

## Co-opetition in the Supply Chain Business

In a fascinating book on chaos theory and its applicability to business, Paul Cilliers lists the attributes of what makes a system complex. A quick look at the ten attributes leads one to recognize the dynamics of a typical global supply chain.

The days of vertical integration and tight control are long gone, and today's supply chain managers have to cope with an increasingly challenging planning and execution environment in which collaboration and coordination are critical to superior performance.

Indeed they have to constantly consider a set of seemingly conflicting goals. Product lifecycles in many industries continue to shrink, and a firm has a limited timeframe to achieve acceptable ROI. And yet this need for, on the one hand, product availability and supplier responsiveness has to be managed with, on the other, an extended supply chain that has long lead times and in which control of the product through its various stages is handled by independent entities who tend to favor their own metrics.

Leading companies have realized that the old adage "Tell me how you'll measure me, and I'll tell you how I'll behave" is applicable in the business environment. They have taken steps to ensure that the loss of control due to increased reliance on partners (suppliers, contract manufacturers, ODM, logistics providers, etc.) is not coupled with a loss of purpose. All too often, a myopic approach to managing the extended supply chain results in underserving the market and a network-wide loss of revenue.

An emerging supply chain best practice, co-opetition, allows companies to leverage a set of strategic relationships to look beyond administrative boundaries and establish a truly collaborative supply chain working model.

Three layers characterize such co-opetition setups: a technology layer that allows for disparate entities to seamlessly interact and exchange information, a business process layer allowing for collaborative

1. Complex systems consist of a large number of elements.
2. The elements have to interact and this interaction must be dynamic.
3. The Interaction is fairly rich, i.e. any element in the system influences, and is influenced by, quite a few other ones.
4. The interactions are *non-linear*.
5. The interactions usually have a fairly short range, i.e. information is received primarily from immediate neighbours.
6. There are loops in the interaction.
7. Complex systems are usually open systems, i.e. they interact with their environment.
8. Complex system operate under conditions far from equilibrium.
9. Complex systems have a history. Not only do they evolve through time, but their past is co-responsible for their present behaviour.
10. Each element in the system is ignorant of the behaviour of the system as a whole.

Attributes of a Complex Systems, from *Complexity & Postmodernism: Understanding Complex Systems* by Paul Cilliers.

planning and execution processes,, and an analytics layer that provides multi-tier performance tracking as well as exceptional monitoring and handling.

Dell, as an innovator in its field, has built a Supply Chain Command Center where a cross-functional team (think of it as a real-time S&OP team) along with representatives of their key EMS and 3PL partners (connected via VPN to their respective systems) are assigned fully to this entity and leverage a multi-tier supply chain monitoring platform to proactively identify exceptions (e.g., critical shipment delays, potential inventory shortages, potential schedule adherence issues, etc.) and jointly take corrective actions.

This co-opetition allowed Dell not only to involve its partners in its inner supply chain execution processes; more importantly, it also allowed Dell to improve the efficiencies of the end-to-end supply chain as a whole—which benefited all parties.

I often like to remind friends and colleagues that in today’s global economy where access to information is so widespread, innovation has been, to some extent, commoditized! Talent is everywhere, and no company’s market position is safe. Given all the challenges discussed above, superior supply chain execution is more than ever a truly complex endeavor, and very few companies have managed to turn it into a competitive differentiator. Those who have managed this have embraced the spirit and practice of co-opetition.

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