
2008 IPMA Young Researcher Award

Reconciling Order and Chaos in Multi-Project Firms: Empirical Studies on CoPS Producers

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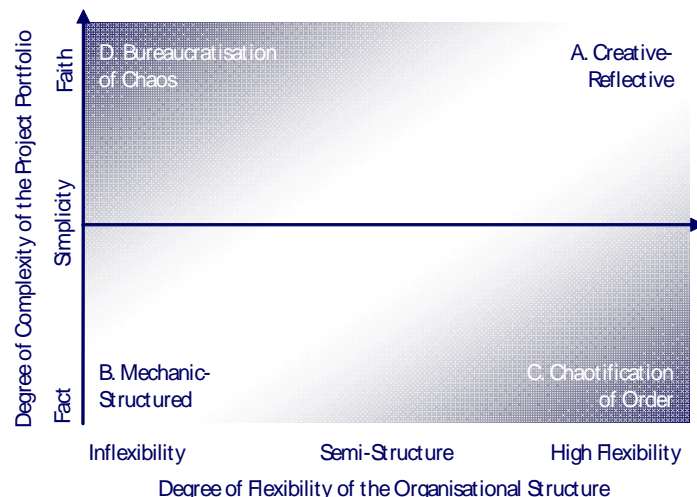
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Purpose: One of the key challenges faced by companies is to cope with the coexistence of contradictory demands; one of these is the coexistence of order (control, efficiency, standardisation of tools and processes, reliability) and chaos (creativity, innovation, flexibility to adapt to contingencies in projects). The goal of the study was to understand how multi-project firms reconcile these demands.

Conceptual Model explored the ability of organisational units to reconcile order and chaos through the fit between complexities faced by the project portfolio (complexities of faith and fact) and the flexibility of the organisational structure (flexibility around six questions: what, how, who, when, where, how much). A framework (see figure below) formed by the juxtaposition of these concepts distinguished four organisational archetypes: the creative-reflective and mechanic-structured (in fit); chaotification of order and bureaucratisation of chaos (in misfit).



The position of organisational units and the framework itself were dynamic. The necessary core competences of the company (reliability, technological innovation and interaction) to deal with different complexities were identified.

Approach and Methodology: The research was focused on multi-project firms in general and CoPS (Complex Products and Systems) producers in particular¹. It followed three phases: Exploratory Phase (literature review and 12 interviews in a large CoPS producer), Conceptualisation Phase (abductive elaboration of the Conceptual Model based on field and longitudinal studies in a CoPS producer), and Validation Phase (deductive validation of the model through a multi-case study conducted with seven CoPS producers).

Findings:

- Multi-project firms inexorably deal with contradictory demands amongst project phases, organisational units, inside of organisational units and between environment and organisation.
- Successful companies create “chaotic” structures to deal with “ordered” external demands. This enables companies to adapt to the inflexibilities dictated by clients. Companies in “chaotic” environments tend to create their own “order”. As external inflexibilities were more respected, these companies are more likely to succeed if the internal order is accepted as an “Act of God”.
- The ability to reconcile order and chaos is relevant and lies in the balance of forces leading to misfits, and in the case of mis-balance, chaotification of order is preferable to bureaucratisation of chaos (companies in bureaucratisation of chaos were less successful).
- Situated mis-balances are unavoidable. Project Conclave, Fit Chain Management and Factitious Positions (see below) are possible approaches used by project managers and members of the team to respond to misfits.
- “Interaction core competence” is advantageous to keep reconciling order and chaos.

Potential Use of the Framework: The framework provides a common language to project managers, line managers, team members in different facilities within a company and in different companies involved in the project to discuss the organisational designs able to balance order and chaos in multi-project firms. The six questions on flexibility and the concepts of complexity of faith and fact offer a basis for analysing how projects could be led (or are) to chaotification or bureaucratisation, and how could this be avoided (or modified).

Adjacent Tools:

- *Project Conclave*: team that cannot be dissolved until the achievement of its objective; this can be used to link or transform chaos into order.

¹ CoPS producers were defined as “companies which, based on their comprehensive know-how of technical, technological and managerial process, are capable of providing financing, planning, design, production or global procuring, supply, assembly, and ramping up of production or power plants with budget of minimum €15m at least once a year.” (Stroh, V., 2006. *Großanlagenbau: Portrait einer weltweit bedeutenden Branche*. VDMA (German Association for CoPS Producers) In <http://www.vdma.org/>, consulted on 21.02.06.

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- *Fit Chain Management*: Organisational units influence each other. One relevant pattern was that organisational units moved towards a higher bureaucratisation of chaos in order to compensate for the chaotification of order of others. The analysis of these mutual-dependences may assist companies to reconcile order and chaos.
 - *Creation of Factitious Position*: Employees produce an image that they are in a different place than they in reality are, and consequently increase the acceptance of their position. This was used to attend to unrealistic demands of the client, or overcome barriers to the execution of something unique, etc. However, this behaviour may also undermine genuine changes.

Value of the Work: The research aids the comprehension of how to orchestrate plurality. This ability is not only necessary for multi-project firms but also for organisations facing a world of uncertainties treated as certainties, mass customisation, regional globalisation, flexible efficiency, creative reliable solutions, etc, i.e. organisations facing the “real world”. This research commences by agreeing with Henry Adams proposition that “*chaos is the law of nature, order is the dream of man*”. Beyond making the dream of man come true and supporting the enhancement of order, control over the “chaotic” behaviour of nature and reduction of plurality, it has been argued that managing (“at the edge of chaos”) is about the reconciliation and acceptance of this dichotomy, dealing with order and chaos, man and nature.

Keywords: Multi-Project Firms, Organisational Structure, Complexity, Flexibility, Dynamic, Core Competence.

Key Publications on this Research

- Geraldi, J. G. (2008) Reconciling Order and Chaos in Multi-Project Firms: Empirical Studies on CoPS Producers. Sierke Verlag, Göttingen. (Copy of the PhD)
- Geraldi, J. G. (In Press) Geraldi, J. G. (2009) Reconciling Order and Chaos in Multi-Project Firms. International Journal of Managing Projects in Business.
- Geraldi, J. G. (2008) The Balance between Order and Chaos in Multi-Project Firms: A Conceptual Model. International Journal of Project Management, 26(4), pp. 348-356.
- Geraldi, J. G. (2007) Patterns of Complexity: the Thermometer of Complexity. In Project Perspectives 2007/2008
- Geraldi, J. G. and Adlbrecht, G. (2007) On Faith, Fact and Interaction in Projects. In Project Management Journal, vol. 38, issue 1, pp. 87-98