



## The Fateful Triangle Complementarities between Product, Process and Organizational Innovation in the UK and France

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### Abstract

*This paper explores the triangle of relationships among product, process and organizational innovation, examining the complementarities and substitutes between these forms of innovation. Drawing from a large pooled sample of French and UK manufacturing firms, it investigates if firms can find a beneficial interplay between forms of innovation. A first analysis through a trivariate probit and a multinomial logit shows that the determinants of the different forms of innovation are not identical and the correlation of residuals in the trivariate probit displays national differences for the complementarities in use. The results of the tests of the complementarities in performance show that the efficient strategies of innovation combinations are not the same for all the firms. They depend on the national context as well as on the firm size and the firm capabilities, and give credit to the contingency hypothesis rather than to the naïve view of a unique best strategy. The main combinations are the “technological strategy” (product-process innovations) and the “structure oriented strategy” (organization-product), and in no case the combination of the three strategies at the same time, which is presumably too costly or difficult.*

**Keywords:** *Innovation, Organisation, Complementarities, UK, France*

**JEL codes :** *C12, D24, L25, O31*

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### I - Introduction

This paper explores the relationship between product, process and organizational innovation in order to better understand the complementarities between different forms of innovation. Since Milgrom and Roberts's (1990, 1995) seminal contributions, there has been a surge of research interest in complementarities in economics and management. This literature explores when sum is more than its parts, examining the beneficial interplay between different parts of a system (Athey & Stern, 1998). The complementarities perspective is not itself a theory of organizational design or performance, but rather an approach to help researchers to understand relational phenomena and how the relationships between parts of system create more value than individual elements of the system (Ennen & Richter, 2010). This approach helps to enrich understanding of how different practices and strategies are combined and recombined, and how such combinations shape subsequent performance.