

Cross-functional Working: Some Thoughts about the Third Market Orientation Component Implementation

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Abstract

During the last 15 years, businesses, technologies, business models have become much more complex. Business environment will continue to grow, becoming more complex and volatile, providing new opportunities for companies that have the ability to quickly identify and exploit such opportunities. The competitive dynamic has led to greater instability in profitability. In this complex global context, the consumers' power has increased unprecedentedly, leading us into a consumer economy. Today, the consumer has become more sophisticated and better informed, being driven by the principle of "value for money". Client-led economy, knowledge and lifelong learning have become key success factors. Thus, the knowledge component of products and services has increased significantly in importance and has become the dominant component of the value offered to the customer. Based on these changes in the business environment, companies are more concerned with finding ways to build customer value by working cross functionally. Thus, this paper aims to analyze the importance of inter-functional cooperation in developing new products, to provide an inventory of the consequences of cross-functional cooperation and to propose a series of principles for the operationalization of this concept into the companies' practices.

Keywords: new business environment, change, value creation, working cross-functionally.

JEL classification: M31, D20

1. Introduction

We are currently living in a period of chaotic transition to a new era defined by drastic economic as well as political and social changes, the global economy being marked by volatility and global hypercompetition. The change has become so rapid that the need for a different way of doing business will mark the entire global business environment. All these developments are taking place in a context in which the world economy is going through a period of transition from the industrial economy to one based on knowledge. Within this transition, the development of new innovative business models based on value co-creation is an important aspect in the development of competitive advantage. The rapid information flow and the instant communication have changed the notion of time and space. The information has become available throughout the world more than ever. Consumers, competitors and innovators have instant access to each other. The technological changes, particularly the changes concerning the information and communication technology represent the "catalyst" of the current complexity of the business environment. The Internet has fundamentally changed the way of doing business and the competition. Due to the emergence of the new ways of

developing and distributing products and services online, the competition sphere expanded. The competitive dynamics has led to the greatest instability in companies' profitability. In this complex global context, the consumer's power has increased unprecedentedly leading us to a consumer-led economy. In this type of economy the knowledge component of the products and services has significantly increased in terms of importance and has become the dominant component of the value offered to the customer and to the society in general. In one of his works, professor Dunning (2009) points out that, especially over the last two decades, the knowledge component of the production outputs is estimated to have evolved from 20% in 1950 to 70% in 1995 (Stewart , 1997). Also, within the client-led economy, the knowledge and lifelong learning have become key success factors. The intellectual capital is today the source of sustainable competitive advantage. As Nonaka (1991) argues, there is only one sustainable competitive advantage – the KNOWLEDGE. It represents a combined set of data and information, based on which the company employees make decisions and act ensuring the long term success of the company. Therefore, the knowledge, especially the tacit knowledge, which is in the mind of the employees or inside the company, is unique and specific. A series of factors such as the location of the company/ subsidiary, the experience, the organizational structure, the employees' cultural diversity, the strategic options etc. lead to a unique composition of data and information. All this data and information as well as the interference areas between them (cross-functions areas) are transformed into knowledge (A.E. Maehler, 2011). Identifying, developing and turning the knowledge into marketable products and services represent a set of strategic activities within the company (Cohen and Levinthal, 1990). Product innovation based on the market information led to the emergence of the concept of value co-creation. Also, the inter-functional coordination based on the information collected from the market led to the emergence of new organization forms inside the organizations aimed at increasing the cross-functional integration and connectivity in order to generate new valuable knowledge.

Thus, the main research questions which lie at the centre of this study were:

What is cross-functional integration and cooperation and how is this operationalized within companies' practices?

How to work cross-functionally? What is the relationship between cross-functional teams (CFT) and new product development?

What are the consequences of cross-functional teams usage?

Thus, the present study aims to analyze the importance of cross-functional cooperation in developing new products, to provide an inventory of the consequences of cross-functional cooperation and to propose a series of principles for the operationalization of this concept into the companies' practices.

2. What is cross-functional integration and cooperation and how is this operationalized within companies' practices?

The international research and also the companies' practices emphasize that the traditional pyramidal organizational structure is no longer a successful way of doing business in the context of the new business environment. As Vadim Kotelnikov (2009) emphasizes we are currently living in a period of chaotic transition to a new era defined by drastic changes, global competition, rapid information movement and instant communication, increase in business complexity and accelerated globalization. The change has become so rapid that the need for a different way of doing business will mark the entire global business environment. This

environment will be characterized by new innovations and a consumer whose preferences will rapidly evolve. Table no. 1 synthetically presents the main changes characterizing the business environment and the business models in the process of transition from traditional economy to the knowledge-based economy.

Characteristics	Traditional industrial economy	Knowledge-based economy
Economic growth	Constant, linear and easy to predict	Volatile – very rapid changes with explosive developments and sudden falls. Chaotic – the economic change directions are not very clear.
Market changes	Slow and linear	Rapid and very difficult, if not impossible, to predict
Consumer behaviour	Spending orientated	Value for money orientated
Product and technology life cycle	Long	Short
Development of new products	The development of new products was made slowly and carefully Internal, technical perspective.	There is an increasing effectiveness in developing new products.
Innovation key sources	Research	Research, systematic innovation, knowledge management, new business models, leading the innovation process from the market perspective (open sources of innovation)
Competition	Local	Global hypercompetition
Marketing	Mass marketing	Target marketing
Focus on	Stability	Management of change
Business development	Strategic pyramid: vision, mission, objectives, action plans	Led by opportunities, dynamic strategy –strategic flexibility
Success assessment	Profit	Company market value (market price for the entire company)
Main sources of competitive advantage	Access to lower cost raw materials, labour force and capital, cost reduction by achieving scale economies. The competitive advantage was due to the costs control.	Distinctive competences, institutional excellence, high reaction speed, human resources, partnerships with clients. The sustainable competitive advantage is obtained through superior customer value creation.
Production	Everything was carried out internally; internal process	The production of many components is outsourcing. It is focusing on the core components.
Strategic alliances with other companies	Rare; “on my own” thinking	Strategic partnerships with the members of the value chain -access to new capacities and technologies. Focus on the partnership with members of the value chain system (going together).
Organizational structure	Hierarchical, bureaucratic, functional, pyramidal Traditional pyramidal organizational structure	Levelling and making the organizational structure flexible; interconnected systems, competence assignment, management through inter-functional teams focused on interconnected tasks – networking

		the matrix organization structure
Business model	Traditional: orders and leads	Flexible business models
Leadership	Vertical	Divided: empowering the employees and own leadership
Management – employee relationship	Confrontation	Cooperation, team work
Perspective concerning the employees	Spending	Investment

Table no. 1 - Synthesis of the changes into the transition process from traditional economy to the knowledge-based economy

Source: processing after Kotelnikov (2009), www.1000advices.com and Pandelica et. al (2011)

Taking into account the characteristics of the new type of economy and the new type of organizing models, cross-functional integration and cross-functional collaboration have become an important topic for researchers and for practitioners alike. It is important to mention that researchers are using cross-functional or inter-functional integration and cooperation as interchangeable terms. The concept of cross-functional integration emerged from the necessity to coordinate the various departments (functions) within the organization (Homburg and Workman, 2002; Oliveira et. al., 2015). The need for inter-functional coordination was emphasized since 1990, by Narver and Slater, who introduced the concept of market orientation, proposing three components in its construction. The inter-functional coordination, component of the market orientation, refers to dissemination of the market information within the organization, across functions, and functions collaboration for superior value creation. Thus, this component is directly linked to the company's absorption capacity, respectively learning, based on external information, how to develop knowledge which are integrated into new products/innovations. Thus, researchers suggest that inter-functional coordination has a positive effect on innovation consequences because it facilitates dissemination of novel market information and enhances problem solving (Gatignon and Xuereb 1997). In this line, Menon and Varadajan (1992) claim that market knowledge must be transferred or disseminated across departments before knowledge can play a critical role as a strategic asset. At the heart of inter-functional coordination lies the sharing of market information which is crucial for new product development (Im and Workman 2004). Also, Lou et. al (2006) argue that scholars in marketing and strategic management put a great emphasis on knowledge transfer across functional boundaries for new products success. On the other hand, Pimeira et. al. (2014) claimed that cross-functional integration was widely studied in the Supply Chain Management and this helps companies to develop an innovative culture. Maltz and Kohli (2000) described cross-functional integration as integrating mechanisms in activities that require expertise from different functions. The cross-functional integration level, according to Topolsek and Curin (2012), is determined by the efficiency of cross-functional relations among employees, and cross-functional teams (CFT) represent a mechanism that may improve these relations. Thus, in this line cross-functional teams represent the operationalizing of the cross-functional integration and cooperation. As international research emphasizes, cross-functional teams (CFT) are very important in developing innovative solutions for any type of business in a changing environment and represent an important tool for enhancing cross-functional integration.

3. How to work cross-functionally? What are the consequences of cross-functionally?

According to Katzenback and Smith (1993) a cross-functional team is a group of people with complementary skills who are chosen to achieve a common goal and are mutually accountable for the team's success. Such groups facilitate the interactions of members of different functions/departments that are performing temporary tasks (Turkulainen and Ketokivi, 2012).

Also, Holland et. al. (2000) described CFT as a group of people with a high degree of interdependence. Cross-functional teams are usually constructed with employees that have a formal functional home base (engineering, personnel, marketing, finance etc) and are working collaboratively on commune scope or processes that require diverse resources and expertise (Kettley and Hirsh, 2000). For instance, in designing/building projects there is a strong interdependence between the architect, the engineer and the construction manager. In new product development projects there is a high interdependence between R&D, manufacturing and marketing, but also other functions. Different researchers underlined the importance of CFT in developing the stronger interconnectedness between research, development and marketing activities. Indeed, diverse functional areas participate to differing degrees in the design, development, and launching of new products. R&D-marketing collaboration has long been suggested as a key determinant for the success of the product development (Moenart & Souder, 1990). Also, Wilemon (1996) emphasized the impact of CFT on R&D and technology managers. Thus, members of the CFT must think, act and behave jointly, in order to achieve the purpose behind the team.

According to the CFT definition, there is a clear purpose behind its establishment within the organization. For instance, Turkulainen and Ketokivi, (2012) claim that there are at least two temporary tasks for CFT: (1) the development of new products and (2) integration of operational processes. On the other hand, Kettley and Hirsh, (2000) underline the following reasons of CFT: (1) innovation and new product/services development, (2) problem solving across traditional organizational/functional boundaries, (3) integration of systems typically via process re-design/re-engineering, (4) co-ordination into a "one stop shop" or single point of contact or delivery. New product development (NPD) is one of the most important scopes for setting up CFT in many companies. A great number of studies analyzed the relationship between CFT and NPD or innovation. For instance, Haon et. al. (2008) analyzed, in an extensive literature review, the effects of functional diversity (characteristic of the CFT) on performance of new products or innovation and they have found that most researchs hypothesized and empirically tested the positive impact of functional diversity achieved through cross-functional teams on new product performance. Thus, Larson and Gobeli (1988) analyzed the success rate of the development projects and found that projects developed by cross-functional teams have a higher success rate than those developed by a single function based teams. Kahn and McDonough (1997), but also Song et al. (1997) empirically tested the relationship between cross-functional collaboration and product development performance and they found that such a strong collaboration has a positive significant effect on product development performance measured as: product quality, NPD cycle time, NPD objective met and NPD program success. In another approach of this relationship McDonough (2000) underlines that cross-functionality is associated with a higher success rate of the new products, thus there is a direct association between cross-functional collaboration and the new products success rate. In a same approach, Sherman et. al. (2005), empirically tested the relationship between cross-functional integration and product performance and underlined that this integration has a significant global positive effect on product performance, measured as: process, product launch, design change frequency, performance competencies, NPD cycle time. In spite of the rich empirical research that underlined the positive effects of cross-functional collaboration, cross-functionality or cross-functional integration on NPD performance, and on the fact that CFT represents a tool or a mechanism for achieving a high degree of cross-functionality, should be noted that within the international research there are many discussions on companies' failure on setting up successful CFT. For instance, Behnam Tabrizi (2015) argues that nearly 75% of cross-functional teams are dysfunctional. He identified five most important failing criteria, as follows: (1) meeting a planned budget; (2)

staying on schedule; (3) adhering to specifications; (4) meeting customer expectations; (5) maintaining alignment with the company's corporate goals. Thus, we can conclude that there is a certain gap in the international literature regarding how to put the cross-functionality into practice, and how to set up and to manage the successful CTF in order to generate high impact on NPD and innovation.

Another important topic approached in international research is related to the relationship between CFT and learning. According to Mohrman et. al. (1995) cross-functional teams can provide optimal organizational learning and knowledge generation. For instance, a cross-functional team established for NPD is designed by putting together representatives from different functional areas as R&D, marketing, manufacturing and so on. One of the most important effects is the information flow and exchange, knowledge diffusion and new assets development through inter-functional collaboration. Thus, new products will be developed by integrating and conciliating at least two perspectives: the technical and market ones. So, it is more likely for a new product developed in such an integrated perspective to be successful than those which were developed in a single function approach (for instance, from the technical/engineering perspective). Usually, employees regard different issues from their own perspective, that is rooted within their department based location, and they are tending to think and behave in an isolated way, and these perspectives can be very different from the marketing department to the production hall, for instance. Looking at a door as a product, the researcher will look at a better way of functionality and how it can be further developed, the engineer will look at a better way for production processes, the marketer is looking at new ways of advertising and selling the door, the financial responsible will assess the costs and how these can be cut off, and so on. In spite of the fact that all these specialists are looking at the same product, they are actually seeing different "faces of the coin". Thus, bringing people from different parts of the company together can accelerate the learning process through information flow, knowledge diffusion that will conduct to new knowledge generating, supporting the delivery of innovative solutions. Also, cross-functional working will bridge the diverse perspectives and will conduct to homogenizing the isolated thinking and the mind-set across departments. Referring to the cross-functional innovation teams, Blindenbach-Driessen (2015) underlines that these can create novel ties between functional domains by integrating up and downstream knowledge to facilitate the transition to production and break down knowledge barriers between functional departments. Also, Kettley and Hirsh (2000) suggested that there are for particular directions of learning in the case of CFT: (1) direct transfer of knowledge or skills from other experts, (2) picking things up from observing the others in action, (3) collective problem-solving and experimentation, (4) consolidation prior experience and re-framing new insights. Anyway, during the time, different researchers have mentioned that knowledge transfer across functional boundaries is critical for numerous outcomes as new product success and organizational learning. Still, as Lou et al. (2006) argued, the transfer of knowledge across functional boundaries can be difficult and complicated, and even if scholars recognize the knowledge transfer as valuable very often this process is difficult to achieve.

5. How to put the CFT at the heart of company practices?

As our study emphasized, putting cross-functional collaboration through CFT into companies' practices is a difficult task and it is strongly connected with the transition from the traditional organization to the new way of business models that are more flexible. Thus, an operationalizing way of cross-functional integration is connected with organizing structure. As Peston et al. (1997) claimed, the structures for product development are more horizontal and team based. The usage of CFT based organizing will reduce hierarchical centralization; the processes will be faster in terms of flow and will increase market responsiveness. According

to Horney et. al. (2009), a matrix implementation is a complex process that will determine important changes in the organizational structure, systems, culture and behaviours. The matrix organization is a mix of different horizontal relationships designed under a hierarchical structure. This kind of organizing the relationships among employees enables each participant to bring his/her contribution and expertise to a cross-functional team built around a clear purpose. A model of a typical matrix organizational structure is presented in figure no. 1. The most important benefits of the matrix organizational structure can be viewed in terms of connectedness, integration, coordination and learning.

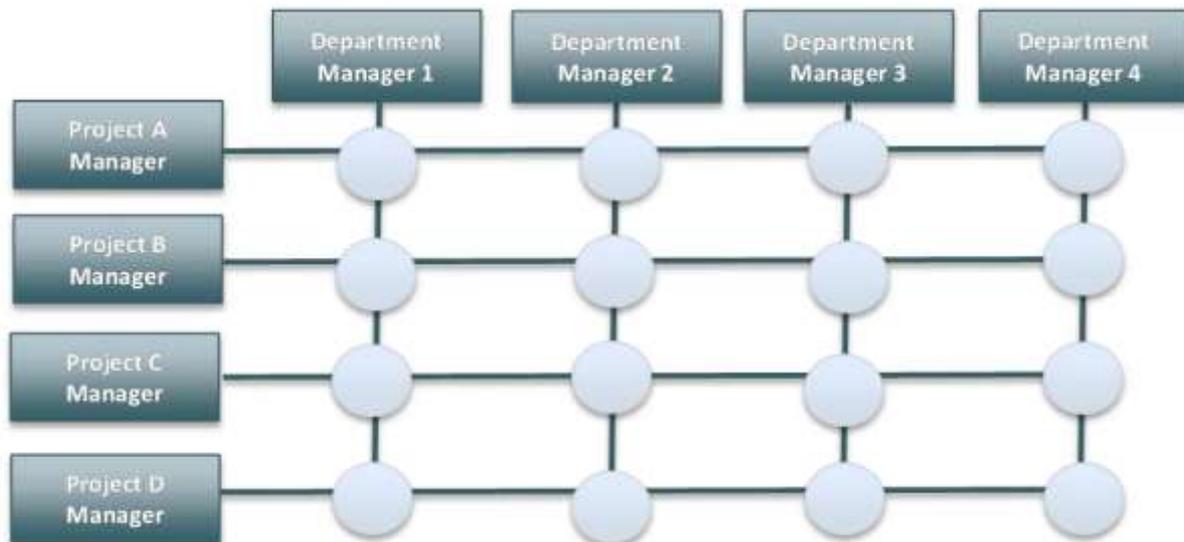


Figure no.1. Typical Matrix Organizational Structure

Source: Best Practices in Matrix Organizational Structures, 2013

Also, we consider that another important change should take place within the organization at the organizing level but also at the strategic level for the cross-functional integration and CFT operationalizing, synthesized into table no. 2.

Conclusions

The present study had the purpose to analyze the importance of cross-functional cooperation in developing new products, to provide an inventory of the consequences of cross-functional cooperation and to propose a series of principles for the operationalization of this concept into the companies' practices. Cross-function collaboration was identified as one of the key factor in achieving performance in new product development. Researchers analyzed different relationships between cross-functional collaboration and new product development and they found that the success of the new products is associated with the cross-functional integration. The main tool or mechanism for achieving such integration is the set up of the cross-functional teams (CFT). The usage of this tool or mechanism can be successful in the context of a matrix organizational structure. The most important benefits of the matrix organizational structure can be viewed in terms of connectedness, integration, coordination and learning. It is important to note that even if the international research showed a positive effect of the CFT on new product development in terms of performance, in practice, there are many cases when such a way of working failed or did not generate notable results. In the context of the new type of business environment, there is a clear challenge to compete based on a new type of competitive

advantage - superior value creation through new knowledge generation and integration into the new products development. Thus, Slater's statement from the '90s is more than ever present and challenging: " A time will come when the borders between functional departments disappear and in such a context, the engineers do not design the product but prepare it for production and the marketers, the sellers and the finance people make a team, which have as final goal the increasing of superior value for the consumers. Who serves the clients? It's nobody's task but everybody's task!

Traditional way of doing business Functional based	New way of doing business Cross-functional integration
Most of the components were created inside the organization	The creation of many components is externalized. The organization concludes strategic partnerships with members of the value chain system. It focuses on basic competences
The improvements were made by comparison with own products (inside prospective)	The improvements are made according to consumers desires and demands by comparison with competitive products (external prospective)
The management was performed through functional departments. Traditional organizational structure	The organization is managed through cross-functional task-oriented teams. The organizational structure is blunter and more flexible - matrix
The competitive advantage was due to the costs control	The sustainable competitive advantage is obtained through creation, communication and delivery of superior customer value and knowledge generation
The creation of new products was slow and careful	There is an increasing effectiveness in creating new products. New products are projects that involve cross-functional task-oriented teams. The new products are the result of a tight collaboration between C & D and Marketing and other functions.
The innovation process was made from a technical (engineering prospective)	Innovation process is led from the client's perspective. The members of the value chain are involved in the innovation process
Making decisions belonged to top-management level.	Decision-making process is decentralized. The project managers assigned with high competences in decision-making.

Table no. 2. - Synthesis of the business model characteristics - functional base vs. cross-functional integration

Source: Authors' synthesis based on literature review

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