

## **Organizational Memory: Cultural Antecedents And New Product Outcomes**

**Kyriakos Kyriakopoulos**

University of Maastricht

P.O. Box 616

6200 MD Maastricht

The Netherlands

Email: [k.kyriakopoulos@mw.unimaas.nl](mailto:k.kyriakopoulos@mw.unimaas.nl)

Phone: +31 43 3883855

Fax: +31 43 3884918

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### **Abstract**

Knowledge stocks or organizational memory are fundamental to competitive advantage according to organization science, marketing, and strategy literature (Ansoff 1988; Walsh & Ungston 1991; Cohen 1991; Walsh 1995; Moorman and Miner 1997). Drawing from the knowledge view of firms, this paper attempts to conceptually and empirically explore the role of organizational memory in new product development. Specifically it has three key objectives: (1) to identify different types of memory; (2) to examine cultural factors as antecedents of organizational memory; and (3) to investigate how firms can deploy and benefit from their memory.

**Key constructs:** Drawing from previous literature, *organizational memory* is defined as the collective values, behavioral routines, or physical artifacts (Moorman & Miner 1997) that serve as a repository for collective insights (Day 1994) containing learned ways of thinking and behaving (Walsh and Ungston 1991).

Following the same literature, I distinguish two types of knowledge stocks. First, *procedural memory* refers to process memory or memory of standard practices and routines for tasks (Nelson 1982), describing "how things are done" (Cohen & Bacdayan, 1994: 404). These routines can contain formal written procedures as well as informal norms and accepted practices, that are automatically retrieved or accessible unconsciously (Moorman and Miner 1998). Second, *declarative memory* refers to the skills and concepts or "memory for facts, events, or propositions" (Cohen, 1991: 137), and therefore, unlike procedural memory, can be more general. Memory here might consist of knowledge about incorporating customer preferences in the product design, or the technological skills of a firm's product line (Day and Nedungadi 1994).

**Conceptual framework:** It delineates the antecedents, consequences, and moderators of the memory types. Specifically, using the culture typology of Quinn (1988), the hypotheses predict that clans and adhocracies (organic cultures) will facilitate the building of declarative knowledge while markets and hierarchies (mechanistic cultures) will facilitate the creation of procedural knowledge. In addition, hypotheses predict that procedural/declarative knowledge stocks will have a positive impact on the new product's short-term financial performance but negative/positive on innovativeness. Finally, external information flows will enhance the impact of declarative and procedural memory while internal information flows will reduce their impact on financial performance and innovativeness.

**Conclusions and implications:** Using data from 127 new product development project from the food industry in Holland, the main findings of the empirical investigation show that hierarchical cultures promote the creation of procedural memory while adhocratic cultures facilitate declarative knowledge. Furthermore, declarative memory facilitates the new product short-term financial success and innovativeness directly but especially *in presence* of external information flows. Internal information flows, on the contrary, make declarative memory have negative impact on financial performance.

The conceptual model and the findings advances the extant literature and business practice in various ways. First, unlike prior studies, unlike previous research, this study has provided empirical evidence that organization memory is *embedded* in the organizational culture. Second, this study has showed that each type of memory has a *distinct* effect, and hence firms should manage the two types accordingly. Finally, this study points to a *conditional* role of memory as its value can be realized when external information flows to the firm and the new product development team. Overall, the paper has clarified issues related to the creation and valuable deployment of experience and knowledge stocks.