



T_03-06: VISIONARY ENTREPRENEURSHIP IN COMPLEX WORLDS: COMPUTER MODELING BUSINESS GAMES AND SCENARIO ANALYSIS

SIG: Entrepreneurship

T_03-06: Visionary entrepreneurship in complex worlds: Computer modeling, business games and scenario analysis.

The aim of the track is to (1) advance knowledge (2) stimulate innovative theorizing and (3) facilitate discussion and connections about the following topics:

1. Learning and teaching entrepreneurship through business games
2. Cases of utilization of computer modeling for scenario analysis.
3. Dealing with organizational complexity with computer-based scenario analysis
4. Dealing with environmental complexity with computer-based scenario analysis
5. Using business game for experimental approach to internal corporate entrepreneurship

Doing business around the world offers opportunities but forces confrontation with sociopolitical unstable scenarios. Is a business idea suitable for specific environments? New business ideas often lack analysis of their long-term sustainability. What is the inter-temporal rate of growth a business can sustain without incurring in limits to growth? Business ideas might be well designed but lacking dynamics test for sustainability. The dynamic resource-based view (Dierickx and Cool, 1989) has unveiled the limits of an equilibrium-based-analysis of entrepreneurship.

Building computer model to run simulation experiments in virtual environments provides a strong tool to support scenario-based analysis of long-term sustainability of business ideas (Delauzun and Mollona, 1999). Computer-aided process of deduction goes far beyond the human capability to appreciate long-term consequences of strategic decisions. Thus, computer simulation support entrepreneurs interpreting complex patterns of behavior such as peaks and lowest point, oscillations with different characteristics and changes in rates of growth or decline (Stermann, 2000).

Also, computer simulation supports leadership and aggregates support around a business idea. First, by learning through computer simulation, entrepreneurs are able to overcome typical bias such as focusing on neighborhood search and past decisions, overestimating current capabilities and adopting mimetic behaviors. Second, as suggested by Ajzen's theory of planned behavior, perceived control over actions reinforces the intention to realize the actions. Simulating long-term scenario represents a test bed of the robustness of a specific strategy thereby increasing perceived control over the strategy. Third, when implementing their strategies, by having simulated different scenarios, entrepreneurs are able to recognize weak

signals and better interpreting unfolding behavior.

The track encourages the analysis of:

1. Learning/teaching entrepreneurship through business games
2. Utilization of computer modeling for scenario analysis.
3. Organizational complexity with computer-based scenario analysis
4. Environmental complexity with computer-based scenario analysis
5. Business game as experimental test-bed for internal corporate entrepreneurship

We especially welcome papers that present business games and computer models or that report cases of utilization of these tools for education or as supports for entrepreneurial decision-making.

References

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- Sterman, J.D. 2000. *Business Dynamics: Systems thinking and modeling for a complex world*. McGraw Hill.

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Keywords

System Dynamics , Computer simulation, Scenario Analysis, Business games, Learning environment, Strategic Intelligence.

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