

2008

A global analysis of supply chain trends in the health industry

Siti Zulkiffli

Peter Wayne Robertson

University of Wollongong, peterrob@uow.edu.au

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Recommended Citation

Zulkiffli, Siti and Robertson, Peter Wayne: A global analysis of supply chain trends in the health industry 2008.

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A global analysis of supply chain trends in the health industry

Abstract

• An outlook for the pharmaceutical and medical logistics market • Achieving success in the pharmaceutical supply chain • Improving efficiency along the supply chain

Disciplines

Business

Publication Details

Zulkiffli, S. & Robertson, P. Wayne. (2008). A global analysis of supply chain trends in the health industry. The 5th Annual PharmaMed Logistics 2008.



A GLOBAL ANALYSIS OF SUPPLY CHAIN TRENDS IN THE HEALTH INDUSTRY

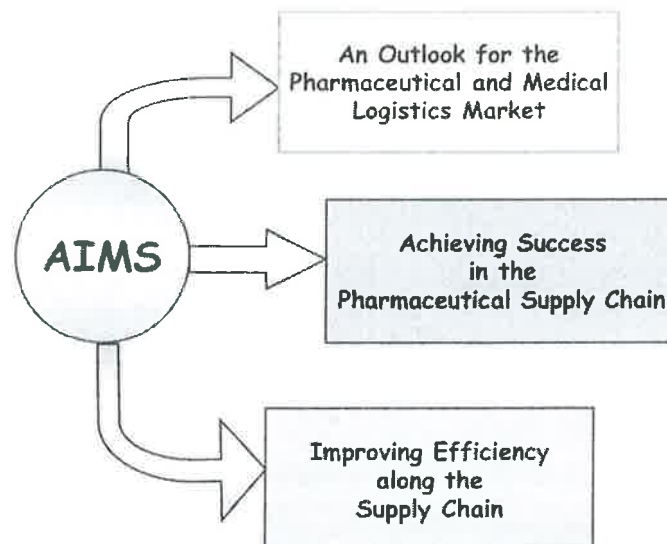
Siti Nur 'Atikah Zulkiffli¹
Dr. Peter W. Robertson¹

¹GRADUATE SCHOOL OF BUSINESS
UNIVERSITY OF WOLLONGONG

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THE BURNING ISSUE



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BACKGROUND (1)

The Pharmaceutical Industry is Big

Global Sales in 2008 are expected to reach
US\$735 billion

Annual rates of sales growth are slowing but still
of the order of **5% to 6%/year**

Source: IMS 2008 Global Pharmaceutical Market Forecast (2008)

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BACKGROUND (2)

North America is the area of largest sales albeit with lower growth

<i>Region</i>	<i>Share</i>	<i>Region</i>	<i>Growth</i>
North America	45%	North America	4~5%
Western Europe	23%	Western Europe	4~5%
Japan	10%	Japan	1~2%
Australia	1%	Emerging Econ. ¹	12~13%
Rest of World	21%		

Source: IMS 2008 Global Pharmaceutical Market Forecast (2008)

¹ China, Brazil, Mexico, South Korea, Turkey and Russia

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BACKGROUND (3)

Pharmaceutical Companies are very profitable

<i>Profitability Measure</i>	<i>Pharma Median</i>	
Return on Revenues	14.3%	4.6%
Return on Assets	10.3%	3.1%
Return on Shareholders Equity	22.1%	12.6%

Source: Fortune 2003 results for 500 companies surveyed

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BACKGROUND (4) ... THE TOP 10 PLAYERS



Source: MM&M (May 2008, p. 46)

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BACKGROUND (5)

Pharmaceutical Companies are new-product compelled... but it is risky business

- The industry is highly regulated
- On average only 1 out of 5000 medicines is approved for patient use
- The average cost of bringing a new medicine to market in the 1990's was US\$802M *and growing!*
- The average development time for a new drug is 12~15 years
- On average only 30% of new drugs make money
- Prescription drugs account for 10.5% of total health care cost

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BACKGROUND (6)

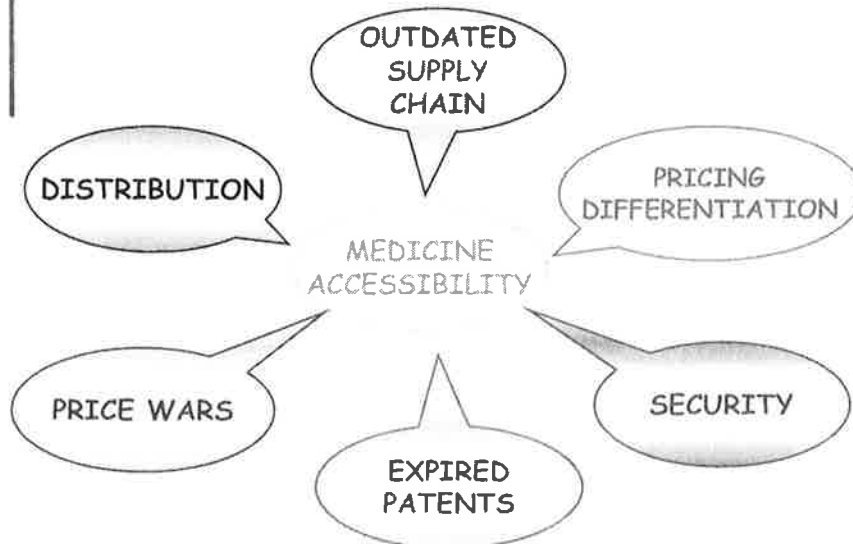
The Pharmaceutical World is Nevertheless Changing

- "Healthcare costs have outpaced inflation in 13 of the last 17 years" (Porter & Teisberg, 2004)
- Convoluted price/rebate structure exists with poor incentive alignment between manufacturers & distributors
- Government interventions (e.g. NICE in UK)
- Expiration of patents leading to growing number of generic products
- Parallel trade in drugs where drugs are purchased in a low price country and on-sold to a high price country
- Continuation of industry consolidation
- The pharmaceutical industry's supply chain is bloated with inventories and burdened with inefficiencies

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SUMMARY OF ISSUES



Source: Bauer (2005); Grigjanis (2008)

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SPECIFIC SUPPLY CHAIN ISSUES

The Pharmaceutical Industry's Supply Chain

"... is characterised by clinician selected products, high inventory levels, discontinuous product flows, paper-based information flow, inconsistent technologies, inefficient buying practices, and high costs associated with the administration of contracts and rebates."

(CSC Consulting, 1996, p.25)

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SYSTEM DYNAMICS DRIVEN BY CULTURE

Start here

Patent expiry, IP breaches, generic products - all drive motivation to develop and launch new products

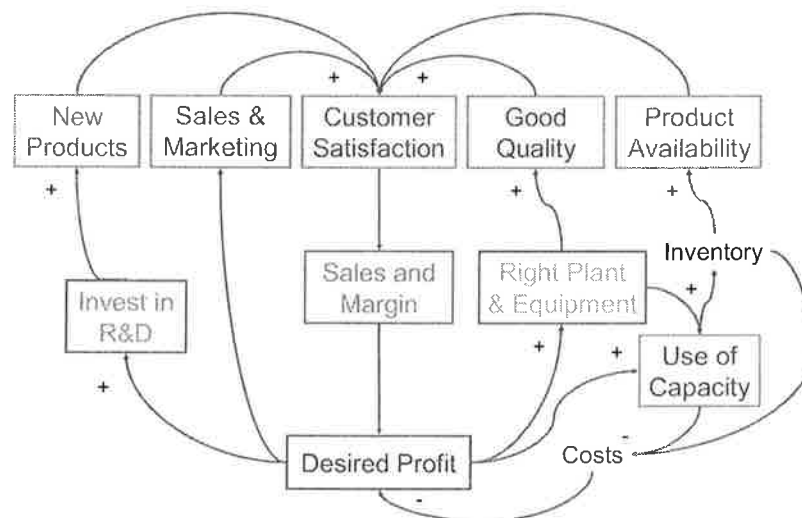
When new products are launched, plentiful supply is ensured in order to capture all sales opportunities

Lack of supply chain coordination and drive for sales means bloated supply chain inventories and failed deliveries

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SYSTEM DYNAMICS – THE DETAIL

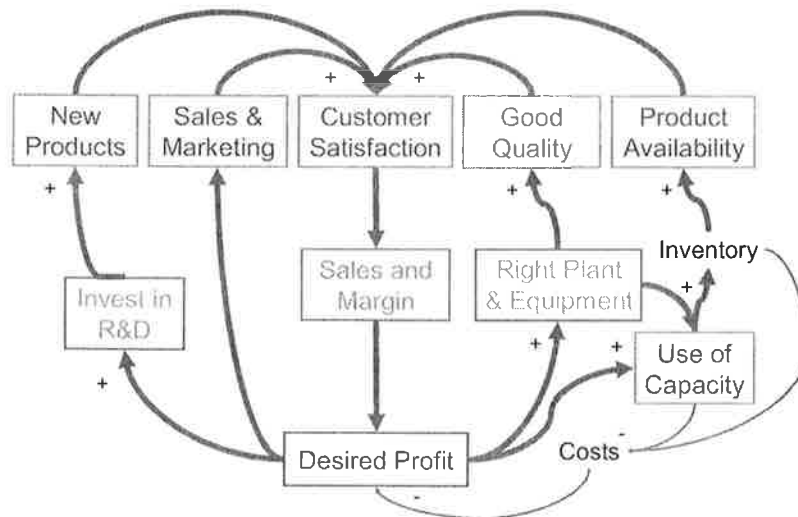


Source: Adapted from Singh 2005

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SYSTEM DYNAMICS – THE PRIORITY

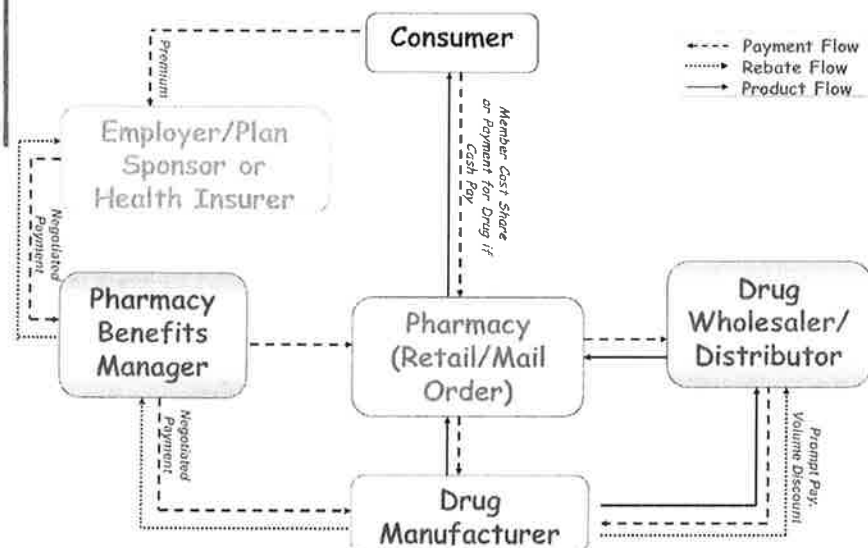


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PHARMA SUPPLY CHAIN OVERVIEW

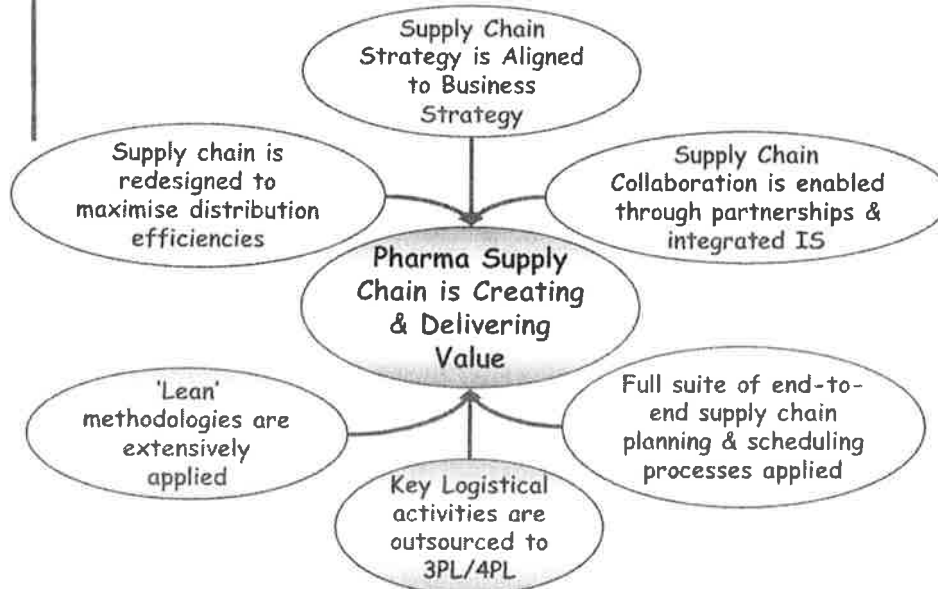


Flow of Goods and Financial Transactions among Players in the U.S. Commercial Pharmaceutical Supply Chain

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Source: Adapted from LLC (2005, p. 34)

THE PROPOSED FUTURE (1)



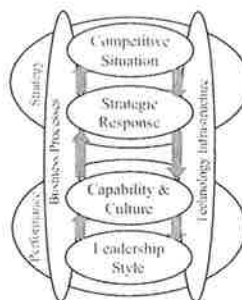
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THE PROPOSED FUTURE (2)

Supply Chain Strategy is Aligned to Business Strategy

- The strategic issues of pricing, new product development cost management, channel to market models, product IP security and partner profit sharing all need to be sorted out and the precise strategy for each of these issues defined
- Then the model below can be completed and be the precursor to the supply chain management strategy required to support it



- Rules
- Playing the Game
- Culture and Leadership

(Source: Gattorna, 2003)

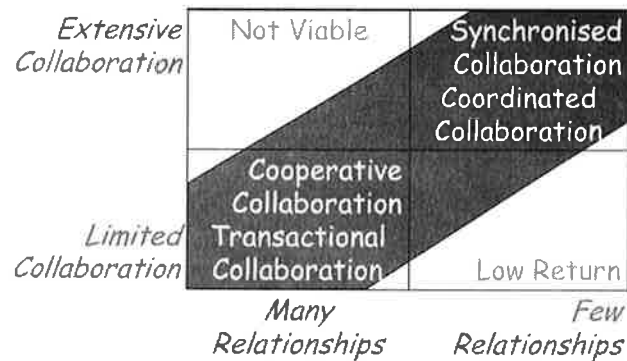
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THE PROPOSED FUTURE (3)

Supply Chain Collaboration is Enabled through Partnerships & Integrated IS

The Collaboration Spectrum:



Supported by competent and modern Information Systems

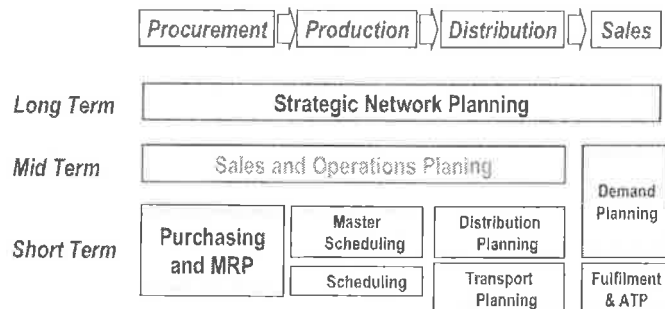
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THE PROPOSED FUTURE (4)

Full Suite of End-to-End Supply Chain Planning & Scheduling Processes Used

- Many proven software applications exist today that can be used to enable the following necessary processes...



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THE PROPOSED FUTURE (5)

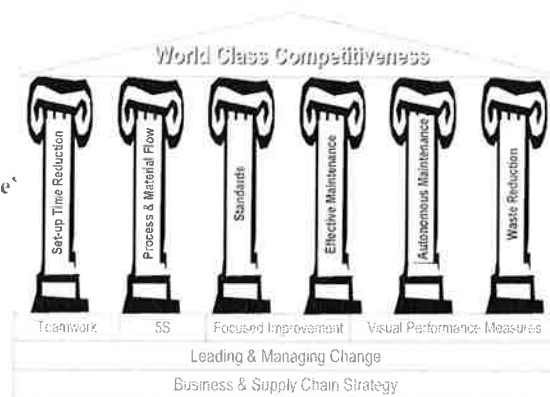
Key Logistical activities are outsourced to 3PL/4PL

- 3rd Party and 4th Party Logistics providers have grown in competence since the concept was introduced into industry about a decade ago
- By now there are a number of truly capable 3PL and 4PL providers such as DHL, FedEx, UPS, Linfox, Toll
- The pharmaceutical industry could do well to consider such companies as potential partners in achieving greater channel:
 - *Efficiencies*
 - *Reliability of delivery*
 - *Security over the channel*

THE PROPOSED FUTURE (6)

'Lean' methodologies are extensively applied

The 'House' of Lean



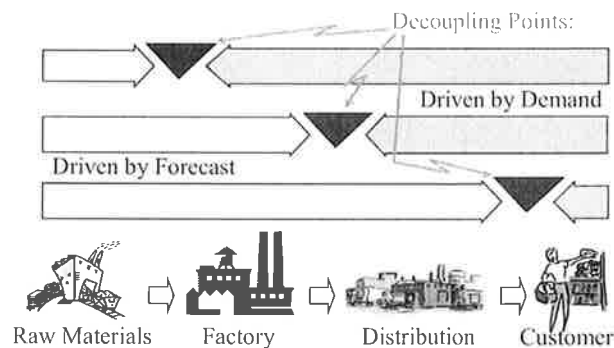
THE PROPOSED FUTURE (7)

Supply chain is redesigned to maximise distribution efficiencies

Using a combination of:

- *Weighted-factor rating model*
- *Break-even model*
- *Centre-of-gravity model*

Determine the optimal location of pharma distribution facilities
And marry that with Agile capabilities...



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THE CLOSE

In the shifting pharmaceutical marketplace, "building relationships directly with patients as they become better educated and take a more active role in their own healthcare also is essential. And the industry must continue to engage the broader healthcare community in a rational and positive dialogue about the delivery of higher quality healthcare to patients at lower cost."
(Aitken as quoted in IMS Global Insights, 2008)

The underlying pharmaceutical industry dynamics are changing and the industry needs to develop and implement a sensible response to this situation... the application of robust supply chain management techniques can help the industry do this

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thank you for your time
any questions??