

The New Science of Networks and the Multi-National Firm

Tim Kastle and Dr. John Steen

School of Business, University of Queensland, St. Lucia QLD 4072, Australia

Corresponding author e-mail: t.kastelle@business.uq.edu.au

Studies have demonstrated that many characteristics of the economy have complex network structures. The international trade connections between nations, and the distribution of both wealth and city sizes have all been shown to have scale-free network characteristics. Functional groups such as corporate boards and industries such as banking form small world networks. Authors such as Barabasi and Watts have suggested that since complex network structures exist in the economy, they will prove to be important. The question remains: if the economy is a complex adaptive system with scale-free and small world network structure, what implications does this have for business managers?

One area in which the application of this perspective holds promise is that of international business. This paper uses complex network theory to address one of the central questions in this field: the issue of intrafirm coordination. Following from Bartlett and Ghoshal's categories of MNE forms it may be envisaged that intrafirm network properties may represent independent variables for research into MNE performance. For example, do successful transnational firms have international networks within the firm that exhibit 'small world-ness' with lesser clustering around hubs within the firm network? Or do increasing degrees of 'scale free-ness' reflect a structure that supports a more 'global' strategy'?

Laying out a concrete set of propositions linking complex network theory with international business problems will aid the development of a research agenda in this field. While a great deal of work has been done to apply non-linear dynamics to economic problems, much of this has taken place at a macro-economic level. It seems logical to think that there will also be micro-economic applications as well.