



THE PROMOTION OF INNOVATION ACTIVITIES ACCORDING TO MANAGER'S DUTIES: A CASE STUDY IN A COMPANY OF THE BRAZILIAN ENERGY SECTOR

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ABSTRACT

From a point of view based on the instability in several sectors of our economy, we aim to investigate in this article whether the managers of a certain company have been promoting innovation activities. This research comprised a random sample of 109 managers of a large company of the Brazilian energy sector with more than 10,000 employees spread throughout Brazil. The goal was to relate the duties of managers regarding innovation activities promoted in their management. We elaborated a list of duties of managers based on the work of renowned authors and a list of types of innovation activities according to the Oslo Manual. Each manager was asked to indicate, for each of his listed duties, if he had promoted some type of activity within a year, and also the type of activity. The most common results demonstrated the most exercised duties during this period, as well as the types of innovation activities most promoted. This study revealed significant relationships from a quantitative point of view. The experience was idealized as a prototype that fulfilled its function of stimulating the knowledge of an institution's own managerial body, and it can be applied to any company.

Keywords: Leadership. Manager's duties. Management skills. People management. Innovation management. Organizational innovation.

1. INTRODUCTION

According to Gomes et Teodoro (2010), the identification and correct use of talent contributes greatly to the success of any organization. Talent is understood as the human resource – the employees, endowed with their set of skills. Also, we describe success as the achievement of the strategic goals, among others, the financial return and a good organizational environment. Faced with a scenario of competitiveness and scarcity of resources, many companies begin to innovate in products, processes, marketing and management (Schumpeter, 1982). There is a need to reduce waste, propose creative ideas to add more value to the business, generate more attractive products, motivate the workforce, propose better processes or develop business sustainability.

According to Castro et Eboli (2013), development centers focused on employee training have collaborated with the

improvement of products and processes. Corporate Universities have sought to broaden the vision of managers, open their horizons and provide them a more refined reading of the world and their companies.

The Oslo Manual initially developed in 1990, the Innovation Survey (Pintec) carried out by the Brazilian Institute of Geography and Statistics (IBGE) since 2002, the Innovation Law (Law no. 10,973, of December 2, 2004), the National Innovation Award (2012), forums such as the World Innovation Forum held in June 2013 in New York, the Global Innovation Forum in November 2013 in London, are some documents and events that highlight the interest on the part of the companies, the society and the government in the innovation subject.



The concepts of innovation and management are more discussed and have become more intimately related to each other, bringing to the scope of management empirical methods of work, as we can observe in the article "Laboratory of Innovation in Management", by Gary Hamel (2006). The scope of this study is be the innovation of the management, and not the management of the innovation, as it has been approached by the Knowledge Management discipline.

The company studied comes from the energy industry area and employs thousands of workers distributed throughout several cities in Brazil. It is, therefore, a large company, of great complexity and of great importance for hundreds of other companies and for the Brazilian population.

The search for information on management innovation brings new perspectives that deserve to be verified, such as the existence of incentives for managers to promote innovations in the way they manage their teams.

Based on the initial questions previously presented, this is the problem situation question we aim to answer: **what types of innovation activities are being promoted by managers?**

We do not intend to judge the innovation activities found with this research. The present study aims to list the types of innovation activities that are being mostly promoted. It is a preliminary study based on the individual perception from a sample of managers.

Companies that manage to innovate their products and services are those that can be more competitive and therefore more profitable. This process of innovation is continuous, incremental and demands special attention from managers (Tidd et al., 2005).

According to Kotler (1982), a service is anything that one party can offer the other, being essentially intangible and not resulting in ownership of something material. Thus, all the activities provided between areas within the same company – such as contracting cleaning services, IT or telecom support activities, HR management, among others – can be seen as rendered services.

The Oslo Manual (OECD, 2005) incorporates the concepts of organizational and service innovation into the 2004 review.

According to Deming (1982), "You can not manage what you do not measure, you can not measure what you do not define, you can not define what you do not understand, you can not succeed in what you do not manage."

Primarily, this study proposes, based on data collected

and on the last sentence of the previous paragraph, to better understand the behavior of managers.

2. LITERATURE REVIEW

Managers' duties

Since the emergence of scientific management and the elaboration of the General Theory of Administration, there was a concern in defining the duties of the administrator. According to Fayol (1994), the area of administration or management of a company would be responsible for: predicting (foreseeing tendencies and outlining an action program), organizing (constituting the company's material and social organism) The organization), coordinate (unite and harmonize collective actions and efforts) and monitor (check if established regulations are being followed).

According to Fleury et Oliveira Junior (2002) managerial competences must add social value to the individual and economic value to the organization, and can be summarized in: knowing how to act, how to mobilize resources, how to communicate, how to learn, how to engage and commit, how to take responsibility and to acquire a strategic vision. Already for Mintzberg (1973), the managerial roles, or the managerial activities, are:

- Boss image: to represent the company in its physical shape;
- Leader: aim to bring together the interests of the company and employees;
- Networking: creating horizontal relationships with peers outside the company;
- Monitoring: identifying events that interfere with the company;
- Communicator: disseminating information within the company;
- Spokesperson: making pronouncements on behalf of the company;
- Entrepreneur: taking the lead, monitoring decisions and committing to a better outcome;
- Mediator: managing conflicts and unexpected events;
- Distributor: allocating resources where they will be better used, delegating tasks;



- Negotiator: dealing with other managers and committing with resources for better results of the company.

We observed that all the authors contributed to the determination of the manager's responsibilities. For didactic purposes, we merged some categories in order to group the most similar duties, and proposed a regroup of these roles by semantic similarity, according to Figure 1 below.

Innovation activities

The Organization for Economic Co-operation and Development (OECD) published in 1990 a proposal of guidelines for collecting and interpreting data on technological innovation, known as the Oslo Manual. This document was translated and disseminated in Brazil by the Financier of Studies and Projects (Finep) in 2005. According to this manual, innovation is understood as everything that is new to society, to the market or to the company, which generates relevant im-











Managers' Duties			Nr. Of Activity type	
I		Planning Developing strategic vision, to know and understand the business of the company, its environment, identifying opportunities and alternatives. Providing methodologies to plan what should be done in short, medium and long terms.		
II		Converging interests Matching the interests of the company and employees. Defending the interests of their team in face of their superiors (Bottom Up). Constitute the company's dual material and social organism.		
III		Disseminate Representing the company as its physical form (Top Down), disseminating information within the company; Making pronouncements on behalf of the company; Have the ability to command, direct and guide the organization		
IV		Networking Create horizontal relationships with peers outside their management circle. Know how to negotiate with other managers and how to compromise their resources for a better outcome for all parts.		
V		Entrepreneur Take the lead and monitor decisions. Know how to commit for better outcomes Acting know how: Understanding why and what to do! Know how to judge, select, decide. Know how to commit and take risks		
VI		Monitoring Identifying issues that interfere in company. Checking if goals, values, standards and deadlines established are being followed.		
VII		Learning Reviewing own knowledge, skills, attitude, experience, mental models and development.		
VII		Allocating resources Allocating resources where they will be better used. Know how to delegate tasks. Know how to recognize and develop skills. Know how to create synergy. Reunite and harmonize collective actions and efforts.		
IX		Communicate Know how to listen and how to speak. Be attentive to verbal and non-verbal communication. To understand, to have empathy, to put oneself in the other's place, to analyze the best way to transmit information and the right moment for this. Give and receive feedback.		
X		Manage conflicts Identifying and managing conflicts with employees or between employees. Dealing with unexpected events		

Figure 1 - Manager's Duties

Sources: Fayol (1994); Fleury et Oliveira Junior (2002); Mintzberg (1973).



provement their products, processes, marketing or organizations and that results in improved outcomes, such as increasing production, demand, profits or reducing costs.

According to Hamel (2006), of the four types of innovation (product / service, process, marketing and organiza-

tional or management), organizational innovation was the one that contributed the most to improving performance in companies. To summarize the innovation activities, we considered for this article, Figure 2 below presents the grouping of items quoted in the Oslo Manual (OECD, 2005).


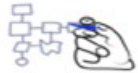








Picture	Activity	Description	Nº
	New concepts for products/services	Add value to company's products or services in a way to improve company's results (profit increase or cost reduction)	1
	New concepts for processes	Optimizing processes in a way to improve company's results (profit increase or cost reduction)	2
	New concepts for marketing	Developing new marketing models and selling products and services in a way do improve company's results (demand increase)	3
	New concepts for organizational changes	Reducing supply and administrative costs.	4
		Promoting satisfaction in workplace	5
		Implementing new methods to organize procedures and routines	6
		Implementing new methods to distribute sub duties and decision-making power between employees	7
		Implementing new ways of organizing relationships with other companies or institutions	8
	Research	Conducting basic or applied research to acquire new knowledge	9
		Conducting direct research on inventions or modifications in existing technology	10
	Training	Performing activities that may strengthen qualifications to allow development of innovations or successful adoption of innovations developed by companies or institutions, through internal or hired training; "learning by doing" may also be included.	11
	Inventions	Paying fees or royalties for patented inventions (which often require research and development to adapt and modify inventions according to company's needs).	12
	Consulting	Buying experience and know-how through engineering, design or other consulting services.	13
	Investing	Investing in equipment, software or material that incorporate innovation work from others.	14
	Other activities	Activities not listed above. Please leave the name of the activity and an email address for further information.	15

Figure 2 - Innovation activities

Source: OSLO Manual - OECD (2005)



3. RESEARCH METHODOLOGY

This study qualifies as qualitative (bibliographic research) and quantitative (data analysis and treatment).

According to Vergara (1999), research studies can be classified based on two initial criteria, one regarding their goals and other as to their means.

Regarding study goals, this is an exploratory research, since it aims to investigate and describe a reality not yet known, that is, to observe and categorize the innovation activities related to the activities of the managers of the company studied.

As for the means, we adopted the simple case study method, which uses the individual as unit of analysis. This method is indicated in studies with recent themes and few bibliographical references. Also, the experience of its actors is fundamental for the explanation of the research (Benbasat et al., 1987). Thus, the option to use the case study method is a good alternative for researchers in the area of innovation of management. There is no rule that defines when to use this method (Yin, 2003), but the more necessary an explanation is for a present circumstance, the more useful it will be.

The goal of the method used was to observe how a sample of company managers promotes innovation activities taking into account all their roles as managers.

We estimated a sample size of 100 questionnaires for a population of about 4000 managers. We also randomly distributed a larger number of questionnaires (135), but only 109 were responded correctly. Each duty, as seen previously, was arranged in a line of the questionnaire. The respondent was asked to read a table of the types of innovation activities and then register any activity that was promoted in each line of the questionnaire.

Individual activities of the managers, of their teams or part of their teams were also accepted. There was no restriction regarding repeating activity types in the other lines. In any case there was more than one activity for a particular line, we were requested the managers to indicate only the most relevant one. In case of any activity promoted that was not on the list of innovation activities, there would be one last item that should be used.

4. RESULTS

We tabulated all the questionnaires in a spreadsheet and performed several analyses.

Total of innovation activity types

Figure 3 below shows the total of each type of activity found in the sample.

A.I.	N	%
A1	36	6%
A2	89	14%
A3	22	3%
A4	29	4%
A5	120	18%
A6	74	11%
A7	81	12%
A8	33	5%
A9	22	3%
A10	14	2%
A11	101	15%
A12	0	0%
A13	17	3%
A14	11	2%
A15	4	1%
total	653	100%

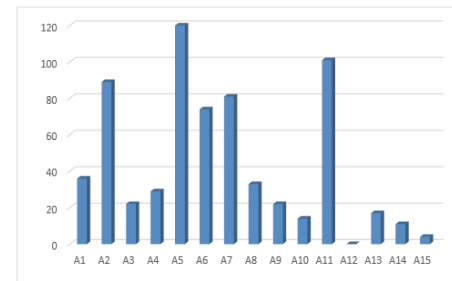


Figure 3 - Total of activities

Source: Authors' study (2015).

Innovation activities are described in the Oslo Manual (OECD, 2005) and can be: innovations themselves (from A1 to A8) or activities to support innovation (A9 to A14). Activity A15 was inserted in the research as the option to be used to classify the activities promoted that did not fall into the previous categories.

Innovations represent 74% of all promoted activities, as shown by the percentages from A1 to A8. The rest of the activities to support innovation totaled 25%, and only 1% of the activities promoted were credited to routine activities not related to innovation.

The most frequent types of innovation activities were related to types: A2 - Optimizing processes; A5 - Encouraging satisfaction in the workplace; A6 - Implementing new methods for the organization of routines and procedures; A7 - Implementing new methods to distribute responsibilities among employees; And A11 - Training.

Activity A12 - Paying fees or royalties for inventions presented no report of promotion by any manager.

Total of Activities per Managers' Duties

Figure 4 below presents the number of activities (blue bars) per manager duty. The number of activities corresponding to innovations is shown in red bars.

We observed that for all but one of the duties, the total number of activities (blue bars) is slightly higher than the number of innovations (red bars).

The exception was the seventh – Learning, in which managers have made a strong relationship with the activity to support innovation A11 – Training, as will be explained later. For all other responsibilities, there is a large predominance of innovations in relation to the number of innovation support activities.

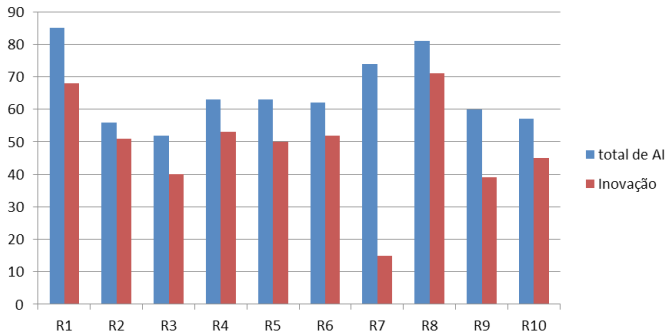


Figure 4 - Total of promoted activities and total of innovations
 Source: Authors' study (2015).

Types of activity per Managers Duties

We organized the type of activity by manager's duty according to the following figure. The numbers are the amounts of each activity promoted for each ordered pair as manager duty (R - columns) VS Activity type (A - rows).

We marked the higher values in figure 5 with stronger red tones to facilitate perception.

The vast majority of relationships (97 cells out of 150) presented one to 10 activities; 40 cells had no activity; 8 presented from 11 to 20 activities; Two, from 21 to 30; Two, from 31 to 40; And only one cell presented more than 41 activities, according to figure 6 as follows.

	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
A1	14	2	3	4	6	1	1	4		1
A2	30	8	2	6	12	17	1	8	5	
A3			8	5	3	3	2		1	
A4	8	1	1	4	3	6		5	1	
A5	2	28	6	4	7	2	3	10	19	39
A6	10	6	7	13	6	17	3	5	4	3
A7	2	5	7	4	10	4	4	35	8	2
A8	2	1	6	13	3	2	1	4	1	
A9	1	1	1	2	2	1	8	1	5	
A10	10				1		1			2
A11		4	8	4	6	3	47	5	15	9
A12										
A13	5		2	2	1	1	3	2		1
A14	1			1	2	5		2		
A15			1	1	1				1	

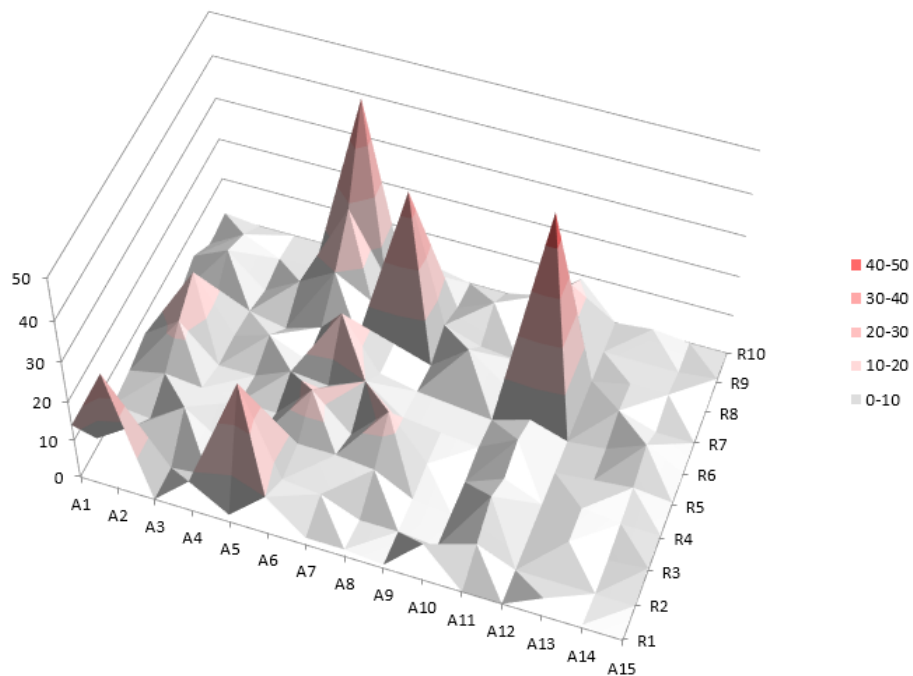


Figure 5 - Totals of each type of activity (lines) for each manager's duty (columns) of all applied questionnaires.
 Source: Authors' study (2015).



vazios	1 a 10	11 a 20	21 a 30	31 a 40	41 a 50
40	97	8	2	2	1

Figure 6 - Pareto analysis

Source: Authors' study (2015).

Analysis of the graph (figure 5) shows that many of the activities were more diluted, while few became more concentrated. This Pareto analysis of concentration revealed the five most significant relationships between managerial activities and duties:

With 28 mentions: [A5-R2], the improvement in workplace satisfaction (A5) is the most frequent type of innovation activity identified as a cause of increased performance in duty R2 - the responsibility of converging the interests of employees and company. Managers believe that stimulating activities that improve workplace satisfaction is related to the manager's duty of defending employees' interests to their superiors.

With 30 mentions: [A2-R1], or process optimization of company (A2) is the most frequent type of innovation activity identified as the alleged cause of increased performance of duty R1 - Planning. A company with little or no optimized internal processes would suffer not only in production, but also in planning itself.

With 35 mentions: [A7-R8], the use of methodologies to distribute sub-duties and decision-making power to employees (A7) is the most frequent type of innovation activity identified as a cause of increased performance in duty R8 - allocating resources (employees). Often, complex activities, large numbers of subordinates, and different employee profiles are factors that impair the allocation of resources. Consistent methodologies are needed in these moments, in order for the managers to exercise their duty properly.

With 39 mentions: [A5-R10], the promotion of job satisfaction (A5) is the most frequent type of innovation activity identified as the alleged cause of increased performance in duty R10 - managing conflicts. The author confirms that much of the work of the managers is to deal with conflicts between members of their own team, due to a strong culture of promoting satisfaction in the workplace, formally recognized in the company as an ambience plan.

With 47 occurrences: [A11-R7], formal training (A11) is the most frequent type of innovation activity identified as a cause of increased performance of duty R7 – continuous learning. Although there are many other forms of learning such as observation, critical analysis, feedback, mentoring, benchmarking, among others, managers have stressed the importance of formal training. This confirms the company's

concern to maintain a Corporate University, which provides frequent meeting of its employees and managers in courses, workshops and other activities that develop managerial competences. These meetings also allow the application of surveys like this.

In this ranking, we identified two types of innovation – process innovation (A2 and A5) and organizational innovation (A7) – and one activity to support innovation – Training (A11).

5. CONCLUSION

Five managers' duties were strongly related to four innovation activities from a quantitative perspective. The strongest relation was formal training (A11) and the continuous learning duty (R7), for 43% of managers. For 36% of managers, promoting job satisfaction (A5) was related to the duty of managing conflicts (R10). 32% of respondents considered the use of methodologies to distribute sub-duties and decision-making power among employees (A7) related to the duty of allocating resources (R8). For 28% of managers, the company's processes optimization (A2) comprised the duty of planning. For 26% of managers, improving workplace satisfaction was also related to the duty of converging the interests of employees and the company.

This study demonstrated the managers' perception in distinguishing which of their duties invest more in innovation activities. This also presented the most promoted innovation activities.

In the future, when compared with the managers' performance per each duty, this research can contribute with many analyzes. For example, in case of low average performance scores in any managers' duty, it may be interesting to check if there is any promotion of innovation activities related with that.

The outcome of this work aims to stimulate companies to encourage methodologies that allow them to better know their management body and to base their training needs.

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