

EFFICIENCY MODELS OF THE CROSS-FUNCTIONAL TEAMS

Dinca Laura
Assistant, PhD candidate
Criveanu Radu
Lecturer, PhD
University of Craiova
e-mail: laura2dinca@yahoo.com

Abstract

Cross-functional teams represent a characteristic of the new organization form of the enterprises, imposed by the complexity of the present environment. Regardless their kind, the new organization forms are based on the cross-functional teams as an innovation source and reunion of competences. Only by the medium of the cross-functional teams, the new organizational partnerships obtain flexibility in their actions and fastness in their reactions. By their features, the cross-functional teams should be differentiated from any kind of work-group. What makes them different is the common effort carried to reach the common objective of the team. The present paper presents two research models for the efficiency of the cross-functional teams, respectively input-process-output and input--mediator-outcome models. These show the factors on which cross-functional teams' managers should action to obtain superior economic performances.

Key words: Cross-functional Teams, Efficiency, Model, Input, Process, Output, Mediator

JEL Classification: M10

Introduction

The actual complexity of the enterprises' environment is well known, reason for which these looked to identify new organization forms. Due to the turbulent environment, new partnerships, networks, clusters or strategic alliances are being formed. The high qualified human resources increase their importance in reaching competitiveness. Information and know-how become the most important assets owned by an enterprise.

Thus, companies hope to answer to the challenges of the environment, which were difficult or impossible to manage with the present structures, and also to develop the synergies and coordination in the value chain.

The solution to adjust the organizational structure at the turbulent environment is the cross-functional principle, whose application helps enterprises to get flexibility in their actions and fastness in their reactions. By the cross-functional principle, the premises for an enterprise to manage to produce qualitative goods and services at a lower price than competitors are being assured. The cross-functionality is applied by the medium of the cross-functional teams (CFTs), characterized by a reunion of the skills of the team's members.

The market pressure and cross-functionality are unavoidable realities of the contemporary economies. „The need for CFTs is more and more frequent” [2, p. 454]. Until 10-15 years ago, cross-functionality was considered a utopia. But, afterwards, this concept has been got clear of its deprecating connotations, being regarded as an ensemble of ideas and concepts that are focusing on certain collective values.

Often, cross-functionality is a matter of time and of timing. Thus John Carlisle, partner of the Persona network, proved that in the field of constructions and public works, the precocious association of various experts allowed reducing constructions costs with more than 25% and delays with more that 30% [14, pp.2-8]. By their late association in a process or a project, the direct or indirect involved actors won't harmonize their constraints, but especially they won't take advantage of their added value.

The more one company develops its employees' skills and knowledge, the bigger their capability to cope with the market is. So there is a direct relation between CFT, competitiveness and efficiency (Fig. no. 1).

„A CFT is a team formed of at least three people that belong to different functional entities that are working together to reach a common goal. These members have got various functional skills and experiences, and they come from different sections within the organization” [8, pp.547-555].

Many times, teams and groups are considered to be identical notions. In fact a distinction between them can be made with the following arguments: a group reunites the individual efforts of its members to achieve a common goal, while a team is characterized by the joint effort of its members to achieve the common goal. „CFT may be considered bridges to success, because the whole is more effective than the amount of parts” [2, p.455].

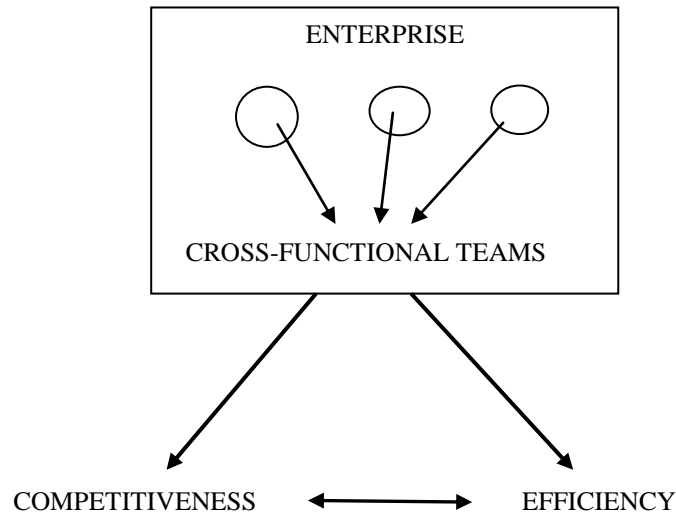


Fig. no. 1. Relation CFT-competitiveness-efficiency

„The chief benefit of CFTs is that they provide a manageable way to bring together diverse resources for a specific project” [13, pp. 17-46]. Nevertheless, the whole potential of the CFTs is not always capitalized. The paradox of the CFTs is that their unique features lead to the success’ increase, but the same features lead to difficulties in reaching effectiveness of a team.

Effective teams may exist in every organization, but CFTs, that provide superior performances, have got certain characteristics [15, pp. 49-53] such as:

- a small un group (under 10 persons), well-defined, with complementary skills;
- an exact and specific purpose and consent on the concrete operation principles to reach this purpose;
- mutual accountability for results and joint ownership of the work products.

”CFTs are being hailed as the cure for companies” is stated in Harvard Business Review [5]. „Within many organizations, teams are becoming more prevalent and more diverse, due to the changing workforce and the development of new organizational forms” [7]. Teams of employees from various departments are being formed with the hope to produce more creative thinking and innovation. Therefore CFTs members have different professions with which they produce key products or services from the respective field of activity. The finality, mission to be accomplished and the work manner agreed by all members of CFTs are the constituent elements of this whole.

2. Efficiency Models of CFTs

In order to assess CFTs efficiency, the researchers are using various models (such as input-process-outcome model or input-mediator-outcome model), various methodologies (experiments, questionnaires), or various factors (input, process, outcome).

2.1. The Input-Process-Outcome Model

The Input-Process-Outcome Model (IPO) has been contoured by Mc Grath [11] having applications in sociology too. According to this model (Fig. no. 2), the input is represented by factors depending on individual, team or organization, respectively factors that allow or restrict interaction between the members of the CFTs.

Therefore, the input category includes the individual characteristics of the team members (skills, features), specific factors for the team (attributions, size of a team), organizational and contextual factors (environment complexity). The process category describes how the team members interact to fulfill their assigned tasks. The outcome category includes the quality of the working in teams and the affective reactions of the team members (satisfaction). All input factors bring their contribution to the organization and deployment manner of the process that takes place in order to reach the final objective of the CFTs.

If CFT members perform their tasks in an appropriate way, the CFT result may be a very good one. Although this model has been recognized as a valuable one, it has been criticized for not taking into consideration of the time, as an influence factor for the process and results. These critics led to the development of the input-mediator-outcome model.

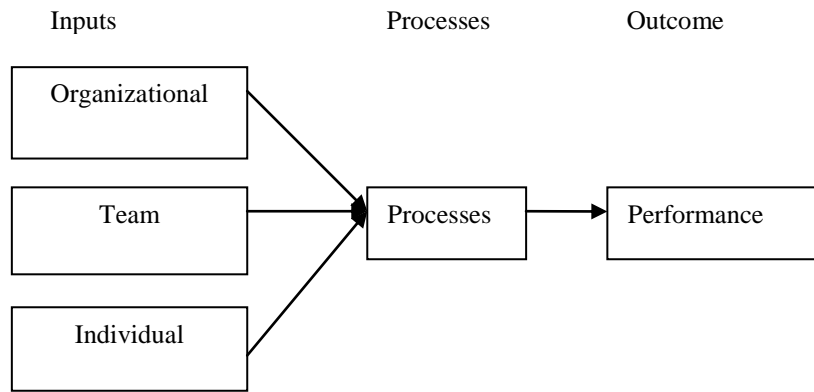


Fig. no. 2. The Input-Process-Outcome Model

Source: Graaf, D., Koria, M., Karjalainen, T., 2009, Modelling Research into Cross-functional Team Effectiveness, Proceedings of the IASDR Conference, Seoul, South Korea, pp. 2363-2372

2.2. The Input-Mediator-Result Model

The Input-Mediator-Outcome (IMO) Model has been contoured by Ilgen and others [6, pp. 517-543] and takes into account the three level of the CFTs, meaning the members and the context of a team, and the organizational context too (Fig. no. 3). Thus the individual members are part of a team and the teams are part of the organization. All input factors are supposed to influence one each other, while the exterior levels affect the interior ones more than the reversed situation. The inputs at the team’s level influence the mediators and outcomes. One variable from the input category, to whom the researchers gave a special attention, is the interaction or interdependence that explains how the team members cooperate and work interactively in order to fulfill their tasks. As Wageman [16, 145-180] says, the skills and competences of the team members, and also the need to share resources within the team intensify the interrelation or interaction level of the team members.

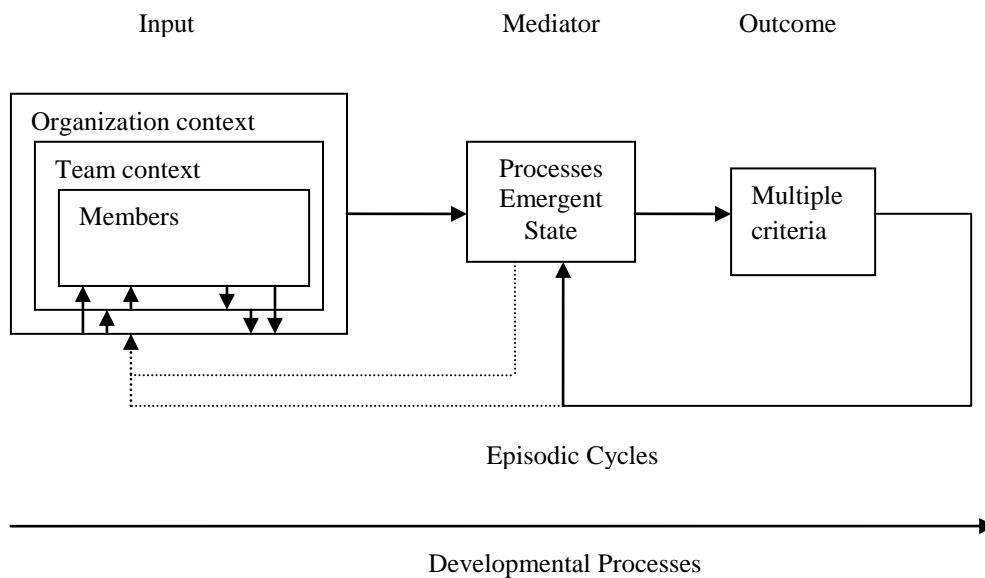


Fig. no. 3. The Input-Mediator-Outcome Model

Source: Graaf, D., Koria, M., Karjalainen, T., 2009, Modelling Research into Cross-functional Team Effectiveness, Proceedings of the IASDR Conference, Seoul, South Korea, pp. 2363-2372

An accentuated state of interrelation is being created when the CFT members depend ones on the others resources and cooperate to fulfill their tasks.

The element that makes this model particular is the mediators, introduced by Marks and others [9, pp. 356-376]. The mediators refer at the process (action of the team members) and the emergent state (collective

efficacy, team potential). Traditionally, processes done in team are being divided in work task and team work [12]. The work task explains the function that the team is supposed to fulfill, and the team work explains interrelation within the team.

Marks and others [9, pp. 356-376] have a modern approach dividing processes in the transition stage, action stage and interpersonal processes. In every stage, teams are deploying specific actions. During the transition stage, teams are especially focused on the activities' evaluation and planning in order to fulfill their tasks. The action stage includes the activities effectively leading to the tasks' achievement. The interpersonal processes are used to explain the teams' management during conflicts or during the action to create motivation for CFT members.

These three stages are developed rather in episodic cycles, than during the whole lifecycle of a process. The results are emphasized by Cohen and others [1, pp. 239-290] that are classifying the effectiveness of a team in three categories: performance, attitude, behavior. The IMO model incorporates time as a crucial factor. According with Mathieu and others theory [10, pp. 410-476], the most frequent ways to include time are: the development method and the episodic method. On the one hand, the development method exemplifies in what way teams are changing during the time and are differently influenced by various factors. On the other hand, the episodic method illustrates the fact that teams must work to processes during their lifetime, this depending on the work task which may be repeated.

3. Factors To Exceed the Functional Wall

The IMO model of teams' effectiveness is, however, not sufficient to study CFTs, since it is not considering an important factor, meaning the background of each teams' member. This observation comes from the fact that team members from fields like engineering, design or business are thinking, acting and behave differently. These differences create a functional wall that surrounds the individuals and prevent interrelation between the teams member. The notion of „functional wall” has been introduced by Graaf and others [4, pp. 2363-2372] in their paper dedicated to the effectiveness of the CFTs.

In order to exceed the functional wall, the team members must create strategies and perform activities to fulfill their objectives. Thus, Douglas and others [3, pp. 251-263] developed the principle of jointness, taken over from the military field and applied to the CFTs. This principle introduces the functional skills, mutual understanding, cross-functional communication and trust, together with behavior norms and organizational capabilities as factors meant to exceed the functional wall. If the functional competence is missing, then the mutual understanding, cross-functional communication and trust won't be realized. The mutual understanding appears when the team members know the strengths and weaknesses, goals and concerns one to each other, as well as the prevalent functional knowledge and its use for the team. The cross-functional communication denotes interoperativity. In order to act successfully in a cross-functional environment, the team members must know how to communicate timely and effectively one with the other, but also to action together. The cross-functional communication and mutual understanding may be obtained by training and from a previous work experience in a CFT. Trust is based on mutual knowing. While its presence does not guarantee the success, its absence increases the probability of failure. When the functional competence exists, the mutual understanding appears too, communication is allowed, trust can be built and the team will be effective. Through the absence of any out of these four factors, the team will fail.

Conclusions:

CFTs are more and more used within various organizational partnerships. The globalization and complexity of the current economic environment involve enterprises' internationalization. Their request for competitiveness necessitates identification of the increasing factors for the CFTs effectiveness. The two effectiveness presented models, IPO and IMO, introduce the concept of functional wall. The main factors meant to exceed the functional wall are functional competences, mutual understanding, cross-functional communication and trust, to which behaviour norms and organizational capabilities of the CFTs are being added. However, the functional wall needs to be the subject of further research, to discover new factors to exceed it and to increase the effectiveness of the CFT.

References:

- [1]. Cohen, S. G., Bailey, D. E., 1997, *What makes teams work: Group Effectiveness research from the shop floor to the executive suite*, Journal of Management, vol. 23, no. 3, pp. 239-290.
- [2]. Dincă, L., Voinescu, C., 2012, *Cross-functional teams and their role in increasing competitiveness of the organizational partnerships*, EIRP Proceedings, Galați, Romania, pp. 453-459.

- [3]. Douglas, M.A., Strutton, D., 2009, *Going "purple": Can military jointness principles provide a key to more successful integration at the marketing-manufacturing interface?*, Business Horizons, vol. 52, no. 3, pp 251-263.
- [4]. Graaf, D., Korja, M., Karjalainen, T., 2009, *Modelling Research into Cross-functional Team Effectiveness*, Proceedings of the IASDR Conference, Seoul, South Korea, pp. 2363-2372.
- [5]. Harvard Business Review, 1994, *Cross-functional teams – are they always the right move?*, Harvard Business Review, November-December.
- [6]. Ilgen, D.R., Hollenbeck, J.R., Johnson, M., Jundt, D., 2005, *Teams in Organizations: From input-process-output models to IMOI models*, Annual Review of Psychology, vol.56, no.1. pp. 517-543.
- [7]. Jackson, S.E., May, K.E., Whitney, K., 1995, *Understanding the Dynamics of Diversity in Decision Making Teams*, in Guzzo, R.A. and Salas, E. (Eds), *Team Effectiveness and Decision Making in Organizations*, Jossey-Bass, San Francisco, CA.
- [8]. Keller, R.T., 2001, *Cross-functional Project Groups in Research and New Product Development: Diversity, Communication, Job Stress and Outcomes*, Academy of Management Journal, Vol. 44, No.3, pp. 547-555.
- [9]. Marks, M.A., Mathieu, J.E. , Zaccaro, S.J., 2001, *A temporally based framework and taxonomy of team processes*, Academy of Management Review, vol. 26, no. 3, pp 356-376.
- [10]. Mathieu, J., Maynard, T. M., Rapp, T., Gilson, L., 2008, *Team Effectiveness 1997-2007: A Review of Recent Advancements and a Glimpse Into the Future*, Journal of Management, vol. 34, no. 3, pp. 410-476.
- [11]. Mc Grath, J.E, 1964, *Social psychology: A Brief Introduction*, New York: Holt, Rinehart & Winston.
- [12]. McIntyre, R.M., Salas, E., 1995, *Measuring and management for team performance: Emerging principles from complex environments*, In R.A. Guzzo & E. Salas (Eds.), *Team effectiveness and decision making in organizations*, San Francisco: Jossey-Bass.
- [13]. Northcraft, G.B., Polzer, J.T., Neal, M.A. and Kramer, R.M., 1995, *Diversity, social identity, and performance: emergent social dynamics in cross-functional teams*, in Jackson, S.E. and Ruderman, M.N. (Eds), *Diversity in Work Teams*, American Psychological Association, Washington, DC, pp. 17-46.
- [14]. Pham, F., 2009, *Developper la transversalite*, Newsletter Open'Act, Mai, pp. 2-8, available at <http://www.openact.com/footerconsultants/approches/transversalite>, accession date 05.01.2013.
- [15]. Smith, P.G., 1997, *Cross-Functional Design Teams*, ASM Handbook, Volume 20, Materials Selection and Design, pp. 49-53.
- [16]. Wageman, R., 1995, *Interdependence and group effectiveness*, Administrative Science Quarterly, vol. 40, no. 1, pp 145-180.