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Exploring interface opportunities between research and practical project management

Many studies seek to emphasize the complexity and uncertainty that characterizes the current project management environment. In fact, it is unquestionable that some environments in which certain projects are developed are characterized by high complexity and uncertainty. However, a greater emphasis on two aspects, which are fundamental to project management, could possibly contribute to further improve the results of certain project management research. The first aspect relates to the number of very complex and uncertain projects in the companies' portfolios. If we look at the reality of most industrial and service companies, particularly in the category of small and medium-size companies, we find that in their daily routine, the vast majority of projects present neither a high complexity nor high degree of uncertainty. In other words, these are relatively simple projects in terms of design and management, showing a low degree of uncertainty regarding a large part of the results. However, many of these projects can add, and often add high value to the business. For example, the development project of a particular package; it may be a procedure that is part of the routine in the area of packaging engineering, rarely requiring high investments and/or large amounts of hours allocated to development activities, but it can be translated into millions of savings in the supply chain.

On the other hand, the second aspect of the practical reality of projects are those classified as complex and even extremely complex and may involve great uncertainty, yet they do not represent the daily reality of most projects developed in most companies. Consequently, they are not part of the daily routine activities of project management.

Therefore, it seems relevant to further explore the relationship between value-added projects and the complexity and uncertainty present in project management activities. It is possible that different typologies could arise, hence contributing to improve the definition of the specific tools and methodologies needed for each project *(or family of projects)*.

Another aspect that seems to present different research opportunities for project management comparatively to the practice in companies is to emphasize approaches that take into account the reality of the supply chain in which the project is a part of the details of the product lifecycle of the project.

In the beginning, research activities in project management were mainly developed in the area of Operations Management *(where supply problems and life cycle were infrequently and insufficiently studied)*. Currently, research on project management has become autonomous and is, for the most, part conducted by researchers dedicated to research project management as an area of expertise. It is often the case that this research does not explore the relevance of interfaces derived from studies focusing on product lifecycle and supply chain in which the product is designed, developed, industrialized, commercialized, modernized and finally removed from the company's portfolio.

By integrating certain critical issues of supply chain and product lifecycle, the results may better reflect some of the problems addressed in project management research. It is suggested that certain aspects can often only be detected by analyzing certain constraints in the supply chain in which the project is inserted, and also by identifying problems that can arise throughout the product life cycle. Therefore, this is another opportunity to create a closer link between project management research approaches and their practical reality in companies.

The same logic can be applied to different research approaches in project management: process design, modernization projects and the new industrial plants, service projects *(export & import, etc.)*, project outsourcing of certain activities related to product development and global product development projects. We should bear in mind that this logic applies to the vast majority of traditional designs. Research problems, which are often treated separately by different schools of project management *(optimization school, modeling school, school decision, etc.)*, could very well benefit from studies that often evaluate a large number of problems related to interfaces and interdependencies, such as studies on supply chain management and product lifecycle management.

Problems regarding supply chain and life cycle are also rich in complexity, ambiguity and uncertainty. Moreover, the aspects of the dimension process groups *(initiating, planning, executing Implementing, controlling and closing)* and the dimension knowledge areas *(integration, scope, time, cost, quality, human resources, communications, risk, procurement and stakeholder)* are relatively clear in terms of recognizing the importance of supply chain and projects life cycle in companies that have a relative level of maturity in project management. Although the practices of these projects would certainly require improvement, it is also unquestionable that these dimensions *(process groups and knowledge areas)* are rarely developed in an exemplary manner by a large and growing number of managers, producing the so-called project management best practices. In summary, a great deal more research in project management can increasingly exploit this opportunity to interface with the practical reality of project management in order to further enrich the final results.