

**Can we break organizational beliefs in the construction sector? Investigating possible paths to Safety Performance Measurements research.**

**GUILHERME ALCÂNTARA PINTO**

UNIVERSITÉ PARIS-SACLAY - CENTRALESUPELÉC

**ISABELLE NICOLAÏ**

UNIVERSITÉ PARIS-SACLAY - CENTRALESUPELÉC

**JOSEPH MANSOUR SALAME**

UNIVERSITÉ PARIS-SACLAY - CENTRALESUPELÉC

Agradecimento à orgão de fomento:

We want to thank the Prevention et Performance chair members, especially the companies involved. We also thank the Laboratoire Génie Industriel that made the research possible and the CentraleSupélec Foundation.

## **Can we break organizational beliefs in the construction sector? Investigating possible paths to Safety Performance Measurements research.**

### **Introdução**

The construction industry is claimed to be the most lethal sector. Despite researchers' efforts to include safety as a relevant indicator in project and firm performance management, practitioners have been using cost/schedule measures for so long that they are still trying to figure out how to boost safety performance. In fact, this prolonged usage has created a myth: investment in occupational safety negatively impacts financial performance. Fortunately, researchers have been busting this myth!

### **Problema de Pesquisa e Objetivo**

In contrast, we have been busting this myth since 1997! So, what is the problem? Why is it still so difficult to improve safety performance? What does it take to break practitioners' beliefs? To investigate this problem, this study seeks to localize safety performance measurement papers within organizational levels to present possibilities of further investigation that would allow better integration of safety into the company's management system and adjacent performance measurements. By doing so, we aim to push future studies on this field to conceive safety as a source of performance.

### **Fundamentação Teórica**

Performance measurement is a complex concept. We split it in two: organizational performance and organizational effectiveness (Richard et al., 2009). Despite the complexity, the indicators employed shapes organizational beliefs and workers' behaviors - therefore, the wrong measures provoke wrong workforce reaction (Neely et al., 1997). This leads us to safety culture and behavior analysis (Guldenmund, 2007). To analyze this, we divide the firm in three: individual, micro, and macro-organizational levels (Hofmann et al., 1995). We prepare a framework to aid further analysis in the next section.

### **Discussão**

We found 6 clusters: (i) most frequent terms, (ii) project management, (iii) safety-related terms, (iv) strategic/financial, (v) process management, and (vi) supply chain management. Safety cluster is spatially distant, and it is connected to the other categories by clusters (iv) and (v). We present the interfaces between the clusters regarding management and analytical approaches employed. Safety is localized in the individual and micro-organizational levels, on organizational effectiveness. We propose further investigation clues to conceive safety as a source of organizational performance.

### **Conclusão**

We have located safety performance measurement research in the organizational context to propose further investigations towards better integrating safety into the firm's management system. Very few studies have proposed methods or theoretically analyzed safety through the macro-organizational and organizational performance lens - a strategic approach. Future studies should investigate how safety value could flow from the individual and micro-organizational level to the macro-organizational level, enhancing the company's performance. Finally, we draw research limitations.

### **Referências Bibliográficas**

Guldenmund, F. W. (2007). The use of questionnaires in safety culture research - an evaluation. *Safety Science*, 45(6), 723-743. Hofmann, D. A., Jacobs, R., & Landy, F. (1995). High reliability process industries: Individual, micro, and macro organizational influences on safety performance. *Journal of Safety Research*, 26(3), 131-149. Neely, A., Richards, H., Mills, J., Platts, K., & Bourne, M. (1997). Designing performance measures: A structured approach. *International Journal of Operations & Production Management*, 17(11), 1131-1152.