisions on marketing activities. By doing so for each of the eight strategic decisions on marketing activities, a standard deviation of influence of functional groups was obtained. In the extreme case of equal influence across all functional groups, the standard deviation equals zero, thus indicating maximum dispersion of influence. In order to aggregate across all eight strategic decisions on marketing activities, the mean of these standard deviations was calculated and then multiplied by -1 to obtain our final measure of cross-functional dispersion of influence on marketing activities, with higher values indicating higher levels of dispersion.

3.2.2. Performance

We used perceptual measures of outcomes that assessed effectiveness, efficiency, and adaptiveness to measure performance (Ruekert et al., 1985). Specific items were adapted from Irving (1995). To provide an appropriate frame of reference, we asked the respondents to rate the performance of their business unit in relation to that of its competitors. We decided to use perceptual measures of performance rather than objective financial performance measures mainly for two reasons. First, financial performance measures such as ROI or ROA are typically not available at the business unit level because a balance sheet is needed to compute them. Most multidivisional firms do not have balance sheets at the business unit level. Second, perceptual performance measures have been shown to have a high correlation with objective financial performance measures, which supports their validity (e.g., Dess and Robinson, 1984; Hart and Banbury, 1994; Naman and Slevin, 1993; Venkatraman and Ramanujam, 1986, 1987).

3.2.3. Market-related dynamism

The measurement of the construct is based on the respondents' assessment of the frequency of major changes in market-related aspects of the business environment from which their business unit derived its largest amount of sales. Aspects included sales strategies, pricing behavior, and sales promotion/advertising strategies, among others. The complete list of items is shown in Appendix A.

3.2.4. Controls

We additionally control for the effects of country (USA = 0, Germany = 1), SBU size (mean of standardized sales volume and standardized number of employees of the SBU) and industry (dummy variables for consumer packaged goods and electrical equipment and components).

3.2.5. Measure reliability and validity

Measure reliability and validity for the constructs effectiveness, efficiency, and adaptiveness were initially assessed using coefficient alpha, which assumes that each indicator contributes equally to the overall variance observed. As illustrated in Appendix A, for most of the measures, the coefficient alphas exceeded the recommended standard of 0.7 that has been suggested by Nunnally (1978). We additionally calculated composite reliability, which is a measure based on confirmatory factor analysis (Bagozzi et al., 1991). Composite reliability represents the shared variance among a set of observed variables measuring an underlying construct (Fornell and Larcker, 1981) and a value of at least 0.6 is considered desirable (Bagozzi and Yi, 1988: 82). As can be seen in Appendix A, this requirement was met for all the factors in our study.

4. Results

In Table 3, the influences of the different functional groups on the different marketing activities are shown. At a general level, our results show that functional groups other than marketing clearly have influence on marketing activities. Specifically, we find certain activities where there is a high cross-functional dispersion of influence on marketing activities such as pricing and new product development. In contrast, there is a relatively low cross-functional dispersion of influence with some activities such as decisions concerning advertising messages. Thus, there are some marketing activities where marketing integrates other functional groups in the decision making and other marketing activities that remain as the traditional domain of the marketing department. Furthermore, it is worth mentioning that a major source of dispersion of influence is that influence is spread between marketing and sales. That finding underlines the need to distinguish between marketing and sales as two distinct functional groups (Cespedes, 1995).

We utilize multiple regression analysis to test for the relationships between the cross-functional dispersion of influence on marketing activities and the different performance measures. The results of the regression equations for these relationships are shown in Table 4. In our conceptualization of our independent variable "cross-functional dispersion of influence on marketing activities," we decided to analyze marketing and sales as two distinct organizational units. However, some authors conceptualize marketing and sales as one organizational unit. Based on the suggestion of one reviewer, we also run the multiple regression analyses illustrated in Table 4 with the independent variable "cross-functional dispersion of influence on marketing activities" by pooling marketing and sales as a single functional entity. The results of the multiple regression analyses (both with and without interaction effects) resulted in the same level of statistical significance with essentially the same parameter values. Thus, we decided to keep our conceptualization of marketing and sales as two distinct organizational units, which, however, may be responsible for interrelated activities.

Table 4
Results of regressing performance on cross-functional dispersion of influence on marketing activities

	Standardized regression coefficients					
	Model 1 (without interaction effects)			Model 2 (with interaction effects)		
Independent variables	Effectiveness	Efficiency	Adaptiveness	Effectiveness	Efficiency	Adaptiveness
Main effects						
Cross-functional dispersion of influence	0.10 **	0.10 **	0.11 ***	0.18 ***	0.22 ***	0.25 ***
Control variables						
Country (USA = 0, Germany = 1)	0.10 **	− 0.07 *	0.12 ***	0.11 **	− 0.06 *	0.13 ***
Size	0.09 **	0.11 ***	0.08 **	0.09 **	0.11 ***	0.08 **
Consumer packaged goods industry	0.15 ***	0.17 ***	0.21 ***	0.14***	0.16 ***	0.20 ***
Electrical equipment and components	0.03	0.02	0.03	0.02	− 0.01	0.01
Interaction effects						
Cross-functional dispersion of influence × market-related dynamism				− 0.13 **	− 0.17 ***	− 0.23 ***
Constant	5.15 ***	4.91 ***	4.77 ***	5.10 ***	4.91 ***	4.69 ***
F value	4.36 ***	4.82 **	7.00 ***	4.36 ***	5.32 ***	8.31 ***
R^2	0.05	0.05	0.07	0.05	0.07	0.10
Adjusted R^2	0.04	0.04	0.06	0.04	0.05	0.09

* $P \leq .10$.
** $P \leq .05$.
*** $P \leq .01$.

Since we see that cross-functional dispersion of influence on marketing activities has a positive impact on all three performance dimensions shown in Table 4, Hypothesis 1a–c are supported.

An additional interesting result from the regression concerns the effect of country on efficiency. Table 4 indicates that efficiency is lower in Germany than in the US. While this may be counterintuitive, considering popular images of German efficiency, given that our efficiency reflects profitability, this result is not so surprising. German trade associations have long complained that high labor costs, inflexible business practices, and taxes to support the social safety net in Germany reduce business profits compared to other countries. For example, net return on sales (after corporation taxes) in the manufacturing sector was on average significantly lower in Germany (1.5%) than in the US (3.6%) for the period between 1988 and 1994 (Institut der deutschen Wirtschaft, 1996, p. 58).

Hypothesis 2a–c were tested using moderated regression analysis (Schoonhoven, 1981; Sharma et al., 1981). This involves including an interaction effect between the independent variable (cross-functional dispersion of influence on marketing activities) and the hypothesized moderator (market-related dynamism). The results are shown in Model 2 of Table 4.

As can be seen from these findings, Hypothesis 2a–c are also supported. All three regression parameter estimates associated with the interaction terms are negative with all

Table 5
Influence structure in SBUs with different levels of performance[a]

	Influence in SBUs with low effectiveness					Influence in SBUs with high effectiveness				
Marketing activities	Marketing	Sales	R&D	Manufacturing	Finance/accounting	Marketing	Sales	R&D	Manufacturing	Finance/accounting
Cross-functional dispersion of influence on marketing activities[b]	38.7					*41.4***				
Pricing decisions	28.5	39.9	3.7	9.2	*18.7***	32.3	41.6	4.3	8.0	13.8
Distribution strategy decisions	31.7	53.0	1.0	5.7	*8.6****	34.5	52.1	1.7	6.2	5.5
Decisions on expansions into new geographic markets	34.7	*48.7***	2.8	3.0	10.8	38.2	44.2	3.3	3.6	10.7
New product development decisions	29.4	23.6	*31.1****	8.4	*7.5***	*35.4****	21.4	27.6	9.6	6.0
Overall influence	20.4	26.9	*16.3****	16.2	*20.2****	*27.1****	*30.3**	13.2	15.3	14.1
	Influence in SBUs with low efficiency					Influence in SBUs with high efficiency				
Marketing activities	Marketing	Sales	R&D	Manufacturing	Finance/accounting	Marketing	Sales	R&D	Manufacturing	Finance/accounting
Cross-functional dispersion of influence on marketing activities[b]	38.5					*41.2***				
Pricing decisions	26.3	41.1	4.3	*11.0****	*17.3***	*34.2****	40.6	3.5	7.6	14.1
Distribution strategy decisions	32.6	51.9	1.3	6.5	*7.7**	34.8	51.5	1.1	6.9	5.7
Decisions on advertising messages	63.6	31.5	2.6	1.1	1.2	*68.8****	25.6	2.9	1.3	1.4
Decisions on expansions into new geographic markets	36.9	*46.9***	2.6	3.0	10.6	40.5	42.2	3.4	3.6	10.3
New product development decisions	28.7	22.5	*31.9****	9.1	7.8	*36.1****	21.8	27.6	8.5	6.0
Decisions on design of customer service and support	29.0	46.2	5.0	*13.2***	7.1	33.2	45.8	4.8	9.1	7.1
Overall influence	21.9	28.2	*15.6***	*16.0***	*18.3****	*28.8****	29.1	13.1	14.1	14.9
	Influence in SBUs with low adaptiveness					Influence in SBUs with high adaptiveness				
Marketing activities	Marketing	Sales	R&D	Manufacturing	Finance/accounting	Marketing	Sales	R&D	Manufacturing	Finance/accounting
Cross-functional dispersion of influence on marketing activities[b]	37.6					*41.6****				
Pricing decisions	27.5	41.1	3.9	9.3	*18.2***	30.9	43.0	4.2	7.9	14.0
New product development decisions	27.7	22.3	*31.6****	8.7	9.7	*34.9****	23.7	24.9	10.2	6.3
Overall influence	21.2	28.2	*15.9****	16.3	18.4	*28.7****	30.9	12.1	14.5	13.8

[a] Values that are significantly higher are in italics.

[b] Consistent with Table 3, this measure is based on the mean of the standard deviations of influence across the five functional groups, which were calculated for each of the business units surveyed. This mean was then rescaled so that 0 equals minimal cross-functional dispersion of influence and 100 maximal dispersion.

* $P<.10$.

** $P<.05$.

*** $P<.01$.

of them significant at the 5% level. It is also worth noting that controlling for the moderating effect of market-related dynamism on the relationship between cross-functional dispersion of influence on marketing activities and performance increases the magnitude and to some extent the significance of the main effect of cross-functional dispersion of influence on marketing activities on the three performance components.

The low R^2's shown in Table 4 are not surprising. While we acknowledge that much of the empirical research in marketing has a higher explanatory power than our study, the percentage of variance explained must, however, be interpreted in the context of related research on similar types of dependent variables. As an example, many experimental studies in consumer behavior exhibit a high level of explanatory power due to closely related constructs and control for other factors. We believe that our results are consistent with other research on complex organizational phenomena where the percentage of variance explained is relatively low (e.g. Boeker, 1989; Kahn and Mentzer, 1998; Moorman, 1995; Spekman and Stern, 1979). The reason for this typically lower level of explained variance is that organizational phenomena depend on so many diverse antecedents and it is only possible to capture some of them in a single empirical study. Specifically, marketing performance depends on a variety of factors such as the quality of decisions and personal skills of managers. Based on the objectives of our study, we do not examine these effects but focus on the dispersion of influence on marketing activities.

While so far we have only looked at the dispersion of influence aggregated over various marketing activities, an interesting question is to also look at the influence structure for specific marketing activities comparing low and high performing SBUs. Therefore, in addition to empirically testing our hypotheses on the performance implications of cross-functional dispersion, we did exploratory data analysis to investigate the patterns of cross-functional influence on marketing activities in successful as compared to less successful SBUs. For each marketing activity, we compared influence levels in functional groups in SBUs that scored high on the three performance dimensions to those who scored lower (upper vs. lower thirds of SBUs). In Table 5, only the marketing activities with significant differences in influence levels are reported. Table 5 also shows that for all three performance dimensions, more successful SBUs had a significantly higher degree of cross-functional dispersion. This provides additional support for our hypotheses Hypothesis 1a–c. Additionally, we found that more successful SBUs showed different influence patterns for specific decision areas than less successful SBUs. In unsuccessful SBUs, finance and accounting had relatively more influence over pricing and distribution strategy decisions. Furthermore, in successful SBUs, marketing was relatively more influential in the context of new product development decisions, whereas R&D was less dominant. Even though sales managers tend to be knowledgeable about foreign markets, it was mainly in unsuccessful firms where sales dominated decisions on expansions into new geographic markets. These examples show that in addition to a higher dispersion of influence on marketing decisions, successful firms show a specific influence structure, where the functional groups have different degrees of influence over the various marketing decisions.

5. Discussion

5.1. Theoretical implications

Our study looks at the performance implications of the cross-functional dispersion of influence on marketing activities. This topic has been addressed, but not empirically studied in prior research. While our concept of dispersion is closely linked to the one suggested by Workman et al. (1998), our study is distinct from their study because of the following reasons. First, our study focuses on performance outcomes of dispersion rather than antecedents. Second, the study by Workman et al. is only conceptual developing propositions based on qualitative interviews. In contrast, we empirically test our two sets of hypotheses.

Our first set of hypotheses relates to the positive performance implications of cross-functional dispersion of influence on marketing activities. Prior research has frequently claimed but has not empirically shown that such a positive link existed. Market orientation results have shown that sharing information cross-functionally is beneficial. However, our study is the first to show that active influence of other groups over decisions on marketing activities is beneficial. Specifically, we were able to show that the cross-functional dispersion of influence on marketing activities improves the effectiveness, efficiency, and adaptiveness of the SBU.

An important contribution related to this finding comes from our focus on explicit influence over marketing activities. Current approaches of cross-functional interaction focus on the cross-functional dissemination of information. However, influence over marketing activities is different from cross-functional dissemination of information. While information may well result in influence on the outcome of the decision process, this is not guaranteed. As an example, functions like finance and manufacturing may be involved in new product development decisions by delivering information on cost-efficiency and feasibility of certain product features but may have no influence on which alternatives are finally selected.

While the call for cross-functional interaction and teamwork is constantly being repeated in the popular press, it is important to keep in mind that such approaches are not always appropriate. The results from our second set of hypotheses show that cross-functional dispersion of influence on marketing activities is not always equally important. In situations of high dynamism in the market, the need for

many functional groups having influence on marketing activities becomes less important. For example, in "high-velocity environments" (Bourgeois and Eisenhardt, 1988), the cost of incorporating the insights of all functional areas may offset the benefits. Future research is needed to understand the optimal level of cross-functional influence in different business environments.

An additional contribution of our research comes from our use of a cross-national data set. It is worth emphasizing that our study is one of the few studies that examine the importance of a cross-functional view of business based on a cross-national data set (for another example, see Kahn and McDonough, 1997). By using a cross-national data set, we were able to increase the generalizability of our findings across different national contexts.

5.2. Managerial implications

From a managerial perspective, it is worth emphasizing that the cross-functional dispersion of influence on marketing activities can pay off. Managers responsible for the organization of the marketing function should be aware of these benefits and try to obtain involvement and influence of other functional units over key marketing activities. Even though such a process may be time consuming and difficult, as the marketing department may not want to give away influence on marketing activities, our results indicate that managers who succeed in increasing cross-functional influence over marketing activities should produce better bottom line results than those who do not.

However, managers should also be aware that moving into the direction of influence sharing may not be equally beneficial in all situations. Cross-functional dispersion of influence may be beneficial but it is not free. When coming to a decision becomes increasingly difficult and costly, the more voices are heard in the decision process. These costs may only pay off in certain situations. Managers should be aware that in unstable environments, it may not be useful to have a fully democratic decision process for decisions on marketing activities. True influence is more costly than mere involvement, where other functional groups may contribute information to the decision process but may not have influence on the outcome of the decision.

The following strategies and tools can be applied for increasing the cross-functional dispersion of influence on marketing activities: First, managers should increase the use of cross-functional teams. By integrating functional groups outside of marketing (like R&D or Finance) into the decision processes of cross-functional teams, these functional groups can gain influence that can increase marketing performance. Second, job rotation of employees across functional groups can increase the level of cross-functional dispersion of influence. Third, performance evaluation and reward systems need to be consistent with the goals of team-based management. Interfunctional conflicts including the struggle for power often have its roots in the firm's traditional evaluation and reward systems, which emphasize short-term financially oriented measures of performance and result in the need to define areas of responsibility tightly.

Our results hold in both the US and the German sample. This finding underlines the importance of a cross-functional approach of marketing. Managers in different cultural settings should therefore focus on the issue of cross-functional influence on marketing activities, since this issue is highly relevant for marketing performance.

5.3. Limitations of the study

While we were able to increase the generalizability of our findings by using a cross-national data set, our findings may not be valid for all cultures. We focused on the USA and Germany. Based on prior field research (Workman et al., 1998), we argue that in these two countries, there are different styles of management and attitudes towards marketing. This allows us to better see if the hypothesized relations generalize across cultural settings. However, despite those differences, the cultures and management styles of these two countries show some common characteristics. In comparison to these two industrialized countries, there may be countries in Latin America and Eastern Europe where completely different management styles may be preferred. For these countries, our findings may not be valid.

Concerning the size of the firms studied, we did not include firms with sales lower than US$25 million. Therefore, our results may not be valid for some small businesses. In these small businesses, it may not pay off to perform marketing in a cross-functional way. However, often, these small businesses do not have a marketing department.

Furthermore, while we were able to empirically show the benefits of influence sharing, we did not investigate the implementation aspects of influence sharing. The implementation of cross-functional influence sharing may require different and more complex implementation approaches than cross-functional information dissemination.

Finally, there are two minor limitations with respect to sampling issues. First, in the context of non-response bias, we tested for the stability of relationships that were hypothesized by running regression analyses, as well as moderated regression analyses for three different subsamples (based on response time). Overall, we found consistent relationships across the different subsamples. However, some differences did occur: Specifically, with the 3rd third of respondents, the industry control variables showed significant effects on each of the three performance variables, while there were no corresponding significant effects with the 1st third of respondents. Second, in the achieved sample, there was a higher percentage of large firms than in the sampling frame (see Table 2). The fact that small firms were somewhat underrepresented in the achieved sample might be explained by the consideration that managers in small firms might have perceived the topic of our study to be less relevant for them.

5.4. Directions for future research

We think that for future research, it is important to investigate the implementation aspects of influence sharing, given the high managerial relevance of these implementation aspects. Specifically, we see three main directions for future research: Which organizational structures, organizational systems, and organizational culture assure that functional groups outside the traditional functional fiefdoms gain real influence on decisions?

The first implementation issue relates to the question how to design the organizational structure in order to obtain greater influence of non-marketing groups over marketing activities. Decisions on marketing activities and processes are an on-going part of the firm's operations. In contrast, much of the prior research on performance implications of cross-functional interactions have been in the context of temporary task forces or project teams. Research is needed to determine the effectiveness of various ways of incorporating other groups' perspectives such as frequent cross-functional meetings, matrix reporting relationships for key individuals, and establishment of marketing advisory boards composed of senior managers from other functional groups.

The second research topic, which relates to implementation of influence sharing, concerns how to design organizational systems in order to distribute influence on marketing activities across different functional groups. In order to achieve dispersion, marketing personnel needs to give up decision autonomy. While our research indicates better performance arises when other functional groups have influence over marketing activities, the tendency of many managers is to retain autonomy and to try to build up their power base by shutting others out of key decisions. Additionally, there is a need for rewards to be given to people in non-marketing units to encourage their participation in marketing activities. These managers might not want to interfere with what is perceived as the territory of a different function. Thus, research is needed on the performance evaluation and motivational systems, which will encourage marketing personnel to give up power over key marketing decisions and which will motivate managers outside of marketing to actively participate in the marketing decision process.

A third opportunity for future research is to look at intangible implementation aspects such as organizational culture and personnel issues. This issue also is related to the motivation of personnel of different functional groups to either give up power or to participate in the decision process. It may be that for such a relatively egalitarian approach, a collaborative culture and empathic people with self-confidence but low egos are needed. Employees need to share knowledge and influence between different functions instead of trying to increase their influence by withholding knowledge. Thus, there are issues of cultural change, employee selection, training, and promotion.

A fourth issue for future research comes from our finding that a main source of dispersion of influence is the different influence of marketing and sales. Future research should therefore treat marketing and sales as two distinct functions and investigate differences between them (Cespedes, 1995).

An additional issue for future research might be the expansion of a cross-functional view of business towards the execution of marketing activities. Which functional groups should be responsible for executing specific marketing activities? This is different from our approach as we focus on the cross-functional dispersion of influence over decisions on marketing activities. While we conceptualize marketing as activities, we still assume the existence of marketing as a functional group or organizational entity. However, given recent considerations on the future of marketing, the marketing department as an organizational entity may become less important (Webster, 1997). Consequently, other functional groups may absorb the responsibility for executing marketing activities and processes. It will be important to know which marketing activities should be executed by which functional groups. It is also interesting to know whether such a dispersion of the marketing function leads to better performance as compared to our approach of keeping marketing as a functional group responsible for the execution of marketing activities but distributing influence over decisions on marketing activities to functional groups outside of marketing. Thus, the question arises as to which cross-functional approach to business leads to greater performance: dissolving functional groups or keeping functional groups combined with increased cross-functional distribution of influence on decisions over functional activities.

Cross-functional dispersion of influence would also seem especially useful in predicting the dynamics of cross-functional relationships over time (Smith et al., 1995). For example, as the influence differences between functional groups decrease, informal rather than formal forms of cooperation may be required. Influence differences may also allow prediction of communication, conflict, and free riding.

Finally, in our study, we focused on manufacturing firms. However, given the increasing economic importance of service industry, it may be worthwhile for future research to examine the performance implications of cross-functional dispersion of influence on marketing activities also in service firms.

Acknowledgments

The research reported in this paper was supported by funding from the Marketing Science Institute (MSI) in the United States, the Fritz-Thyssen-Stiftung in Germany, and the following sources at the University of North Carolina: the Center for Global Business Research of the Kenan Institute for Private Enterprise, the University Research Council, and the Cato Center for Applied Business Research.

Appendix A. Scales, items, scale means, standard deviations, coefficient alphas, and composite reliabilities for measures

Scale name, response cue, and individual items	Scale mean/ standard deviation
Business performance	
While answering the following questions, please relate to the situation in your business unit over the last 3 years. Relative to your competitors, how has your business unit performed with respect to: (respondents scored on seven-point Likert scale with anchors 1 = *very poor* and 7 = *excellent*)	
Adaptiveness (coefficient alpha = 0.71; composite reliability = 0.76)	4.54/1.11
Adapting your marketing strategy adequately to changes in the business environment of your business unit?	
Adapting your marketing strategy adequately to changes in competitors' marketing strategies?	
Adapting your products quickly to the changing needs of customers?	
Reacting quickly to new market threats?	
Effectiveness (coefficient alpha = 0.89; composite reliability = 0.91)	4.96/0.97
Achieving customer satisfaction?	
Providing value for customers?	
Attaining desired growth?	
Securing desired market share?	
Keeping current customers?	
Attracting new customers?	
Implementing your current marketing strategy?	
Performance of marketing on an overall basis?	
Marketing thinking at the top down the line?	
Efficiency (coefficient alpha = 0.87; composite reliability = 0.89)	4.85/1.59
Earning profits?	
Achieving better marketing results at less costs?	
Working productively with all departments in the business unit?	
Achieving efficiency in all marketing activities?	
Performing marketing activities right the first time?	
Market-related dynamism (coefficient alpha = 0.69; composite reliability = 0.70)	3.83/0.97
Please indicate the frequency of major changes in the following aspects of the business environment that your business unit derives its largest amount of sales from (respondents scored on seven-point Likert scale with anchors 1 = *very few changes* and 7 = *very frequent changes*).	
Changes in sales strategies by your business unit and your competitors?	
Changes in sales promotion/advertising strategies of your business unit and your competitors?	
Changes in pricing behavior of your business unit and your competitors?	
Changes in customer preferences in product features?	
Changes in customer preferences in the price/performance relationship?	

References

Ancona DG. Outward bound: strategies for team survival in an organization. Acad Manage J 1990;33:334–65 (June).

Ancona DG, Caldwell DF. Bridging the boundary: external activity and performance in organizational teams. Adm Sci Q 1992;37:634–65 (December).

Armstrong JS, Overton T. Estimating nonresponse bias in mail surveys. J Mark Res 1977;14:396–402 (August).

Bagozzi RP, Yi Y. On the evaluation of structural equation models. J Acad Mark Sci 1988;16:74–94 (Spring).

Bagozzi RP, Yi Y, Phillips LW. Assessing construct validity in organizational research. Adm Sci Q 1991;36:421–58.

Boeker W. The development and institutionalization of subunit power in organizations. Adm Sci Q 1989;34:388–410 (September).

Bourgeois LJ, Eisenhardt KM. Strategic decision processes in high velocity environments: four cases in the microcomputer industry. Manage Sci 1988;34:816–35 (July).

Cespedes FV. Concurrent marketing: integrating products, sales, and service Boston, MA: Harvard Business School Press, 1995.

Child J. Organization structure, environment and performance: the role of strategic choice. Sociology 1972;6:1–22.

Crittenden VL. Close the marketing/manufacturing gap. Sloan Manage Rev 1992;33:41–52 (Spring).

Crosby PB. Quality is free. The art of making quality certain New York, NY: McGraw-Hill, 1979.

Day G. The capabilities of market-driven organizations. J Mark 1994; 58:37–52 (October).

Denison DR, Hart SL, Kahn JA. From chimneys to cross-functional teams: developing and validating a diagnostic model. Acad Manage J 1996; 39:1005–23 (August).

Deshpandé R, Farley JU, Webster FE. Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. J Mark 1993;57:23–37 (January).

Dess GG, Robinson RB. Measuring organizational performance in the absence of objective measures. Strategic Manage J 1984;5:265–73.

Dougherty D. Interpretive barriers to successful product innovation in large firms. Organ Sci 1992;3:179–202 (May).

Duncan RB. Characteristics of organizational environments and perceived environmental uncertainty. Adm Sci Q 1972;17:313–27.
Enz KA. Power and shared values in the corporate culture Ann Arbor, MI: UMI Research Press, 1986.
Feigenbaum AV. Total quality control 3rd ed. New York, NY: McGraw-Hill, 1991.
Fornell C, Larcker DF. Evaluating structural equation models with unobservable variables and measurement error. J Mark Res 1981;18:39–50 (February).
Griffin A, Hauser JR. Patterns of communication among marketing, engineering, and manufacturing — a comparison between two product teams. Manage Sci 1992;38:360–73 (March).
Griffin A, Hauser JR. The voice of the customer. Mark Sci 1993;12:1–27 (Winter).
Griffin A, Hauser JR. Integrating R&D and marketing: a review and analysis of the literature. J Prod Innovation Manage 1996;13:191–215 (May).
Gupta AK, Raj SP, Wilemon DL. A model for studying R&D–marketing interface in the product innovation process. J Mark 1986;50:7–17 (April).
Haim A. Does quality work? A review of relevant studies. The Conference Board, Report Number 1043, New York, NY, 1993.
Hart S, Banbury C. How strategy-making process can make a difference. Strategic Manage J 1994;15:251–70.
Hendricks KB, Singhal VR. Does implementing an effective TQM program actually improve operating performance? Empirical evidence from firms that have won quality awards. Manage Sci 1997;43:1258–74.
Hinings CR, Hickson DJ, Pennings JM, Schneck RE. Structural conditions of intraorganizational power. Adm Sci Q 1974;19:22–44.
Hunt VD. Quality in America: how to implement a competitive quality program Homewood, IL: Irwin, 1992.
Institut der deutschen Wirtschaft. Internationale Wirtschaftszahlen 1996, Deutscher Institutsverlag, Hauptabteilung Wirtschafts- und Sozialwissenschaften, Köln, 1996.
Irving E. Marketing quality practices. Unpublished Dissertation, University of North Carolina, Chapel Hill, NC, 1995.
Jaworski BJ, Kohli AK. Market orientation: antecedents and consequences. J Mark 1993;57:53–70 (July).
Juran JM. Juran on leadership for quality: an executive handbook. New York, NY: The Free Press, 1989.
Kahn KB. Interdepartmental integration: a definition with implications for product development performance. J Prod Innovation Manage 1996;13:137–51.
Kahn KB, McDonough EF. Marketing's integration with R&D and manufacturing: a cross-regional analysis. J Int Mark 1997;5:51–76 (January).
Kahn KB, Mentzer JT. Marketing's integration with other departments. J Bus Res 1998;42:53–62.
Karmarkar US. Integrative research in marketing and operations management. J Mark Res 1996;33:125–33 (May).
Lazo H, Corbin A. The organization of the marketing department. In: Britt SH, Boyd HW, editors. Marketing management and administrative action. New York, NY: McGraw-Hill, 1968. pp. 65–76.
Maltz E. An enhanced framework for improving cooperation between marketing and other functions: the differential role of integrating mechanisms. J Mark-Focused Manage 1997;2:83–9.
Maltz E, Kohli AK. Market intelligence dissemination across functional boundaries. J Mark Res 1996;23:47–61 (February).
Menon A, Jaworski BJ, Kohli AK. Product quality: impact of interdepartmental interactions. J Acad Mark Sci 1997;25:187–200 (Summer).
Montgomery DB, Webster FE. Marketing's interfunctional interfaces: the MSI workshop on management of corporate fault zones. J Mark-Focused Manage 1997;2:7–26.
Moorman C. Organizational market information processes: cultural antecedents and new product outcomes. J Mark Res 1995;32:318–35 (August).
Naman JL, Slevin DP. Entrepreneurship and the concept of fit: a model and empirical tests. Strategic Manage J 1993;14:137–54.
Narver JC, Slater SF. The effect of a market orientation on business profitability. J Mark 1990;54:20–35 (October).
Nunnally JC. Psychometric theory 2nd ed. New York, NY: McGraw-Hill, 1978.
Pfeffer J. Power in organizations Marshfield, MA: Pitman Publishing, 1981.
Powell TC. Total quality management as competitive advantage: a review and empirical study. Strategic Manage J 1995;16:15–37.
Pugh DS, Hickson DJ, Hinings CR, Turner C. Dimensions of organization structure. Adm Sci Q 1968;13:65–105.
Reed R, Lemak DJ, Montgomery JC. Beyond process: TQM content and firm performance. Acad Manage Rev 1996;21:173–202.
Reger RK, Gustafson LT, DeMarie SM, Mullane JV. Reframing the organization: why implementing total quality is easier said than done. Acad Manage Rev 1994;19:565–84.
Ruekert RW, Walker OC. Marketing's interaction with other functional units: a conceptual framework and empirical evidence. J Mark 1987;51:1–19 (January).
Ruekert RW, Walker OC, Roering KJ. The organization of marketing activities: a contingency theory of structure and performance. J Mark 1985;49:13–25 (Winter).
Schoonhoven CB. Problems with contingency theory: testing assumptions hidden within the language of contingency theory. Adm Sci Q 1981;26:349–77.
Sharma S, Durand RM, Gur-Arie O. Identification and analysis of moderator variables. J Mark Res 1981;18:291–320 (August).
Slater SF, Narver JC. Does competitive environment moderate the market orientation–performance relationship? J Mark 1994;58:46–55 (January).
Slater SF, Narver JC. Market orientation and the learning organization. J Mark 1995;59:63–74 (July).
Smith KG, Carroll SJ, Ashford SJ. Intra- and interorganizational cooperation: toward a research agenda. Acad Manage J 1995;38:7–23.
Souder WE. Managing relations between R&D and marketing in new product development projects. J Prod Innovation Manage 1988;5:6–19 (March).
Spekman RE, Stern LW. Environmental uncertainty and buying group structure: an empirical investigation. J Mark 1979;43:54–64 (Spring).
Venkatraman N, Ramanujam V. Measurement of business performance in strategy research: a comparison of approaches. Acad Manage Rev 1986;11:801–14.
Venkatraman N, Ramanujam V. Measurement of business economic performance: an examination of method convergence. J Manage 1987;13:109–22.
Webster FE. The future role of marketing in the organization. In: Lehmann KE, Jocz KE, editors. Reflections on the future of marketing. Cambridge, MA: Marketing Science Institute, 1997. pp. 39–66.
Weinrauch JD, Anderson R. Conflicts between engineering and marketing units. Ind Mark Manage 1982;11:291–301.
Weitz B, Anderson E. Organizing the marketing function. In: Enis B, Roering K, editors. Review of marketing. Chicago: American Marketing Association, 1981. pp. 134–42.
Workman JP. Marketing's limited role in new product development in one computer systems firm. J Mark Res 1993;30:405–21 (November).
Workman JP, Homburg C, Gruner K. Marketing organization: a holistic framework of dimensions and determinants. J Mark 1998;62:21–41 (July).