

SUPPLY CHAIN MANAGEMENT: *the challenges are clear*

Many of the cherished manifestations of our modern life owe their emergence and maturation to the by-products of the Second World War. The manufacturing sector rapidly converted from war production to accommodate the insatiable demand for goods and services by an ever-growing number of two-income families.

This was particularly so in the USA. Elsewhere in the hemisphere, countries were shedding the yoke of colonisation and pursuing an accelerated adoption of an industrialisation strategy. Manufacturing systems with

to oil rigs, across thousands of miles. Of necessity, a revitalised shipbuilding and ship service industry was spawned, resulting in vessels capable of carrying well over 10,000 cargo containers.

Yet no single entity was able to aggregate resources capable of handling the volume and diversity of product and geography. As a consequence, an amalgamation of transport providers, computer software providers and capital developed the practice of logistics.

Magic

Hence, McDonald's, KFC, Toyota, General Electric, Hewlett-Packard, Nestlé and

rial and information affordably with precision, economy and timeliness.

Logistics encompassing traffic, transportation and distribution – with accelerated advancements in technology, communications and transportation – has since morphed into the global supply chain.

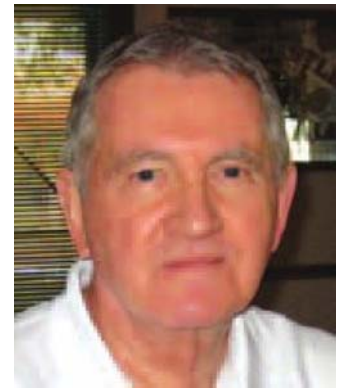
Study

According to a recent IBM study, the amount spent on the global supply chain is about US\$3 trillion. It is also, arguably, the most complex and yet fragmented market in our day, tended by a growing cadre of supply chain management professionals.

Today's global supply chain, at least at the macro level, claims to be a well oiled machine. But it is not always so. Despite significant advancements, the micro world of day-to-day operations continues with the daunting challenge of ever-rising customer expectations.

Supply chain

For decades, the building blocks of the modern supply chain – purchasing, operations, traffic and data processing – were regarded



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as peripheral to corporate success and were viewed top-down as redundant, non-value, back-room expenses.

These functional departments, enjoined to reduce operating expense and make do with less, were cloistered defensively behind procedural mysteries and without an incentive to change the *status quo*. Many department managers saw change in terms of budget constraints, increased labour costs and operating capital drain. Others, who were unskilled, unknowing, risk averse or simply lazy, were reluctant to accrue costly technological advances or take on the risk of process changes. The inventiveness of re-engineering, outsourcing, enterprise resource planning,

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complex support mechanisms found it a challenge to create production processes capable of satisfying the need to move everything from flip-flops to flat-screen televisions, and from bananas

Mini Marts became ubiquitous because the world suddenly, if not accidentally – or perhaps in spite of itself – discovered the magic and ability of logistics to meet the need to move people, mate-

radio frequency identification technology and the like were, and continue to be, a sombre challenge to their *status quo*.

A number of progressive companies, and their managers, recognised that the 'Same Stuff on a Different Day' syndrome would no longer be productive or capable of serving the continued prosperity of the enterprise.

Concept

Globalisation, though at best an imprecise concept, forced an undeniably vigorous competitive environment on many companies. Once dominant and secure in a turtle-paced business arena, many here-

competition and enabled by advanced information technology, many companies have revamped their supply chain to reduce costs and increase responsiveness to changes in the market.

The likes of Wal-Mart, Colgate, Procter & Gamble, Target, Johnson & Johnson, Motorola and Apple are setting the standards by matching production and procurement to customer requirements as well as relentlessly pursuing efficiencies throughout the chain, less reluctantly than in the past. These chain forgers are looking towards academia for help. Such efforts have

Novack, Agryris, Bertrand and Bowersox – who over decades offered their works in pure research, model building, surveys, case study research, action research, quantitative modelling and experimentation. In turn, their works fostered a growing interest in specialised higher learning. In 2004 the Graduate Management Admission Council ranked Operations Logistics as the sixth most requested area of specialisation for an MBA. Taking specialised learning to the next level, the noted MIT academic and consultant Yossi Sheffi, who is also director of the MIT Center for Transportation Logistics, is drawing the attention of US industry with the MIT-Zaragoza International Logistics Program, which fosters partnerships among academia, industry and government to advance the supply chain. Forward-looking companies are subscribing to academic journals and exploring scientific and quantitative techniques to advance the value calculus of the supply chain.


3. Disruptive events

Catastrophic, episodic and unexpected events have captured headlines since the first days of print. Now, with instantaneous high-tech communications networks and social media tools, we are real-time witnesses to disruptive events. Each event – whether a natural catastrophe, a political convulsion, an economic crisis, or a terrorist attack – frequently and severely strains each link of the supply chain.

Attempting to predict catastrophic events is best left to the black-box phenomena researchers. A critical, albeit aggressive, look at pattern projection, frequency and probability statistics and the application of risk management techniques, coupled with hire and promotion of creative people with right-brain ideas, will provide the framework to mitigate service and supply disruptions in the future.

With the three forces identified here, strategic alignment, in-house silo elimination and integration, partner collaboration and synchronisation within the supply chain will be necessary to meet the challenges posed by an ever-dynamic world economy. The growth in business logistics systems in recent years has been dramatic.

As Dominic Obrigkeit, vice-president of Evergreen, one of the world's largest shipping companies, notes: "Survival for today's global player requires inventive thinking followed with quick and decisive action. The arena is fast-paced and challenging. And it is not at all forgiving. The wrong action – or, worse, inaction – causes the movement of goods to stop [and] that is fatal."

The challenges for today's supply chain management professional are, indeed, clear. 

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tofore giants of industry had been rendered irrelevant by the new world order – to wit, the demise of such venerable names as Rover, Polaroid, Pan Am, British Leyland, Atari, Daewoo, F.W. Woolworth, Xerox and more.

Challenging and changing times

Consider three independent forces that significantly affect the supply chain process and frame industry's ability to respond to the forces of globalisation:

1. Corporate inventiveness

Supply chain management is about the management of the material and information that flows in multi-staged production and distribution networks. Since these are driven by fierce global

improved the modern supply chain's ability to deliver a sustainable competitive advantage to firms by bringing value to the consumer. Thus, these companies are ensuring their continued success, at least until the 'Next New Thing' rears its head.

2. Academic research

The history of formal supply chain study is well documented, generally in scholarly journals. Supply chains, characterised by multiple dependencies, complexities and fragilities, have provided ample research material. In the late 1990s and early 2000s, the practitioners, seeking alternatives to the tried and true, turned to the archetypal 'blue bloods' of research – Mitroff,