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MATERIALS MANAGEMENT REVIEW



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Logistics Technology Trends 2020



Impact Analysis of COVID-19

Industrials

The Industrials sector will see **NEGATIVE** impact due to COVID-19 outbreak and is expected to register at Par growth rate compared to the global GDP growth



IMPACT

Market Impact

This market will have **NEGATIVE IMPACT** due to the spread of COVID-19



Pandemic Impact on Market

INDIRECT

Global Logistics Market 2020-2024

Market growth will **ACCELERATE** at a CAGR of almost **2%**



Incremental growth



\$ 95.42 bn

Growth for 2020

(1.49)%



IMPACT

Market growth in 2020 likely to **DECREASE** compared to 2019

Expected time by when the impact on market will normalize



Q3-2021 [Best Case]



Q1-2022 [Worst Case]



Market estimates to be revisited and updated in Q3-2020, based on the revaluation of the impact as the pandemic spread plateaus. The update will be available free of cost to all customers.

From the Desk of The National President



Dear Members,

Greeting from National President!!

As we are entering the last quarter of 2020, the end seems near of a traumatic year which has brought the entire world to its knees. The global pandemic has set new normal in every walk of life. One of the biggest take away of this year is health has gained center stage in our life. In the quest for success and materialistic pleasure health had become a secondary priority. People have learnt a hard way the importance of leaving a healthy lifestyle. Another area where we have noticed significant progress is online learning. Since work from home has become a new normal, people are able to get more time for self-development after their office hours. With the availability of online learning by way of webinars, e-learning, etc. more and more people have pursued various online courses which will help them to gain competitive edge in their respective discipline. Standalone institutes like IIMM which is into distance learning mode have a great role to play. We have put in all our efforts by organizing over 75 online classes covering various subjects for PGDMM and PGDSCM&L.

On 4th Sept. 20, IIMM lost one of the most respected member, a great academician, and an excellent human being Prof. A.K.Saihjpal. Prof. Saihjpal's demise has caused an irreparable loss to IIMM. He made a significant contribution in streamlining various educational activities in IIMM during last six months. I take this opportunity to pay my respect and heartfelt condolence to all family members of Prof. Saihjpalji.

We are in the midst of admission for June – Dec. session. I urge all IIMMites to assist us in enrolling maximum students in our two AICTE approved courses pertaining to PGDMM and PGDSCM&L. Let us collectively target to avail our full quota of 400 students each in these two courses. As already communicated earlier, for the benefit of students seeking fresh admission in IIMM courses, we have given 10% COVID discount in the course fees of 1st Semester and instalment scheme towards fees payment for students of every semester. Although the admission numbers till date is encouraging but we still have to realize our full potential.

In order to make a positive impact towards environment, we have issued communications to all our members to let us know their preference to have a hard copy of MMR or soft copy. As a rule, we will be circulating e-copy of MMR to all our paid members. I take this opportunity to urge all members in our green and ecofriendly initiative.

My greetings to all IIMMites and their family members on the occasion of forthcoming festival of Navratri and Durga Puja. Stay healthy and stay safe.

With Warm Personal Regards



Malay Mazumdar

National President, IIMM

Email: Malay_mazumdar@yahoo.co.in

From the Desk of Chief Editor



Dear Members,

Indian Logistics system has been jeopardised with no. of problems like high logistics cost (14% of GDP), high transit time, poor infrastructure, highly fragmented and complex regulatory structure with more than 20 government agencies, 40 partnering agencies, 37 export promotion councils, 500 certifications and 10,000 commodities.

Over and above, Covid-19 epidemic has brought in new set of challenges. This has slowed down the economy (negative growth of 23% for Indian Economy in April – June Quarter) of the entire world and affected great corporate and businesses. Ensuring fast and safe movement of goods amidst these turbulent times became a challenge and this is where logistics assumed an utmost important role in the Covid-19 scenario, helping businesses continue their operations.

However, E-commerce ecosystem has witnessed a significant shift during the Covid 19 Pandemic, with steep rise in order volumes and it is reported that India's online grocery market sales may reach Rs 225 billion (\$ 3 billion) in 2020, registering a growth of 76 percent from 2019. E-commerce companies are focussing on same-day delivery with the pandemic influenced lockdowns placing greater dependency on e-commerce for food and grocery items provided logistical challenges are met efficiently and effectively.

Govt. has implemented series of reforming steps in the Logistics Sector such as granting Infrastructure status to Logistics Sector so that easy and cheap loan can be availed. Drafting a National Logistics Policy which will bring transparency & efficiency into the system and impact Logistics industry in a positive manner. Implementation of GST, Logistics Park Policy etc.

In a recent, Webinar organised by PHD Chamber of Commerce, Mr. Pawan Aggarwal, Special Secretary, Logistics Division under Ministry of Commerce said that, Commerce Ministry is considering replacing the current Multi Modal Transportation of Goods Act with full-fledged National Logistics Law with a view to promote growth of the logistics sector and bringing down the cost of logistics from 14% to 10%. He also asserted that National Logistics Efficiency and Advancement Predictability Safety Act (NLEAPS) is under consideration, which will define the space of logistics and create a light regulatory system.

The move assumes significance as high logistics cost impacts the competitiveness of domestic goods in the international market. Effective implementation of the policy would help provide an impetus to trade, enhance export competitiveness, and improve India's ranking in the Logistics Performance Index.

Modern Day Business requires Modern day Solutions for their problems especially during the ongoing crisis of Covid 19 Epidemic. Advance Technologies like Artificial Intelligence, Big Data Analytics, Autonomous deliveries has evolved extensively to support various logistical activities and corporations/business houses have starved continuously to introduce new innovative technology driven logistics processes to offer paperless and no/low contact operations to improve their system of deliveries and streamline them in a best possible manner.



(DR. M.K. BHARDWAJ)



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MATERIALS MANAGEMENT REVIEW

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PREPARING FOR POST COVID-19 SUSTAINABLE SUPPLY CHAIN

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Abstract : Coronavirus COVID-19 had disrupted the supply chains of all enterprises and particularly those who had global sourcing links. During the last two to three decades most of the supply chains had gone global in order to reap the benefits that global supply chains provide with respect to integral cost, total quality and time to market. COVID -19 had changed abruptly the demand as well as the supply side of the chain and the supply chain actors were rooted out from the bases. As the impact of this was severe and shall completely re-define the demand, supply, consumption pattern of the post COVID supply chains, it was felt necessary to undertake a research study involving supply chain practitioners and experts across industry domains to understand how the solutions for post COVID supply chains shall emerge. This article enumerates the backdrop and details of the aforesaid research work.

Keywords : COVID-19, Sustainable, Delphi Technique, Paired Comparison, Scenario Building Exercise (SBE), Supply Chain Integration, Agile Supply Chain, Sourcing, Quick Response Manufacturing (QRM)

Introduction : The COVID-19 pandemic is a global crisis without modern parallel. During the last two to three decades, most of the growing companies have gone global based on globally connected supply chains. The coronavirus pandemic exposes the vulnerability of such globally connected supply chains which shall face major reshuffle and monumental restructuring. As the outbreak spreads, supply chain vulnerability shall multiply and ultimately may lead to total collapse. The rapid spread of the pandemic may bring another shockwave, exposing global manufacturing to a stress test. The era of globalization, as we used to know, may come to a standstill with the world witnessing emergence of a new era.

The COVID-19 pandemic has hit the business world in an unprecedented scale and speed. It has resulted in standstill in many businesses, work suspension in production units, disruption to global manufacturing industries and their supply networks, dwindling workforce availability and fear of extinction of

specialized skills, plummeting consumer confidence in disrupted supply chain. This has led to acute stress on working capital for business. Owing to the globalization of supply chain ecosystems over the previous 2-3 decades seemingly no company is immune.

Questions facing the supply chain fraternity as global lockdown is lifted in Post COVID scenario are: How consumer behaviour may change or go for a paradigm shift?, How shall supply chains be affected due to changing consumer behaviour?, What shall be the emerging consumer demands?, What are the areas businesses should stress and focus on now and in the coming months to prepare for the post COVID era?

COVID 19 can be termed as a Black Swan event which shall completely disrupt the global economy. It may cause the collapse of global supply chains. COVID-19 is causing large scale disruption to global supply chains with further impacts yet to be fully felt. Understanding the supply chain both upstream and downstream is critical to the continued effective management of a business' supply chain operations. One unique attribute that differentiates this crisis from others in recent years is its worldwide effect on both demand and supply side of the supply chain. Furthermore the consumption pattern within the supply chain shall get completely disrupted. Actors in the supply chain will go through a paradigm shift with respect to human psychology. A major challenge the situation poses is to deal with the "Bullwhip Effect" as a result of major swings in inventory due to panic buying and hoarding of consumers, the impact of this sudden demand being magnified as it moves upstream in the supply chain.

There is not an iota of doubt that there shall be gargantuan re-shuffling of supply chains in the post COVID-19 period. The question is how to prepare and tune the organizations for this new era so that they are ready with robust, innovative and adaptable supply networks sustainable enough to take on the next "Black Swan".

This article attempts to unfurl this critical challenge and throws light on some critical domains emerging

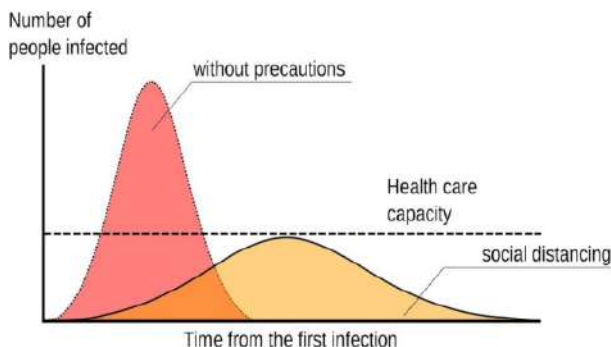
through this COOVID-19 scenario to better prepare the organizations in the post COVID-19 world with regard to their supply chains.

Literature Review : ‘The concept of black swan events was popularized by the writer Nassim Nicholas Taleb in his book, *The Black Swan: The Impact Of The Highly Improbable* (Penguin, 2008). The essence of his work is the world is severely affected by events that are rare and difficult to predict. The implications for markets and investments are compelling and need to be taken seriously’. (Investopedia, Brian J Bloch, June 25, 2019)

However, the concept was challenged by Nouriel Roubini who said these are predictable vulnerabilities. “In my 2010 book, *Crisis Economics*, I defined financial crises not as the ‘black swan’ events that Nassim Nicholas Taleb described in his eponymous bestseller but as ‘white swans’. According to Taleb, black swans are events that emerge unpredictably, like a tornado, from a fat-tailed statistical distribution. But I argued that financial crises, at least, are more like hurricanes: they are the predictable result of built up economic and financial vulnerabilities and policy mistakes.” (Nouriel Roubini#, *The Guardian*, International weekly edition, 19th Feb 2020)

Whether we agree to either of these two philosophies, it is clear that not enough measures were taken by the nations to make the supply chains resilient leading to COVID-19 Supply Chain Collapse. The companies and nations were busy to create supply chains for their narrow gains, going miles apart from supply chain global integration.

For the crisis of today, the literature review points out crisis emerging out of uncertainty of predictability of measures like **social distancing**. Work of Neil J Rowan, John G Laffey published in *Elsevier*, volume 725, July 2020 highlights this uncertainty.



While talking about solutions for post COVID-19 Supply Chains, author Amitava Sengupta, entrepreneur media, inc, April 2020 highlighted concept of ‘supply chain control tower’a single platform for all actors, but seem

to be originating from his own perspectives and not necessarily through a research methodology.



Sources: Llamasoft; Goldman Sachs Global Investment Research

The Economist

The above figure depicts the supply chain and manufacturing risks associated with the COVID-19 pandemic. Industries which have good inventory buffers and more number of alternate supply sources are at lower risks. Accordingly, automotive industry is at a relatively lower risk in terms of their supply chains while retail and pharma are at medium risk and high tech industries are at a higher risk.

Research Method

The following research techniques were deployed for collection of primary data and its scientific analysis:

Delphi Technique
Paired Comparison Matrix
Decision Evaluation Matrix

There were total of 225 respondents participated in this survey conducted during the period March 2020 to mid of April 2020. Survey was conducted maintaining social distancing protocols through webinars on digital platforms. Most of the respondents were supply chain practitioners and experts and few were from educational institutions teaching and consulting in supply chain domain. All participants remained anonymous minimizing the risk of ‘bandwagon effect’ or ‘halo effect’, allowing free expression of opinion, encouraging open critique which facilitated admission of errors while revising earlier judgements. Respondents participated in four webinars and five rounds of iterations. In the initial round, there were 120 ideas generated and at the end of fifth round it converged to twelve different proposals. Table below gives the breakup of respondents:

Respondent Demography

Type of organizations	No. of respondents
Global Multinationals	15

Large Transnational Companies	10
National Companies	35
Consulting Companies	04
Educational Organizations	35
Supply Chain Students	30
MSME Sector	96
TOTAL	225

Results and Analysis

The proposals were tabulated under following broad headings:

SL. NO.	PROPOSAL
1	Quick Response Manufacturing (QRM)
2	Supply Chain Integration
3	Scenario Building Exercise (SBE)
4	Supply chain visibility
5	Sourcing
6	Automation
7	Industry 4.0
8	Safety stock
9	Forecasting
10	Machine learning
11	Agile supply chain
12	Multiskilling

The respondents converged to the following seven criteria for the purpose of evaluation of proposals:

Cost Effective, High Impact, High Sustainability, Ability to Absorb shocks (Black Swan), Adaptability, Ease of Implementation, Capability to cut across (industry segments). Paired Comparison was done to arrive at weightage of each factor.

EVALUATION MATRIX

IDENTIFY CRITERIA FOR SELECTION

IDENTITY	CRITERIA	SCORE	RANK
A	Cost effective	2	4
B	High impact	5	3
C	High sustainability	9	1
D	Ability to absorb shocks (Black Swan)	8	2
E	Adaptability	1	5
F	Ease of implementation	1	5
G	Capability to cut across (industry segments)	8	2

NB : Scores and Rank derived from Paired Comparison Table.

PAIRED COMPARISON CRITERIA

COMPARISON	POINTS
Major difference	3
Medium difference	2
Minor difference	1
No difference	0

PAIRED COMPARISON TABLE

A	B	C	D	E	F	G
	B2	C3	D2	E1	A2	G2
	B	C1	D2	B2	B1	G1
		C	C0	C2	C2	C1
			D	D2	D2	D0
				E	F1	G3
					F	G2
						G

Conclusion : From the detailed research study conducted and considering the ranks of the various proposals, it can be concluded that the following interventions to a large extent may prove to be effective in preparing for a post COVID-19 sustainable supply chain:

1. Scenario Building Exercise (SBE)
2. Supply Chain Integration
3. Agile Supply Chain
4. Sourcing
5. Quick Response Manufacturing (QRM)

After the COVID 19 situation dissipates, the world shall see companies fall into one of two categories:

Companies that didn't do anything hoping that such disruption won't ever happen again. These companies are taking a highly risky gamble.

There will be firms that learn from this crisis, garner and implement robust interventions that shall make them well prepared when the next crisis strikes (next Black Swan) and equip them with solutions (as mentioned above) when disruptions occur.

The second group of organizations shall emerge as winners in the long run.

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DECISION MATRIX

5-POWENT SCALE 5- EXCELLENT 4- VERY GOOD 3- GOOD 2- FAIR 1- POOR	DESIRED CRITERIA	HIGH SUSTAIN ABILITY (C)	ABILITY TO ABSORB SHOCKS (BLACK SWAN) (D)	CAPABILITY TO CUT ACROSS (INDUSTRY SEGMENTS) (E)	HIGH IMPACT (B)	COST EFFECT TIVE (A)	ADAPTA BILITY (G)	EASE OF IMPLEME NTATION (F)	TOTAL	RANK
PROPOSALS	WEIGHTAGE FOR CRITERIA	9	8	8	5	2	1	1		
QUICK RESPONSE MANUFACTURING (QRM)		4	3	3	4	3	3	3	132	5
SUPPLY CHAIN INTEGRATION		36	24	40	20	8	3	3	157	2
SCENARIO BUILDING- EXERCISE (SBE)		3	4	3	3	4	4	3	161	1
SUPPLY CHAIN VISIBILITY		40	32	40	20	8	3	3	129	6
SOURCING		3	4	4	4	2	3	2	139	4
AUTOMATION		36	32	32	20	10	3	4	103	11
INDUSTRY 4.0		3	3	3	4	2	2	2	126	7
SAFETY STOCK		4	3	4	3	2	3	2	105	10
FORECASTING		18	32	32	15	4	2	2	116	9
MACHINE LEARNING		4	3	4	3	2	2	3	103	11
AGILE SUPPLY CHAIN		36	24	32	20	4	2	2	150	3
MULTISKILLING		3	2	4	4	2	2	2	122	8

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#Nouriel Roubini is a professor at NYU's Stern School of Business and was senior economist for international affairs in the Clinton White House's Council of Economic Advisers. He has worked for the IMF, the US Federal Reserve and the World Bank.

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STRATEGIC SUPPLY CHAIN MANAGEMENT: A STRATEGIC APPROACH FOR ENHANCING BUSINESS PERFORMANCE

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Introduction : There are various drivers influencing performance of the firms. One of them, strategic supply chain approach, is about strategic thinking on supply chain management (SCM) to enhance the firm's performance. SCM is "the management of upstream and downstream relationships with suppliers and customers in order to create enhanced value in the final marketplace at low cost to the supply chain as a whole" (Christopher, 2011). SCM is a critical success factor for today's organizations.

Firms can experience improved performance through SCM by aligning various processes from customer and its upstream, and sharing relevant data for enhancing customer value proposition. SCM operates at three levels: strategic, tactical and operational (Cooper et al., 1997). The highest level of SCM decisions is the strategic -also referred as strategic supply chain management (SSCM) which is relevant to the entire organization.

Any action plan to enhance supply chain (SC) performance makes efforts to align supply and demand, reduce overall costs and enhance customer satisfaction (Madhani, 2018). Bruce et al., (2004) defined a supply chain as "a process that describes the flow of goods from the production of a product right through to the final sale to the end consumer". According to Poluha (2006): "A supply chain is a coordinated system of organizations, people, activities, information and resources involved in moving a product or service in physical or virtual manner from supplier to customer".

Conventionally, the focus of supply chain has been on moving materials in the whole delivery process and hence it has been labeled as 'support' function in the value chain as support functions help firms in achieving their goals. The traditional supply chains have aimed to become leaner with shorter lead times and more cost efficient to lower costs (Christopher, 2005). However, with focus of only cost efficiency they are more vulnerable to unexpected events and as a result, they faced major problems such as stock outs and disruption of activities (Lee, 2004). In this context, strategic supply chains take a crucial role in enhancing efficiency and effectiveness of operations. Strategic supply chains are capable of building competitive advantage by balancing higher efficiency requirements along with better demand management while managing supply chain risks.

Strategic Supply Chain Management (SSCM): Key

Dimensions : The main theme of SSCM is not limited to the use of a supply chain as a process to deliver goods and materials to right place, as its scope is extended to elevate strategic position of a firm by strengthening its overall business performance. In this way, strategic supply chain approach transforms traditional supply chain from a functional role that guides operational strategy as a supporting function to a central theme of the business strategy. SSCM can enable firms to create value in multiple ways and shows how the role of supply chain is being redefined, from an operational tool to a bonafide competitive strategic weapon.

The value of SSCM is reflected in how firms such as Wal-Mart, Zara, Toyota, and Dell have used their supply chains as competitive weapons to gain advantages over peers (Hult et al., 2007). These firms have created competitive advantage by balancing downward cost pressures and the need for efficiency, with effective means to manage the demands of market-driven service requirements and the known risks of routine supply chain failures.

In order to be competitive, firms have to design and manage a supply chain that is agile, adaptive, assured and aligned, i.e. develop the strategic supply chain. The most successful companies work within strategic supply chains that rapidly respond to short-term changes in immediate and ultimate customer demands (i.e. agility), adjust to long-term changes in economies and markets by restructuring the supply chain (i.e. adaptability), offer robustness and reliability of supply chain network (i.e. assurance) and integrating and coordinating business processes resulting in equitable sharing of risks, costs, and benefits with all participating partners (i.e. alignment).

The focus of SSCM is to identify the critical combination of competitive priorities (quick response, higher flexibility, higher reliability and low cost) in supply chains that can help organizations to succeed. Strategic supply chains do not aim to improve only one operational dimension of supply chain but aim to maximize the total value added to the customer and to use supply chain as a means to create a competitive advantage and enhance firm performance. Therefore, strategic supply chains excel in their performance in relation to a set of competitive priorities and at the same time, they achieve sustainable competitive advantage (Figure 1).

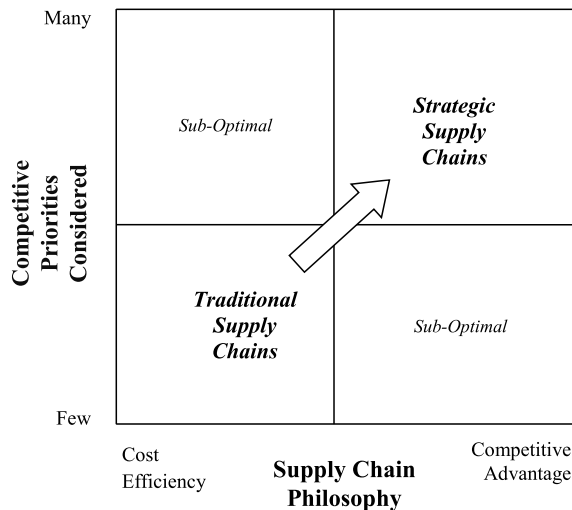


Figure1: Traditional Supply Chains versus Strategic Supply Chains: Performance Criteria

(Source: Framework Developed by Author)

Strategic supply chains with its agility and capability of speed can respond both quickly and cost effectively in the rapid demand and supply fluctuations. Such supply chains are resilient as they are able to modify supply chain design to accommodate and adapt market changes. Strategic supply chains have assurance of system that performs its function as intended and hence provide reliability. They are also characterized by the alignment of interests of all chain members and accordingly make collective efforts to pass any cost efficiencies to their buyer. Strategic supply chains do not fixate on flexibility, or on any other single metric; instead, relative to their peers, strategic supply chains focus on the total value added to the customer. Strategic supply chains target high performance across all competitive priorities and hence provide superior outcomes in terms of overall customer satisfaction. Overall, a strategic supply chain aims for an ideal balance among these four competitive priorities.

SSCM can improve the product planning process as well as distribution strategy and overall supply chain decision making related to it. Thus, SSCM boosts the organization's ability to introduce new products and enhancements of existing products in an effective and efficient manner. As customer data and information is shared in real-time with the supply chain partners, quality improvements and product innovation process accelerates while trimming down time to market. Such strategic approach for enhancing customers' overall satisfaction with firms' products or services, improves the profitability and efficiency of the entire enterprise in the long run, which includes all the supply chain partners. SSCM is increasingly being recognized by organizations as a strategic choice for enhancing performance of organizations by decreasing inventories across various partners of supply chain and

simultaneously deliver what the customer demands.

Strategic Supply Chain Management (SSCM): Convergence of Competitive Priorities

Strategic supply chains attempt to build on agility, adaptability, assurance and alignment in order to do really well along multiple outcomes - often labeled as "competitive priorities" and hence provides better solution to cater changing customer needs.

The diverse goals of a strategic supply chains are:

- (1) to enhance responsiveness to demand fulfillment process by delivering the materials in correct sequence and shape i.e. at desired place and time by gathering and analyzing sales data. Supply chain responsiveness enables supply chain to initiate quick response on short-term, temporary or interim changes in supply/demand;
- (2) to enhance resiliency of supply chain to cater volatile demand changes by modifying supply chain design to accommodate market dynamics. Resilient supply chain quickly senses market changes to meet customers demand, with stands system id discontinuities and adapts to a new risk environment;
- (3) to increase reliability by controlling probable causes of supply chain risks, design constraints and interruptions as a reliable supply chain performs its function as intended overcoming supply chain disruptions; and finally
- (4) to enhance realignment among supply chain partners by establishing incentives for them to improve performance of the entire chain as a realigned supply chain operates in an uninterrupted and seamless fashion.

Figure 2, shows, a conceptual framework of strategic supply chain management (SSCM) with all these competitive priorities of responsiveness, resiliency, reliability and realignment.

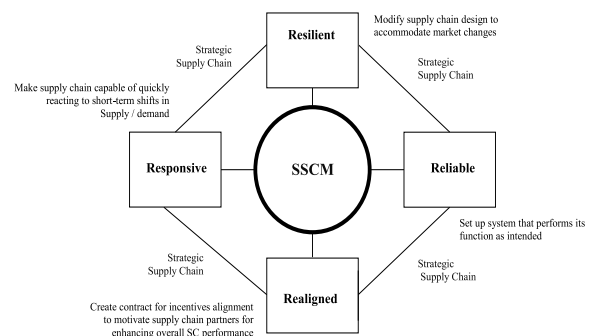


Figure 2: Strategic Supply Chain Management (SSCM): Convergence of Competitive Priorities

(Source: Framework Developed by Author)

Strategic Supply Chain Management (SSCM): Competitive Priorities

Competitive priorities of strategic supply chain management shown in Figure 2 are explained below:

(1) Responsiveness : Responsiveness describes the ability to react quickly to sudden variations in demand or supply. With responsiveness, firms handle external disruptions smoothly by responding to short-term changes in demand or supply swiftly.

(2) Resiliency : Resiliency describes the ability to adapt overtime as market structures and strategies evolve. It allows firms to alter design of supply chain according to changes in products, markets, strategies and technologies. Unless firms make their supply chain adaptable, it's very challenging for them to remain competitive in market place.

(3) Reliability : In supply chain performance management, reliability indicates 'correct' supply chain delivery performance in terms of product, place, time, packaging, quantity, and documentation, to the actual customer (LMI, 2003). Reliability represents the odds that any individual component or whole system carries out its assigned task as planned and hence it refers to the degree to which a supply chain yields consistent performance (Kuo and Zuo, 2003).

(4) Realignment : Lack of supply chain alignment can be caused by functional silos and conflicting objectives across various functional areas such as marketing, sales, manufacturing and distribution. Supply chain alignment can be defined as the ability to share information, responsibilities and roles and incentives with supply chain members to synchronize and coordinate processes and activities. Realignment of supply chain refers to aligning the interests of supply chain partners continually by confirming that the goals of a supply chain partners are in harmony.

Conclusion : Strategic supply chain management (SSCM) has a direct impact on performance of a firm, as it enhances capabilities of the firm to excel in the swiftly changing business environment, with even more focus on the customer. In order to be competitive, firms have to design and manage a supply chain that is agile, adaptive, assured and aligned, i.e. develop the strategic supply chain. Accordingly, strategic supply chains transform traditional supply chain from a functional role to a central theme of the business. Firms that effectively develop strategic supply chain are differentiated from other firms in number of ways: increased responsiveness, resiliency, reliability and better realignment with supply chain partners.

SSCM helps organizations to anticipate demand of consumers precisely; cater such demand reliably and swiftly and enhance supply chain productivity. Hence, it ultimately leads to decrease in supply chain costs, faster market response and higher efficiency and effectiveness of supply chain. Greater insight into

demand and delivery schedule will improve operational efficiencies and help organizations in creating the business value they seek. SSCM creates competitive advantage for firms by balancing downward cost pressures and the need for efficiency, with effective means to manage the demands of market-driven service requirements and the known risks of routine supply chain failures. This research has emphasized that dynamic capabilities of responsiveness; resiliency; reliability and realignment are important drivers of strategic supply chain management.

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FUTURE OF BUSINESS: CIRCULAR ECONOMY: ROLE OF SUPPLY CHAIN

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Abstract : This paper highlights that the future of business, circular economy and the role of supply chain. The paper is written on conceptual basis considering the secondary data. The subject experts' views and professionals' from industry opinions were considered. Manufacturing shifts such as. Economics of production, Consumer demand, Nature of products and Economics of value chain were discussed. Emerging areas of future business were also discussed. Further, circular economy and its relevance were discussed. The restorative or regenerative by intention and design principle also discussed. The value creation process in circular economy was highlighted with examples. Finally, the role of supply chain was discussed. The Berkeley Supply Chain Management in Bear Buy process and key activities involved were discussed. The paper also talks about the four Vs in supply chain management. Industry 4.0 technologies such as IoT, AI, machine learning, deep learning, data analytics, data security and safety, virtual stores etc were highlighted. The paper has been concluded by highlighting digital technology and its relevance to supply chain management.

Key words: digital technology, circular economy, manufacturing shifts, Industry 4.0 technologies.

Introduction : Business is not going to stay same in the future. Business firms are going to face challenges in terms of technology, practices in commerce and trade and emerging new areas of business. According to Sprint Business's Ivo Rook, Senior Vice President, Internet of Things and Tom Andriola, Chief Information Officer at the University of California System the most significant trends and technologies that will be impacting businesses over the next few years, are: Internet of Things, Security and privacy, Drones and autonomous vehicles, Artificial Intelligence and software bots, Self service automation, Mobile apps for communications, collaboration and reporting, Robotics in manufacturing and service. Technology is advancing in those areas. So, the companies are more

concentrating to invest in those areas for better results.

In these times, when the digital revolution is no longer novel and technology has penetrated every aspect of our lives, it goes without saying that disruption is the name of the game. And that's in virtually every industry. Technology has changed everything from taxi cabs to gambling, even dramatically altering the way we socialize with one another. As we fast approach the third decade of the 21st century, there are four schools of technology that hold the promise to not just disrupt, but transform the way we all approach day-to-day business. They are: i. Artificial Intelligence, ii. Internet of Things (IoT), iii. Data Science and Data Analytics and iv. Block chain.

Right now, the biggest issue is data breaches," Beck (CEO and founder of Optherium, a global research and development company) said. "All companies dealing with centralized data storage, any kind of data storage, they'll adopt blockchain tech first to get away from liability of storing data in one location." "Next few years more and more companies will start implementing blockchain in their phase one," Beck said. "It has already started and it will continue going [1].

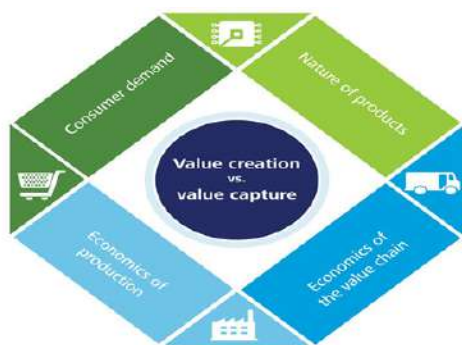
Future of Business: Manufacturing

Manufacturing is no longer simply about making physical products. Changes in consumer demand, the nature of products, the economics of production, and the economics of the supply chain have led to a fundamental shift in the way companies do business. Customers demand personalization and customization as the line between consumer and creator continues to blur. Added sensors and connectivity turn "dumb" products into "smart" ones, while products increasingly become platforms—and even move into the realm of services.

As technology continues to advance exponentially, barriers to entry, commercialization, and learning are eroding. New market entrants with access to new

tools can operate at much smaller scale, enabling them to create offerings once the sole province of major incumbents. While large-scale production will always dominate some segments of the value chain, innovative manufacturing models—distributed small-scale local manufacturing, loosely coupled manufacturing ecosystems, and agile manufacturing—are arising to take advantage of these new opportunities.

Meanwhile, the boundary separating product makers from product sellers is increasingly permeable. Manufacturers are feeling the pressure—and gaining the ability—to increase both speed to market and customer engagement. And numerous factors are leading manufacturers to build to order rather than building to stock. In this environment, intermediaries that create value by holding inventory are becoming less and less necessary. Together, these shifts have made it more difficult to create value in traditional ways. At the same time, as products become less objects of value in their own right and more the means for accessing information and experiences, creating and capturing value has moved from delivering physical objects to enabling that access. Four important shifts in manufacturing are: i. Economics of production, ii. Consumer demand, iii. Nature of products and iv. Economics of value chain [2].



Source: Center for the Edge

Graphic: Deloitte University Press | DUPress.com

Figure 1 Four Shifts in Manufacturing

What are the trends during the future of business?

According to research findings: i. Collaboration will help to shape firms shared future – high level of collaboration is the key. ii. Who will do the work: Robots or Humans?. Companies are going to face many challenges in terms of people performance, purpose, potential and personalized plan. One size will not fit many people. iii. What will drive changes in production? Make vs Buy decisions, economics of scale, outsourcing vs insourcing etc. iv. How must be

respond as consumption habits change? Data driven decision making is more prevalent than heuristic approach.

Circular Economy

The linear economy has to change. We must transform all the elements of the source-make-delivery- return /waste system: how we manage resources, how we make and use products, and what we do with the materials afterwards. Only then can we create a thriving economy that can benefit everyone within the limits of our planet.

Circular economy it's a new way to design, make, and use things within planetary boundaries. Shifting the system involves everyone and everything: businesses, governments, and individuals; our cities, our products, and our jobs. By designing out waste and pollution, keeping products and materials in use, and regenerating natural systems we can reinvent everything.

A circular economy is an industrial system that is restorative or regenerative by intention and design. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models.

Such an economy is based on a few simple principles, as shown in Figure 2. First, at its core, a circular economy aims to design out waste. Waste does not exist: products are designed and optimized for a cycle of disassembly and reuse. These tight component and product cycles define the circular economy and set it apart from disposal and even recycling, where large amounts of embedded energy and labour are lost. Second, circularity introduces a strict differentiation between consumable and durable components of a product. Unlike today, consumables in the circular economy are largely made of biological ingredients or 'nutrients' that are at least non-toxic and possibly even beneficial, and can safely be returned to the biosphere, either directly or in a cascade of consecutive uses. Durables such as engines or computers, on the other hand, are made of technical nutrients unsuitable for the biosphere, such as metals and most plastics. These are designed from the start for reuse, and products subject to rapid technological advance are designed for upgrade. Third, the energy required to fuel this cycle should be renewable by nature, again to decrease resource dependence and

increase systems resilience (to oil shocks, for example).

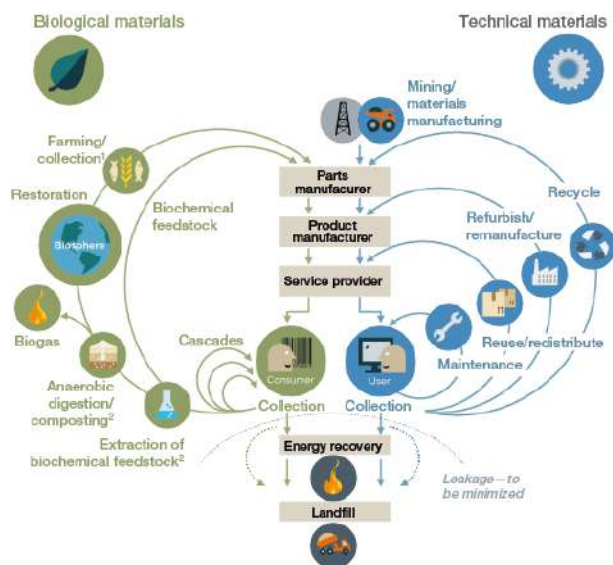


Figure 2: The circular economy—an industrial system that is restorative by design

These principles all drive four clear-cut sources of value creation that offer arbitrage opportunities, i.e. ways to take advantage of the price difference between used and virgin materials in Figure 3.

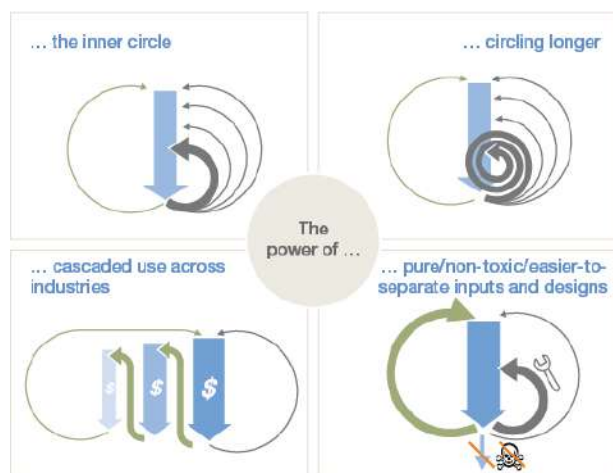


Figure 3: Sources of value creation for the circular economy

These four ways to increase material productivity are not merely one-off effects that will dent resource demand for a short period of time when these circular setups are introduced. Their lasting power lies in changing the run rate of required material intake. They can therefore add up to substantial cumulative

advantages over a classical linear business-as-usual

Effect of circular system on primary material demand in widget market
Volume of annual material input required



Effect of circular system on material stock and landfills
Cumulative volume of material used

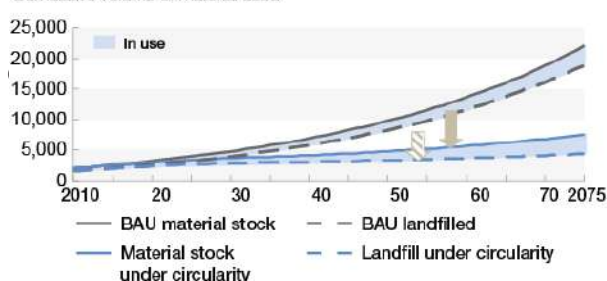


Figure 4: A circular economy would not just ‘buy time’ but also reduce the amount of material consumed to a lower set point

A number of businesses are already thriving on it. Innovative products and contracts designed for the circular economy are already available in a variety of forms—from innovative designs of daily materials and products (e.g. biodegradable food packaging and easy-to-disassemble office printers) to pay-per-use contracts (for tyres for instance) [3].

Role of Supply Chain

Manufacturers are facing intensifying challenges from both local and international competitors in the marketplace. In order to survive, manufacturers must be able to manage the dynamic market variables and satisfy their customers better than their competitors. Recent investigations have started to look in a more detailed manner at particular management techniques and practices to provide better advice on how these manufacturers should react to this challenge. One of the alternatives that seek to leverage manufacturers’ ability to compete is developing a high standards relationship starting with their customers and ending with their vendors, which defines the term supply chain management (SCM) [4].

According to SCOR model, the major process

components of supply chain are: plan- source- make- deliver- return. The cost containment is possible by adopting the right strategy in sourcing. i.e., bulk buying, system contract, strategic partnership by signing long term business agreements (LTBAs) / Rate Contracts etc. By adopting lean distribution channel, further cost reduction is possible. Backward integration and Forward integration are more relevant strategies to adopt for cost reduction and uninterrupted supply of material.

Berkeley Supply Chain Management in Bear Buy process talks about various process components in it. The details are shown in Table 1 below. [5]

Table 1 Bear Buy Process Flow

Activity	Process Flow
Cart	Shopping
Requisition / Purchase	Requisition Creator, Authorization, Requisition Approval, Purchasing
Purchase Order	Supplier
Order Fulfilment	Receiving Goods / Services
Voucher Entry, Review	Invoice, 2way match (Voucher matching & Approval and PO matching, Voucher Approval
Payment Status	Payment

(Source: Berkeley Supply Chain Management, 2018)

In future, companies are not going to compete by offering products and services, but their supply chains are going to compete. Companies are going to concentrate both on upstream and downstream supply chains. Collaboration and adoption are important, companies are already in the process of implementation. Four Vs in a supply chain are: velocity, variability, variety and value. FMCG Companies are more concentrating on distribution side, whereas engineering companies are more concerned about supply side (sourcing) to gain competitive advantage.

Conclusion

Business firms are going to face many challenges in the coming years in terms of technology, business

practices and concentrating on new emerging areas of business. Industry 4.0 technologies are also going to bring more challenges and commitments to manufacturing sector in particular. Technology challenges such as IoT, AI, Machine Learning, Deep learning, Data driven decision making etc are the focus areas for the firms. It is also seen that there is a shift manufacturing such as I. Economics of production, ii. Consumer demand, iii. Nature of products and iv. Economics of value chain. Linear economics should change with circular economy. A circular economy is an industrial system that is restorative or regenerative by intention and design. This brings lot of alternate material usage in product development and material processing. Customer expectations are increasing day by day, low price, more varieties, low supply lead time and more customization further brings challenges to business firms. In this area, supply chain is going to play a vital in gaining competitive advantage and earn business excellence. Supply chain configuration, metrics driven supply chain performance and all the business entities should be seamlessly integrated. Technology and business should be properly embedded. Supply chain role is vital for future business and to improve the economic growth and development.

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EFFECT OF ONLINE MARKETING TO ROLLOVER OFFLINE MARKETING ON CONSUMERS - A QUALITATIVE ANALYSIS

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Introduction : After development of the internet as a promotional tool and high level technological and conceptual terms, the intercompany business relationships have drastically changed. These technical changes, improved not only promotional tools but also all other marketing functions by electronic means. A new form of marketing emerged, nowadays known as online marketing. After the “dot com boom” also known as “dot com bubble” (Galbraith, Hale, & Conference, 2004) in 1995 to 2000, companies and researchers took the situation more seriously by seeing online marketing not just as a promotional tool but more as whole marketing form. After those developments in marketing, researchers presented evaluations and definitions which differ from each in many aspects, regarding core and extensional functionalities.

Online Marketing : Online Marketing is the art and science of selling products and/or services over digital networks, such as the Internet and cellular phone networks. The art of online marketing involves finding the right online marketing mix of strategies that appeals to your target market and will actually translate into sales.

The science of online marketing is the research and analysis that goes into both choosing the online marketing strategies to use and measuring the success of those online marketing strategies.

It includes email marketing, search engine marketing, social media marketing, many types of display advertising (including web banner advertising), and mobile advertising. Like other advertising media, online advertising frequently involves both a publisher, who integrates advertisements into its online content, and an advertiser, who provides the advertisements to be displayed on the publisher's content.

Tools of Online Marketing

Display advertising - Display advertising conveys its advertising message visually using text, logos, animations, videos, photographs, or other graphics. Display advertisers frequently target users with particular traits to increase the ads' effect.

Web banner advertising - Web banners or banner ads

typically are graphical ads displayed within a web page. Banner ads can use rich media to incorporate video, audio, animations, buttons, forms, or other interactive elements using Java applets, HTML5, Adobe Flash, and other programs.

Frame ad (traditional banner) - Frame ads were the first form of web banners. The colloquial usage of “banner ads” often refers to traditional frame ads. Website publishers incorporate frame ads by setting aside a particular space on the web page.

Pop-ups/pop-under - A pop-up ad is displayed in a new web browser window that opens above a website visitor's initial browser window. A pop-under ad opens a new browser window under a website visitor's initial browser window.

Floating ad - A floating ad, or overlay ad, is a type of rich media advertisement that appears superimposed over the requested website's content. Floating ads may disappear or become less obtrusive after a preset time period.

Expanding ad - An expanding ad is a rich media frame ad that changes dimensions upon a predefined condition, such as a preset amount of time a visitor spends on a webpage, the user's click on the ad, or the user's mouse movement over the ad. Expanding ads allow advertisers to fit more information into a restricted ad space.

Interstitial ad - An interstitial ad displays before a user can access requested content, sometimes while the user is waiting for the content to load. Interstitial ads are a form of interruption marketing.

Text ads - A text ad displays text-based hyperlinks. Text-based ads may display separately from a web page's primary content, or they can be embedded by hyperlink individual words or phrases to advertiser's websites. Text ads may also be delivered through email marketing or text message marketing.

Search Engine Marketing (SEM) - Search Engine Marketing, or SEM, is designed to increase a website's visibility in search engine results pages (SERPs). Search engines provide sponsored results and organic (non-sponsored) results based on a web searcher's query.

Search engines often employ visual cues to differentiate sponsored results from organic results. Search engine marketing includes all of an advertiser's actions to make a website's listing more prominent for topical keywords.

Sponsored search - Sponsored search (also called sponsored links or search ads) allows advertisers to be included in the sponsored results of a search for selected keywords. Search ads are often sold via real-time auctions, where advertisers bid on keywords.

Social media marketing - Social media marketing is commercial promotion conducted through social media websites. Many companies promote their products by posting frequent updates and providing special offers through their social media profiles.

Mobile Advertising - Mobile advertising is ad copy delivered through wireless mobile devices such as smart phones, feature phones, or tablet computers. Mobile advertising may take the form of static or rich media display ads, SMS (Short Message Service) or MMS (Multimedia Messaging Service) ads, mobile search ads, advertising within mobile websites, or ads within mobile applications or games (such as interstitial ads, "advergaming," or application sponsorship).

Email Advertising - Email advertising is ad copy comprising an entire email or a portion of an email message. Email marketing may be unsolicited, in which case the sender may give the recipient an option to opt-out of future emails, or it may be sent with the recipient's prior consent.

Offline Marketing : The word contains the meaning of offline marketing itself. It includes other methods of marketing apart from internet marketing. This industry is very popular since hundreds of years back. Although the methods have changed according to latest technology but the meaning is still same. It comprises of advertisement in newspaper, magazines, hoardings, exhibition shows, and print media (like the Yellow Pages, buses, benches, and billboards), sponsoring something, partnership and so on, there are various new and old methods that have been helpful to reach the target audience. This is the kind of marketing where everything is done to make a business popular among its fans and consumers, excluding internet marketing efforts. This marketing concept is useful for all commercial and non-commercial businesses and products globally. Offline marketing helps in increasing Brand popularity, Product sale, Revenue generation, Profit Maximization and Covering the gap between providers and consumers.

There is so much that is possible in offline marketing but everything need to be properly planned and organized else it may have adverse impacts too. The difference between Online and Offline Marketing very much depends on the base itself, market penetration, approach to the customer, manpower required, time and expenses, the return on investment, the management information system, products

information and measurement.

Pros and Cons of Offline Marketing :

Pros:

Maximum Conversion into Consumers: It is a proven marketing method that converts target potential consumers with maximum possibility. These are proven methods and on application can get good results.

Multiple Methods: There's a lot more than one method of offline marketing, so you can easily reach people without access to a computer via different methods. These methods include TV adverts, postal mailing lists, billboard posters and a lot more.

Cons:

Cost: The cost of offline marketing can really add up, so it isn't best for people with small businesses or a small budget to focus purely on this.

Time Span: Offline marketing methods take time to put into place, you can't get breaking news and expect to be on the television within the hour to let people know. Mailing letters, posters, and radio adverts take time to make and distribute, so you have to do a lot of planning ahead.

Research Methodology : The blue print of the research work as below:

Research design: -Descriptive in nature.

Population: - In the study we included students, housewives, and consumers of age group belong to 18 to 60 years.

Sample size: - 500 respondents

Sampling method: - Convenience sampling to select the respondents for study.

The tools :- A details taxonomy based questionnaire will be developed after extensive reviewing the literature besides ascertaining personal view of academic as well as consumers and retailers.

Statistical analysis: - Qualitative analysis has been conducted.

Objective of the study: - To study recent trends towards online marketing of consumers.

Findings of the study:

The findings are as shows:

1. Respondents between the age group of 18 to 45 are more comfortable for online activities like sale, purchasing, surfing and educating themselves.
2. The age group above age 45 do not prefer online activities, as do not have trust and hence prefer traditional marketing.

3. The study reveals that the female are less interested for online activities rather than male.
4. The female are more into offline activities, because they enjoy shopping whether it is traditional marketing like malls, old and weekly bazaar in town.
5. The younger generation are more often purchasing from online sites because of the revolution in the technology among the youth population.
6. There are many marketing site which is more preferable by the youngster.
7. There are increasing demand of online marketing because the variety of options for the consumers to choose and that to at a reasonable price and sometime even less price than the market.
8. Electronic items were less demanded from the e-marketing but clothes are much more demanded by the consumers.
9. There are several products which are not delivered by the marketing sites in the preferable area, it is seen that with the advancement of the mobile phone technology the preference of the online marketing increases.

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- To constantly impart advanced professional knowledge and thus improve the skill of the person engaged in the materials management function.
- Propagate and promote among the members strict adherence to IIMM code and ethics.

CODE OF ETHICS

- To consider first the total interest of one's organisation in all transactions without impairing the dignity and responsibility of one's office :
- To buy without prejudice, seeking to obtain the maximum ultimate value for each rupee of expenditure.
- To subscribe and work for honesty and truth in buying and selling; to denounce all forms and manifestations of commercial bribery and to eschew anti-social practices.
- To accord a prompt and courteous reception so far as conditions will permit, to all who call up on legitimate business mission.
- To respect one's obligations and those of one's organisation consistent with good business practices.



THE ECONOMY IS PICKING UP PARTLY DUE TO PENT UP DEMAND, SAYS NITI AAYOG'S VICE CHAIRMAN

NITI Aayog Vice-Chairman Rajiv Kumar has placed a huge glass pane on his table as a precautionary barrier since he is meeting officers, staff members and guests daily. In this age of the novel **coronavirus**, one has to tread carefully. Kumar is cautious on another front as well: **revival of the Indian economy**. In an interview with **Shantanu Nandan Sharma**, he says he is only cautiously optimistic about the recent data that shows a surge in highway and **railway traffic**. Excerpts:

Is the recent traffic surge in highways and railways' freight segment a good indicator of economic revival, or should we wait for more evidence?

The rise in traffic in the highways and the railways freight clearly indicates that economic activities have been picking up. Between the two modes of transportation, the surge in freight traffic in the railways in particular is a very good sign because during the monsoon season, usually, the transport of bulk commodities gets restricted. It is likely that this surge is also due to companies and plants building up the inventory of inputs, which could have run down during the lockdown period on account of logistics bottlenecks. I am told that the capacity utilisation of trucks too has picked up from April levels, but it's still not as good as the railways. So, the rise in traffic needs to be analysed from two angles, first, yes, the economy is picking up and these are good indicators; and, second, we need to acknowledge that it is partly due to the release of pent-up demand from the lockdown period.

How do you compare the rise in traffic — in railways and highways?

Between the two, the railways has been doing better and that's a good sign. I hope this trend continues. And I am optimistic that the railways will have an upper hand as the average speed of freight trains has considerably increased. The introduction of time-table for freight/goods trains will make a significant difference too. Most part of the Dedicated Freight Corridors will also be ready by the end of next year which again will release a lot of capacity and accelerate railway freight movement.

Both the highways and the railways have their own roles to play. But the modernisation of **Indian Railways** and the adequate capacity expansion will play a bigger

role in driving the economic growth in the years to come. It will also have a huge positive impact on the ecology.

What is your assessment on economic recovery for a year or so?

I don't want to dodge this question, but it will be foolhardy to make a forecast at this juncture. It will largely depend on how the **pandemic** behaves. If the virus resurfaces, for example in Europe, it will have an impact on our trade as well.

The recovery has so far been V-shaped, but to be honest, that is unlikely to continue that way. Once the pent-up demands are met, things may start normalising again.

The economy will likely see a contraction during FY 2020-21. So, we have to try very hard to ensure that in 2021-22 we pass the level of output we had reached in fiscal 2019-20. And to make that possible the government has announced a very large infrastructure pipeline and is pushing big-ticket infrastructure projects. These will create a momentum in the economy. If a project is well-designed and viable, finding the necessary financing is not an issue. The prime minister has a vision about making our infrastructure world class and so I am optimistic.

Do you think mini lockdowns as well as weekend curfews imposed by various state governments are a major disrupter in reviving the economy?

Yes, statewide lockdowns are a disrupter because the supply chains go across states. You can't expect one industry expanding its output without having inputs from other states. My personal view is that we have to go for focussed, hyper local interventions to contain Covid-19. In every state, the authorities have to identify areas of high infection and contain those. The 3T process (tracking, testing and treatment) should be consistently followed. The blanket lockdowns in states are counter-productive. All the states need to understand that. After all, a pick up in economic activity, while keeping the virus in check, is in their interest as well.

Source : The Economics Times

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LOGISTICS: A PIVOTAL ROLE IN THE COVID-19 PANDEMIC

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Covid-19 is also giving us an opportunity. The whole world can now see, what we have said for many years, that health is an essential investment in safer, healthier, fairer, and more sustainable societies.

-Dr Tendros Adhanom Ghebreyesus, DG, WHO

Introduction :

The Indian logistics market is expected to grow at a CAGR of 10.7% between 2020-2024, and branded products are only boosting this growth by leveraging cutting-edge technologies. Logistics has been one of the most important sectors this year, especially amidst the COVID-19 pandemic. The industry is playing a pivotal role during the crisis, and it will take shape post-COVID-19 pandemic.

India has been shocked by the impact of the COVID-19 pandemic for over six months. The global crisis has upended livelihoods and businesses and resulted in a transformation of massive scale overnight. For businesses across verticals, it is a challenging time, to say the least. However, the eCommerce logistics sector has proven to be a boon during these difficult times.

The logistics industry has been instrumental in ensuring that the global flow of goods, particularly essential items, is largely unhindered despite the lack of sufficient transport and disruptions in the supply chain. As the COVID-19 pandemic-induced mayhem continues with the increasing number of cases across the country, eCommerce logistics brands like Flipkart, Amazon, Swiggy, etc. are working relentlessly to ensure that customers receive their orders on time and the rise in demand due to the pandemic is met.

Logistics, followed by tourism and hospitality, construction, information technology, and telecom, have emerged as the top five employment-generating sectors in India in the aftermath of the/ COVID-19 pandemic. The five most popular job roles that have emerged on the basis of demand are courier delivery executive, housekeeping attendant, customer care executive, warehouse associate, and machine operator.

Supply chains have been disrupted unimaginably due to extended lockdowns in several countries with social distancing and face masking becoming the norm. The pandemic has created situations in racing to stock up on essential items that have increased their demand exponentially.

The demand has risen by 25-30 % from both buyers and sellers, and digitization is taking the center stage. Logistics players have turned towards technology to help them fulfill the growing demand. With contactless and OTP-based deliveries, brands are taking their businesses online and leveraging technology to mitigate the risk and ensure both customers and employees are safe.

1. Logistics Aggregation : With the internet revolution gaining momentum and brands digitizing their operations, third party logistics brands, i.e., logistics aggregators, are ramping up their efficiency. With increased automation and technology-driven solutions to meet the demand and boost business, logistics brands are also looking to optimize costs.

These are extremely difficult times and cost-efficient operations are necessary to keep their brand afloat in the highly competitive but lucrative market. Logistics brands are also increasingly going hyper-local for the faster delivery of goods. For small sellers who wish to take their business online, logistics aggregators prove to be a boon – assisting them with easily navigable tech-enabled tools to help them fulfill local demand whilst connecting with their customers.





Logistics aggregators are striving to streamline orders and ensure a friction-less post-order experience for every small business by automating the fulfillment and warehousing services. They are offering the best-in-class packaging experience for minimal weight discrepancies. Logistics aggregators are also assisting in generating new revenue streams for local Kirana stores by bringing them online and partnering with some of the giants in the eCommerce logistics space to improve end-user experience.

Furthermore, by giving small sellers a list of options to choose from for expert courier partners, logistics aggregators continue to empower them by increasing their chances of customer satisfaction and retention. // The pandemic has shed light on the importance and global need for logistical services now more than ever. While the pandemic may be a temporary situation, the need for logistics is everlasting. By further improving the agility and efficiency of the logistics industry with support from aggregators as well as the government, dynamic progress in this sector is expected.

2. Effective Use of Logistics by UNICEF

United Nations International Children's Emergency Fund (UNICEF) provides an overview of the current and anticipated near term impact of COVID-19 on UNICEF's supply chains for country programs. The focus is on supplies that make up the majority of UNICEF's procurement 'footprint' (by procurement value and volume). Accordingly, it covers health-related products, notably medicines, nutrition, cold chain equipment (CCE), safe injection equipment (SIE), long-lasting insecticidal nets (LLINs), education, as well as products related to water and sanitation.

Key shipping and logistics challenges

Air travel restrictions and airfreight market disruption

remain and continue to interrupt and delay the supply of essential health products (vaccines, etc.) to many countries. While there is still no indication as to when the situation is expected to return to pre-crisis levels, there has been a gradual increase since early April in the number of flights available and therefore in the capacity to deliver supplies to countries.



Meanwhile, global freighter capacity (dedicated planes for cargo) has increased and is currently 20 percent higher than 2019 levels. However, the overall air freight capacity globally continues to be critical and is at approximately 25 percent below the levels registered for the same period in 2019, but much less to African destinations.

Even though Africa is the region currently less affected by the pandemic, currently only having an estimated three percent of the currently reported caseload, this situation may change. Africa has been heavily affected by the consequences of airline restrictions, especially inter-regional logistics travel inside Africa, in addition to the social and economic consequences as a result of mitigation measures.

Airfreight transit times have increased and are about 3-6 days longer than previous standard transit times due to the reduced flight departures, as freighter flights are less frequent than passenger flights. In addition, the constrained market capacity difficulties in the securing of bookings which further expands air freight overall lead times for delivery of supplies.

In terms of global sea freight, ocean freight rates appear to be staying relatively firm, despite falling demand, as lines exhibit a high degree of capacity management. Extensive "blank sailings" implemented globally has led to fully booked vessels, which is a situation that will continue over the next few months. Imbalances in container availability are now impacting container capacity globally, as space remains tight on all trade routes due to the high amount of "blank sailings".



The recent lockdown in India has resulted in some reduction in some supplier's production capacity and increased lead times for medicines sourced from India because of in-country logistical challenges. Price increases and supply disruptions due to logistics and shipping issues, therefore, remain a possible risk that UNICEF continues to monitor closely in real-time with partners. However, where possible, UNICEF is using suppliers outside of India, including from Europe and China where medicine production has returned to full capacity to source the medicines.

Countries should mitigate the impact of any disruptions by working to maintain supply chains and engagement with communities to ensure access to health services and the delivery of critical medicines including Anti Retro Virals (ARVs) and work to overcome any in-country logistical challenges.

Logistics Support for Nutrition products

Other commodities used in nutrition programs such as multiple micronutrient powders (MNPs) and anti-anemias (iron-folic acid and others) can be delivered from UNICEF's warehouse stock in Copenhagen or directly from manufacturers. Replenishment of UNICEF's warehouse inventory in Copenhagen is being increased and brought forward to ensure that there is enough buffer stock.

Logistics bottlenecks created by border closures, export bans, and reduced sea and air freight and trucking capacity, can also have an impact on the production of finished products as most of the manufacturers of the nutrition products rely on the importation of raw materials, packaging, and active pharmaceutical ingredients, which cannot be sourced locally.

Logistics used for Cold Chain Equipment

The global supply of immunization of Cold Chain Equipment (CCE) is diversified. The key suppliers of WHO prequalified CCE are spread across Europe, South Africa, India, the USA, as well as China.



The production capacity of the Chinese supplier is back to normal with confirmed availability of raw materials and components. Some of the European suppliers' production capacities have been restricted; one supplier had their factories closed while others noted the difficulty in sourcing specific components and raw materials. The sourcing of components and raw materials is especially affecting the CCE suppliers based in India, where there have been delays experienced on several orders.

As a result of border closure to incoming shipments in some countries, there have been delays in picking up some orders from the suppliers, as well as delays of shipments in-transit. This has resulted in additional storage costs in a few instances. There are still delays in shipments in terms of shipment by air freight due to the availability of flights. Wherever possible air freight orders are being re-routed by sea.

In terms of CCE project implementation and installation services at the country level, lockdowns and restrictions on importation have resulted in the full or partial suspension of in-country logistics and installation activities. In some cases, this resulted in increased operational costs.

3. Conclusions

It is observed that during these difficult times, Logistics Service Providers have risen to occasion to full fill the need of Logistics support in delivering the products & services to the customers. They used state-of-the-art technology and innovative IT solutions. This new experience during challenging COVID-19 pandemic times will help the Logistics industry to grow multifold post-pandemic.





NEW SCHEME OF EXPORT INCENTIVE REMISSION OF DUTIES OR TAXES ON EXPORT PRODUCTS' (RODTEP) REFUND OF CERTAIN UN- REFUNDED TAXES OR DUTIES UNDER EXPORTS



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For Promotion of Exports India has Framed various types of Schemes to Rebate or Refund the Taxes. Currently available Schemes are Merchandise Export from India Scheme (MEIS), Advance Authorization Scheme, Export Promotion Capital Goods Scheme (EPCG) and Duty Drawback Scheme.

All these **Export Promotion Schemes** were framed under premise of **Neutralizing Incidence of Taxes based on Universally Accepted cardinal Principles of trade is that Taxes Should Not be Exported**, otherwise it may adversely Influence the commodity Price and may lead to un-competitiveness in the Global Market.



Certain Taxes / Duties / Levies Not Being Refunded:
At present, GST Taxes and Import / Customs Duties for Inputs Required to Manufacture Exported Products are either Exempted or Refunded.

However, **there are certain taxes / duties / levies, at different stages at the central, state and local level, which are incurred in the process of manufacture and distribution of exported products but are not being refunded under any mechanism currently in practice.**

Moreover, in the wake of complaints filed by USA against India to discontinue export incentive scheme (like MEIS) citing these schemes tantamount to subsidy, which is **not in compliance with WTO guidelines**, and subsequent ruling of Dispute Resolution Panel (DRP) of World Trade Organisation (WTO) that India's export

subsidy schemes **violate global trade norms** and therefore **asked to withdraw**.

Abiding by the Ruling, **the Countdown is started to scrap MEIS Scheme by end Dec'2020.**

Refund of Certain Un-refunded Taxes or Duties : The scheme to refund certain un-refunded taxes or duties [levied at the State and Central level], was notified by the Ministry of Textiles for the readymade garments and made-ups in March, 2019 in the name of Rebate of State and Central Taxes and Levies- RoSCTL.

The Government is now contemplating to formulate a new Scheme to cover other export sectors also under a similar framework so as to refund un-refunded taxes or duties/ levies, not exempted or rebated at present by any other mechanism.

Under the WTO rules, certain duties like state taxes on power, oil, water, transportation, and other cesses and local levies are allowed to be refunded.

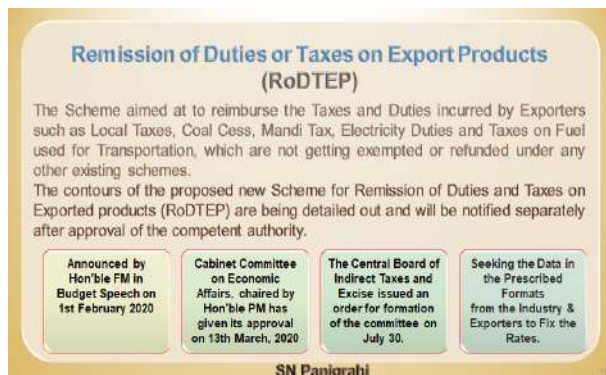
New Scheme Remission of Duties or Taxes on Export Products' (RoDTEP) Introduced : In view of these developments, it is necessitated to Properly Protect the Interests of the Exporters, and make them Competitive in the Global Market, Hon'ble Finance Minister in her Budget Speech on 1st February 2020 had announced that scheme for "Reversion of duties and taxes on export product" will be launched this year to boost exports to international markets.

Consequently, the Cabinet Committee on Economic Affairs, chaired by Hon'ble Prime Minister, Shri Narendra Modi, has given its approval on 13th March, 2020 for introducing the New Scheme '**Remission of Duties or Taxes on Export Products' (RoDTEP).**

Under the scheme an inter-ministerial committee will be set up to determine the rates and items for which the reimbursement of taxes and duties would be provided.

The contours of the proposed new Scheme for

Remission of Duties and Taxes on Exported products (RoDTEP) are being detailed out and will be notified separately after approval of the competent authority.



Objectives of the RoDTEP Scheme

- To make Indian exports cost competitive and create a level playing field for exporters in International market;
- To boost better employment opportunities in export oriented manufacturing industries.
- The scheme being framed in accordance with WTO guidelines.

Salient features of the RoDTEP Scheme:

- Benefit would be provided on certain taxes / duties / levies (other than GST) levies at the central, state and local level, which are not refunded for exports, such as, VAT, Central Excise Duties on Fuel used for Transportation, Natural Gas used in certain Industries, Mandi Tax, Duty on Electricity, Compensation Cess on Coal for Captive Power used during manufacturing etc.
- New scheme aims at creating an Electronic Credit Ledger in the customs system which enables Digital Refund to Exporters.
- The Refund would be claimed as a percentage of the Freight On Board (FOB) value of exports.
- Merchandise Exports from India Scheme (MEIS) benefits would be discontinued on such tariff line / item for which benefit under RoDTEP Scheme is announced.
- This scheme will incentivise exporters at an estimated cost of Rs. 50,000 crore to the exchequer.

Seeking the Data in the Prescribed Formats from the Industry & Exporters

- The government has formed a committee to determine ceiling rates under the Remission of Duties and Taxes on Exported Products (RoDTEP)

scheme. The panel has been tasked with evolving a mechanism for calculation of duties at the central, state and local level which are borne by exporters so that they can be refunded all the taxes paid on goods and services used in export but are currently not being reimbursed under extant mechanisms.

- There are 3 formats / proformas which are required to be filled separately for each export product by a manufacturing / exporting unit.
- The Sector wise details, Rates & Rate Caps and other aspects are yet to be provided and it is widely expected to be notified separately after collection of data from Industry & Exporters.
- The sequence of introduction of the RoDTEP Scheme across sectors, prioritization of the sectors to be covered, degree of benefit to be given on various items within the rates set by the Committee will be decided and notified by the Department of Commerce (DoC).
- It may be ensured that only taxes/ levies/ duties borne on the exported product **which are at present not getting refunded/ reimbursed under any other mechanism** are counted while calculating the tax incidence on the exported product.
- The data provided should pertain to those manufacturers / units who agree to have their records and production processes inspected by the Government for the purpose of verification. Verification of data / processes would be undertaken by DGFT, if required.

Opportunity for Exporters – A Wakeup Call : This is an Excellent Opportunity for Exporters to get their Genuine Claims in a very Legitimate Manner & WTO Compliant way for their Exports and the Incentive Rates be fixed.

This Opportunity is available mainly as a replacement to MEIS Scheme which is being withdrawn by end Dec'2020. Considering limited time Frame the intention of the Authors is to draw attention of Exporters and Manufacturers, Associated Trade Bodies to create a sense of urgency, and get this Opportunity to convert as a Competitive Advantage of Indian Products in the Global Market.

Can also Viewed in SlideShare @ below Link

<https://www.slideshare.net/SNPanigrahiPMP/new-scheme-of-export-incentive-rodtep-by-sn-panigrahi-carishabh-sawansukha-jain>

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TACTICAL BUYING – SO FAR AND HOW FAR!

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Right from the evolution of procurement, till the 1950s and '60s, procurement was perceived as a cost-cutting function. The view, in fact, the underlying visibility of procurement changed from the early 1970s, when the oil crisis of that decade brought in widespread economic and Industrial challenges. Businesses found it back-breaking to obtain raw materials, satisfy customer requirements, and minimize the escalating inflation of goods and services.



This situation resulted in the businesses and organizations enforcing procurement as a distinguished team aiming to secure goods and services by tactical approaches. This work will outline the rise of tactical buying towards a significant outburst of how to sustain and secure materials in a short period. Also, it will describe the opportunities, approaches, the variety of tools, and its growth in the industry.

Sayings so, to expound tactical buying, let's divide this article into sub-topics and derive the partnership of tactical Buying in the industry. Let's touch base some key points before we deep-dive

Stats

Total Jobs Created: 2, 00,000 as per NASSCOM in the year 2019.

Key Players: Infosys, IBM, TCS, CTS, GENPACT, GEP, Accenture etc.

Tactical Buying: More than 45 % of the total jobs created

Salary: As per Experience / Industry.

Trends & Technology: Biggest Impact in future.

Over a while, the above numbers are exceeding the

industry benchmark, but at the same time, it's scary to watch our market becoming more technology-driven, which may bring down the percentage of tactical hires.

The most interesting part is that around 65 % of the employee force doesn't understand that the underlying principle of tactical buying is supply chain distribution. Sad, but who is to be blamed?

Difference between Strategic Sourcing and Tactical Buying :

Do Strategic and tactical buying complement one another? The answer is yes! To be a successful strategic Sourcing leader, how one understands and analyzes the tactical buying record and history is important. The primary difference between strategic and tactical buying is: tactical buying is a short-term victory but Strategic Sourcing is long term decision-making for the organization. Tactical buy in other words simply satisfies the requirements by requesting a quote, placing an order, and expediting deliveries to ensure the presence of materials for production. There is no streamlined approach to render services and products. In short, buying just implies supplying to the organization. When a business needs a product, it raises an Indent and the procurement department procures those goods /Services.

Tactical Buying – Role In & Roll Out : The Role-in of tactical buying is very simple, but Roll out requires an imperative strategic approach by companies to eliminate cost, workforce, and to sustain in the Industry. The intermediate performance of tactical buying creates an impact on the organization in terms of cost and ethics of buying. Since there was no streamlined process when it all started, every company's primary focus was to record a benefit to the organization. This was purely to track down the expenses since there was no ERP system in the industry back then.

Later, when most of the mid-sized manufacturing organizations adapted the technique of tactical buying, the inflow of materials was intact with the production scheduled, but organizations faced a severe impact due to uncontrollable cost, inappropriate supplier sections, etc.



Industry Lookout



When the Manufacturing organizations were adapting to the new way of buying, technology in the industry observed difficulties, process flows, and incompetency of buying professionals in terms of record-keeping and analysis. Then to capture the market, various technology companies came with Enterprises Resource Planning system, shortly termed ERP by Gartner in the 1990's. This software mainly focused on enterprise-wide such as Inventory, Invoicing, sales, production, purchase etc. The initial flow of the software-enabled most of the Tier 1 manufacturing organizations to understand a steady and streamlined way of enabling requirements for the organizations. This was a tremendous mark in the Industry.

Different Technology experts came up with different software to overcome the market difficulties and ease the process for Multinational production companies.

Companies look out

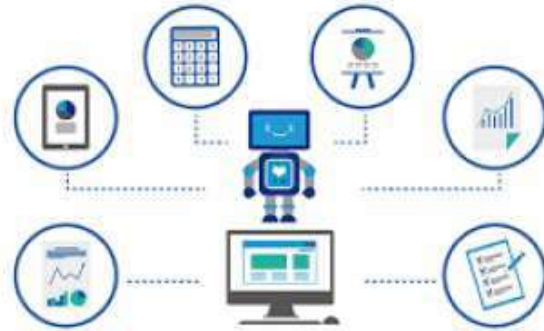
When the technology Industry was busy in capturing the trend, companies started analyzing the pitfalls in the tactical buying nomenclature. Companies wanted an institutional procurement process that continuously improves and re-evaluates the purchasing activities and that's where the "Strategic" term evolved. Most of the blue-chip companies wanted to enable a strategic partnership with the supplier base. So the aim of tactical buying is to support the day-to-day transactions such as issuing purchasing orders, following delivery with suppliers, whereas strategic sourcing focuses on strategic planning, supplier development, contract negotiation, supply chain infrastructure, and outsourcing models.

How Far – Tactical

What exactly are the companies doing to waive off the traditional buying system, in order to reduce the workforce, and increase better transparency in the system? As per the data, most of the employees are engaged in transactional work and hence companies have decided to automate the repetitive tasks and some of the transactional tasks using automation software.

As per statistics, Technology has taken over the commercial way of doing business through automation, by which industry witnessed higher production rates and increased productivity, increased quality, and decreased human intervention. In our context, the industrial terminology is Robotic Process Automation. In simpler words, these are computer Bots.

Below is the list of Top Ten RPA Softwares



1. Automation Anywhere
2. Jacada
3. Open Connect
4. Pegasystems
5. Blue Prism
6. UI Path
7. NICE
8. Kryon System
9. Kofax
10. Softomotive

The best thing about this software is these are "No code, low Code" and closely work with process owners for determining the automation ideas.

Conclusion

The go-to strategy is "Be migrant". Most of the significant and well-established companies have already been taken over by RPA software's and there was a constructive burn down of workforce of about 20 % in the market, which means that 30 % of the transactional activity is automated. This is a warning, but, if you want to be sustainable in the industry, then along with the process knowledge, seek anyone RPA Tool to be very relevant. Moving to a strategic part of buying /procurement will not be very easy in today's market, but keeping the options open is the best bet. Being Techno-Commercial is always a better choice in any unprecedented situation.

Source : www.sourcingandsupplychain.com

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HOW WE WANT FUTURE OF PROCUREMENT... TO LOOK LIKE.!

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The future of procurement is an exciting one but currently looks variable due to lack of strategic planning, clarity, leadership and clear direction. There is an urgent need for procurement professionals to look ahead and work towards effective, transparent and strategic procurement.

We should strategically move procurement to a surer footing. We have to understand the organisation's goals and objectives and show, what best is possible for procurement and set the procurement direction to follow. Procurement should be able to assist our organisation, move towards to saying 'yes' and being more supportive that can meet organisational requirements.

First of all, Procurement professionals should make themselves a desirable sect of people in the organisation to be approached! They should build confidence to all others, that they can always add value, speed, efficiency for growth and profitability of the organisation and request to be involved in early stages.

Need for a Strategic Approach: Procurement requires a clear vision and direction that morphs into a specific and measurable procurement strategy. For procurement to have a positive future we have to start planning now, so future procurement professionals can reap the benefits. Relevant procurement for all options is a must. It would be helpful if we looked at not only the future direction of procurement and but the mid to long term strategic plans. What do we want to see in the short, medium and long term?

Going forward, we, Procurement Professionals, can think strategically and undertake procurement that is specific to each procurement requirement. The 'Same Way' need not be the best way and thinking 'outside the box' is essential. Let us stop following the "Calf beaten track" and think simpler and innovative ways. We should accept change for better.

Procurement should be Proactive and not Reactive:

Proactiveness is the organisation's soul.!

Changing the 'conversation' – we have to look at how we operate – at times we over complicate the process. We are also ignoring our contractual partners – our suppliers. This trend of today's procurement professionals should change and this is possible when we are with positive attitude and proactiveness towards the profession. For example: They should take the lead to monitor, forewarn likely undue delays in supplies if any, instead of reacting to user departments raising the alarm and then rush to take corrective action. Procurement should be always Alert.!

Value Creation : We can consider how we add value through value creation. We certainly need transformation as well as value creation. We really and immediately need to take a hard look at what is needed and that is procurement leaders and leadership. If we want meaningful procurement to show what is possible, we need procurement leaders and leadership to show the way and provide means for this to happen. In this way we can reform procurement and create or increase the value of procurement in the way we move forward.

Co – Creation and Collaboration: We can achieve our requirements if we act in a cohesive, collaborative and innovative way. We have to move from transactional procurement to transformational procurement. We have to operate in an 'us' environment rather than 'them and us' environment that happens all too often. The present state of procurement professionals is in difficult state and many factors influenced them to take a back step and we all will definitely and have to get over from this kind of state of thinking. The 'us' environment will not only provide a competitive edge to the organisation but also, a great place for the procurement professionals in their respective organisations. Working together effectively is in itself powerful. Both sides will benefit for ongoing rewards for both short and long term goals.



Collaboration is essential so that buyers and suppliers work together sustainably and for building relationships. This requires true collaboration rather than as a 'wish' without putting into practice. Let us not forget our suppliers – we have to bring them along with us. We can learn by active listening. They could well be ahead of us and waiting for us to engage.

We as the procurement professionals often take undue advantage of the suppliers' goodness and it happened and still happening. Suppliers are the stakeholders, who (most of them) support our businesses run smoothly and waiting very patiently for our honesty and return support by way of their payments release on time and

involving them in our future supply projects.

Purchasing Builds Relationships with Suppliers



Let us harness the power of collaboration – this can pave the way for working innovatively. The most important step to achieve is a plan and effective communication, which leads to positive collaboration. Contract flexibility provides for options and clarity of purpose that can allow us to get ‘past the norm’ and be creative in how the relationship works. Of course this is best for buyer/supplier relationship, that have been in place for some time and where performance has been positive.

Procurement sustainability – We can no longer ignore this issue. We must consider requirements of our particular industry. This applies to environmental concerns as well as certainty of supply issues.

We expect that the supplier has a responsibility to ‘do something’ but often we do not look at the part we need to play. Lack of attention by procurement professionals loses the opportunity to look at the ‘big picture’ and make positive change to procurement and the entire supply chain.

Sustainability strategy – is recognising that sustainable procurement strategy cannot be considered in isolation of the organisation’s overall strategic vision and direction. A sound sustainability strategy protects organisation’s reputation and all key ingredients for long-term growth and profitability.

The future : We require a clear vision and the ability to implement it. We have to be flexible and our contracts needs to document both the technical requirements but also an effective change mechanism. Procurement has to move from the traditional buyer/supplier relationship which can be a confrontational one and look ahead so both sides work together effectively. Buyers should work “shoulder to shoulder” with their supply partners to resolve issues in Quality, on-time delivery and cost reduction initiatives. We have to recognise that both parties need the other and we should look at how we can improve the relationship and work constructively together in both operations procurement and for next generation procurement.

Linking to procurement reform – Procurement is in need of reform. We should look at implementing change within our organisation. Equally, we can contribute to the wider discussions. There is an urgent need for procurement to change/grow and gain a necessary ‘voice’. Procurement should set the agenda, discuss what can be and involve ourselves so procurement can provide effective solutions to our organisations.

As a part of this, of course, is the need for procurement leaders to become visible and their leadership acknowledged and used. Procurement requires procurement leaders and by extension procurement

leadership. This will enhance procurement and will also provide opportunity to provide input into the procurement agenda. But... how do we find such leaders and what kind of leadership does procurement require?

Procurement leadership – We need to ‘grow’, and one way of doing this is to encourage leadership – on both the big stage as well as within our organisations. We need to consider the ‘big stage’ discussions and especially as it relates to the ‘how’ and ‘where’. The ‘big stage’ is where this belongs rather than within individual organisations.

Procurement leaders – Procurement badly requires procurement leaders. A thorough discussion is required about the mechanism of the process of finding and mentoring aspiring procurement staff.

Place in organisation structure – It is well past time that procurement had a ‘place’ in organisations and appropriate visibility and impact. We need to move out on our own rather than being the ‘poor subordinate’ and hiding under the umbrella of divisions such as ‘Finance’ or ‘Corporate Services’. This requires a big discussion as to where we see ourselves.

Procurement roles – Procurement is in dire need for consistency of roles. This area is such a mess. It is not helpful to have conflicting roles and terminology. We also badly need for procurement staff to be empowered so that they feel valued which will help with retaining of staff.

Looking at procurement rules – Discussion should occur to establish the viability of rules, especially in respect of how long the procurement process takes. This can put off suppliers and lead to frustration. It is acknowledged that there needs to be a transparent process – but a balance should be established between transparency and timeframes.

Procurement salaries – This should be looked at, especially compensation for procurement expertise. Realistic salaries need to be paid and to recognise the work and expertise needed to be in the professional category. Let us move away from the solely administration category.

Saying that it can be hard, especially if the procurement roles have not been defined, this does not absolve the company from paying appropriately for their procurement expertise. Role descriptions can be developed and expertise measured – so the two issues should be looked at and resolved.

For Procurement specialised courses and training, there is a Professional Body, i.e., Indian Institute of Materials Management (IIMM)... always available, running several programmes to support the Procurement / SCM professionals with its various Procurement & SCM courses and Training Programs! For more details: Please visit www.iimm.org

Before we find the people that we first to have a good picture of roles and training. The role of the procurement professional might seem obvious but we should acknowledge that the role itself needs to be better defined. It is often split, or worse, barely acknowledged as a ‘role’. So, procurement needs to find

its place. This is quite possible with great patriotic working attitude and skill development through proper professional training courses.



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Staff training/mentoring/induction. – Procurement requires well trained staff and staff who has passion to be in procurement. We need to motivate, encourage and ‘be there’ for staff. Procurement staff can benefit from mentoring.

Ongoing training is a must and updation of knowledge through professional skill development courses, allowing people to attend seminars/ exhibitions, etc relating to the industry, as and when required. Equally, mentoring should be available for those who wish to make use of it or those who have the ability to mentor. This should be a continuous process for a continual progress.

Procurement paradigm versus procurement professional paradigms.

When we think about changing paradigms our focus on both is required, as a focus on one is limiting the extent of how far we can manage and achieve likely results.

The procurement professional paradigm should be about:

1. Thinking strategically.
2. Necessary direction.
3. Need for procurement qualifications.
4. Professional development.
5. This should be backed up by expertise and training.

The procurement paradigm : We cannot continue to operate in the same routine way -we must look at the best way of operating sustainably and innovatively. Equally, it is going to take the whole procurement and supply chain to achieve this. A start needs to be made. New ideas are required for different results. Having a clear direction will allow you to procure strategically.

Skills and competencies : Procurement requires procurement skills as well as complimentary skills such as financial, communication, advocacy, presentation and persuasion skills including management and other ‘soft’ skills. Some competencies are:

1. Procurement basics
2. Sound Knowledge of the Commodity Procured
3. Communication skills
4. Strategic skills
5. Vision and direction

Competencies seems to focus on procurement requirements at the expense of other helpful skills. There should be a balance of both. A lot of work needs to be put in to build competencies relevant for procurement.

A structured Competency Mapping must be undertaken by a team of experts to assess individuals in procurement, so that square pegs are not fitted into round holes. This mapping will also lead to specific Training needs appropriate to individuals working in the procurement team, instead of generic training without any outcome. Defining clearly proper Job Description is the start of such an exercise.

Retaining procurement staff and empowering procurement leaders – Once we have leaders we need to make sure that we retain them. To do that, we need to encourage personal growth, conceptual understanding, feedback and to provide skill building. We need to up-skill often. We are in dire need of procurement qualifications that reflect procurement overall but also reflect our country’s specific laws and procurement rules.

Summary : All the Organisations have competitive challenges and procurement should get ready to manage the challenges as it relates to procurement. It takes courage to effect change. A start is to work within your organisation for procurement change. Procurement cannot do this alone. The organisation also has a big role to play. Courage and empowerment are a useful mix.

Staff should have confidence that they can make a difference and their input is valued. Procurement professional need to ‘speak up’, to be empowered, to provide relevant and factual information. In this way we can provide value-add to management such as procurement savings. Here, the top management should look into and delegate the required professional authority with the relevant responsibility. The top management has to seriously look into this area and empower the procurement professionals and align the function in line with other functions.

These are challenges but there are also opportunities to improve procurement and to improve the procurement professional role. By doing so, procurement professionals can assist better the organisation overall objectives.

Let us all make an immediate start (if not started, yet..!) so our procurement future is a positive one – for existing procurement professional but also future procurement professionals. Let us make it easier for them and in the process we can make it easier for ourselves as well – it is a win-win situation/ platform – what do you say.!

Ø A request to the readers of this Article: To please forward your views and suggestions to the Author and Editor of MMR, to improve on the future articles.

References: Internet; Self Knowledge & Experience and The Senior Associate’s Review.

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“TRANSFORMING FUTURISTIC TECHNOLOGY ENABLED SUPPLY CHAIN 4.0 – EXPLORING CHALLENGES & OPPORTUNITY IN INDIA”!

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Abstract : The Next Generation Digital Supply Chain in –Re-Energise Future of India, digital technologies like social media, mobile, and analytics are advancing rapidly on the economic landscape. These innovations are used widely by consumers and employees alike. Facebook has more than 1 billion users. There are more than 6 billion mobile phones. Employees often have better digital solutions at home than they do at work, and many customers are more **technology savvy** than the people trying to sell to them.

India is at the cusp of a **digital chain supply revolution**. Declining broadband subscription prices, aided by the launch of **4G** services, have been driving this trend. This has led to an ever-increasing number of “**netizens**.” Furthermore, the likely launch of **5G** services is expected to significantly augment the country’s **internet user base**.

Internet has become an integral part of this growing Indian **population segment** for remaining connected with friends, accessing emails, buying movie tickets and ordering food. The **changing lifestyles** of the country’s **urban population** have also led many people relying on the **internet for their shopping needs**. The convenience of shopping from the comfort of one’s home and having a wide product assortment to choose from has brought about increased reliance on the online medium.

Disruptive **innovations** are currently changing the landscape of many industries and their business models. Because of increasingly **digitalized processes** and an exponential growth of sensible data, supply chains are also impacted by the **fourth industrial revolution**.



The trend of **online shopping** is set to see greater heights in coming years, not just because of India’s rising **internet population**, but also due to changes in the supporting **ecosystem**. Players have made intensive efforts to upgrade areas such as logistics and the payment infrastructure. Furthermore, the Indian consumer’s perception of online shopping has undergone a drastic change, and only for the good. Given these developments, venture capital investors, who were restricting themselves to the sidelines, are now taking a keen interest in the country’s **e-Commerce** market.

In today’s ferociously competitive global business environment, corporate are under compulsions to find **new and unique ways** to create and deliver value to customers through **innovations** and the demand to innovate and – **Efficient, First and Tailored** deliver better value addition is growing ever stronger and stronger.

Innovate to be strongly differentiated and transform supply chain to make it a driver for sustainable growth.

the 'internet of things', the 'internet of everything' or the '**industrial internet**'.



The concept of industry 4.0 is widely used across Europe, particularly in Germany's manufacturing sector. In the United States and the English-speaking world more generally, some commentators also use the terms the 'internet of things', the 'internet of everything' or the 'industrial internet'.

What all these terms and concepts have in common is the recognition that traditional manufacturing and production methods are in the throes of a digital transformation. For some time now, industrial processes have increasingly embraced modern information technology (IT), but the most recent trends go beyond simply the automation of production that has, since the early 1970s, been driven by developments in electronics and IT (see Chart 1).

II. Industry 4.0 is the current trend of **automation** and data exchange in manufacturing technologies. It includes **cyber-physical systems**, the **Internet of things** and **cloud computing**. Industry 4.0 creates what has been called a "smart factory". Within the modular structured smart factories, cyber-physical systems monitor physical processes, create a virtual copy of the physical world and make decentralized decisions. Over the Internet of Things, cyber-physical systems communicate and cooperate with each other and with humans in real time, and via the Internet of Services, both internal and cross-organizational services are offered and used by participants of the **value chain**

While terms like industrial **Internet** and **digital factory** are also used to describe these changes, Here, we use **Industry 4.0** to describe the journey industrial companies are taking towards a complete value chain transformation. At the end of this transformation process, successful industrial companies will become true digital enterprises, with physical products at the core, augmented by digital interfaces and data-based, innovative services. These digital enterprises will work together with customers and suppliers in industrial digital ecosystems. These developments will fundamentally change individual companies as well as transform market dynamics across a whole range of industries. And that is true in countries all around the world—in both developed and emerging markets.

Connected manufacturing as Industry 4.0, several other commonly known terms may point to the same phenomenon. These include:



- Industrial Internet
- Connected Enterprise
- SMART Manufacturing
- Smart Factory
- Manufacturing 4.0
- Internet of Everything
- Internet of Things for Manufacturing

The term "Industrie 4.0" originates from a project in the high-tech strategy of the **German government**, which promotes the **computerization** of manufacturing.

Design principles

There are 4 design principles in Industry 4.0. These principles support companies in identifying and implementing Industry 4.0 scenarios.^[1]

1. **Interoperability:** The ability of machines, devices, sensors, and people to connect and communicate with each other via the Internet of Things (IoT) or the Internet of People (IoP).
2. **Information transparency:** The ability of information systems to create a virtual copy of the physical world by enriching digital plant models with sensor data. This requires the aggregation of raw sensor data to higher-value context information.
3. **Technical assistance:** First, the ability of assistance systems to support humans by aggregating and visualizing information comprehensibly for making informed decisions and solving urgent problems on short notice. Second, the ability of cyber physical systems to physically support humans by conducting a range of tasks that are unpleasant, too exhausting, or unsafe for their human co-workers.
4. **Decentralized decisions:** The ability of cyber physical systems to make decisions on their own and to perform their tasks as autonomously as possible. Only in the case of exceptions, interferences, or conflicting goals, are tasks delegated to a higher level.

III. Challenges

Challenges which have been identified include

1. IT security issues, which are greatly aggravated by the inherent need to open up those previously closed production shops



2. Reliability and stability needed for critical machine-to-machine communication (M2M), including very short and stable latency times
3. Need to maintain the integrity of production processes
4. Need to avoid any IT snags, as those would cause expensive production outages
5. Need to protect industrial knowhow (contained also in the control files for the industrial automation gear)
6. Lack of adequate skill-sets to expedite the march towards fourth industrial revolution
7. Threat of redundancy of the corporate IT department
8. General reluctance to change by stakeholders
9. loss of many jobs to automatic processes and IT-controlled processes, especially for lower educated parts of society

IV. Impact of Industry 4.0

Proponents of the term claim Industrie 4.0 will affect many areas, most notably:

1. **Services and business models**
2. **Reliability and continuous productivity**
3. **IT security**
4. **Machine safety**
5. **Product lifecycles**
6. **Industry value chain**
7. **Workers' education and skills**
8. **Socio-economic factors**
9. **Industry Demonstration:** To help industry understand the impact of Industry

4.0, Cincinnati Mayor John Cranley, signed a proclamation to state "Cincinnati to be Industry 4.0 Demonstration City".

10. A article published in February 2016 suggests that Industry 4.0 may have a beneficial effects for emerging economies such as India.

Table 2. Industry 4.0 key business objectives, organized

 BUSINESS OPERATIONS	Productivity improvements	<ul style="list-style-type: none"> • Maximizing asset utilization and minimizing downtime • Driving direct and indirect labor efficiency • Managing supply network costs and synchronization • Ensuring schedule and plan stability and accuracy
	Risk reduction	<ul style="list-style-type: none"> • Ensuring raw material price and availability • Managing warranty and recalls effectively • Mitigating geographic risks
 BUSINESS GROWTH	Incremental revenue	<ul style="list-style-type: none"> • Finding sources of growth for the core business • Growing aftermarket revenue streams • Deepening customer understanding and insights • Strengthening customer integration and channels
	New revenue	<ul style="list-style-type: none"> • Creating new products and service offerings • Expanding internationally and in emerging markets • Identifying attractive M&A opportunities

V. Addressing today's challenges

1. **Go beyond just data, generate insights** – Use data analytics to understand customers, market trends, track usage patterns, predict failures etc.
2. **Improve, standardize, and automate:** processes to reduce internal cost to serve
3. **Contract effectively** to get best value and manage risk in the changing digital landscape
4. **Embrace technology to support business** e.g. application of sensors, drones, machine learning, 3D printing etc.
5. **Develop right skills internally and explore partnerships** to meet new digital needs



VI. What can you do to prepare for the future?

Behind the great potential of the **digital supply chain (DSC)** lies **Industry 4.0**, the fourth industrial revolution. A transformation in production and automation was brought on first by steam and water power (Industry

1.0), then by electrification (2.0), and more recently by the digital computer (3.0). Industry 4.0, digitization, is about companies orienting themselves to the customer through e-commerce, digital marketing, social media, and the customer experience.

Digital ubiquity is also causing companies to completely rethink how they go about operations. Operations is often mistakenly viewed as “manufacturing,” but operations is what gives a company its ability to act. As with every other aspect of a company, digital technology is enabling completely new operating models.

VII. Conclusion : In this work on Industry 4.0 two methodological approaches have been used to explore the impact on the procurement function. A scoping study was used to better understand Industry 4.0 while in-depth explorative interviews with seven procurement managers should reveal insights from practice. Of course this study is limited with regards to the number of participants in the explorative survey. However, the conceptual findings and empirical insights support the conceptual differentiation of “Procurement 4.0” from previous maturity levels of technology use in procurement. The observations have been collected in form of six fundamental observations. Obviously, Procurement 4.0 must support superior Industry 4.0 strategies of the company. In this role it shall assure the dynamic cooperation across organizations borders and the achievement of a collaboration productivity rent, while safeguarding the companies risk exposure within the Industry 4.0 supply chain. However, research on the topic is still in its infancy, while practice signaled a high demand for explanative knowledge. More conceptual and empirical work is needed to better understand the effects of Industry 4.0 on procurement in detail. With these considerations in mind, this work is an initial exploration of the phenomenon and further observations need to be taken.

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SEARCH IN FUTURE: SUPPLY CHAIN MANAGEMENT

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Search is trying to find something by looking or otherwise seeking carefully and thoroughly, and this concept is a very much in supply chain.

Context: Search creates controls, conveys, and integrates, data across suppliers. Customers, and mapping translates and enriching the data, so as to know what is happening to any of the activities in supply chain.

Search brings visibility to supply chains, inventory reports, stock, location, shelf life, and expiry details. Technological solutions can be modified to be used an affordable search, can automate complex supply chain operations across all business units, and it can be done globally, since the new level of visibility transforming the way the present business works. Search intensifies the stock piling, and shortage decreases, and maintenance gets done on schedule, accountability and efficiency is improved creating a significant and thus generating return on income.

Search in supply chain for actual and good suppliers is often a difficult task, and making companies do not want to reveal that information. Search can be done in newspapers, trade journals, for suppliers, and also search for full text articles, or products, materials, and supplies are contended to report the relationship or contacts with major companies. Search for key words can go beyond searching for good suppliers that can lead to new contacts, joint ventures, partnership, or distributors in supply chain management. Other key word in Search are procurement, purchasing, inventory management, outsourcing, suppliers, warehousing, logistic and operation management, and using these data bases.

Search is available in over different magazine, trade journals, which can result in a good supply chain. In also Search in companies web-site, report, information about customers, suppliers and partners in market are closely associated in supply chain management.

Search is key word to track companies profile details of key customers, suppliers, and competitors, in a supply chain, and this can make suppliers grouped to access to geographic concentration in supply chain.

Search can also filter suppliers list in an organization, into sub-groups, or economic sectors. Globalization, fluctuating in exchange rates, and low cost sourcing, and customer service pressure has transformed service. Search in supply chain is tactical function into a strategic and increasing the organization structure, and organizing the value added by the supply chain, and its counter parts especially during the periods of supply chain in Search, and thus drawing upon their short term and long term, planning activities, and their strategies for cutting costs, and increasing efficiencies

Since speed to market search fulfillment rates, and levels bring global footprint become competitive advantage, companies have the advantage, and the supply chain leaders demonstrate the right mix, of business, financial risk, management skills, and international experience in search supply chain.

Search in supply chain has integrated various global activities: 1. Procurement and Sourcing: 2. Integrated supply chain management. 3. Distribution and transportation logistics management. 4. Management Planning, Demand supply and operations. 5. Inventory management value chain strategy, however the organization effectiveness can be significantly reduced by such issues, and the differences lack structure and governance. Search in supply chain has bought in a concept of high and low cost, on-time delivery with view to a very good effective supply chain.

Search had timed supply chain to the demand by keeping steady supply of inventory on the shelves, instead of better understanding of the ebb and flow demand.

Conventional wisdom suggests that inventory be placed closest to customer so as to help demand in a proper search, but if inventory is replaced by search information, with right data, the organization has to ensure that the product is not only available, when customer is in need of the product at the right time, right place, right quantity, right price, giving a competitive advantage.

Search has given to key words in supply chain the factors innovative difference, forecasting lead time. Forecasting coupled with product segmentation can

predict which products meets customers demand, reducing lead time for the right products, and can allow quicker response time to meet customers demand

Search analytics has an answer, and has become an increasingly prominent, and have figured how to integrate, analysis into operation by innovation by turning data into meaningful insights and a challenge which lead to new business in a supply chain management.

Search has created the functions of effective buyer portal, since the access to search engines shift to on-line, and use the number of websites, being in the portal to consolidate of all procurement information into one area.

Integration: In search in supply chain different buying channels, come together into one place, and the buyer portal become one-stop procurement for the use.

Building relationship: Search with all functions build better relationship among procurement end with customers, within the organization:

Simplicity: Search will function to direct users to the appropriate information, and help when and where the user needs it, since procurement should be considered as one of the key tools to achieve control over financial spend in search in a supply chain, and thus reducing overall spent.

Search in supply chain can monitor risk, and the steps to understand and the types of risk, so as to give better protection to supply chain:

Reputational since brand reputation are a part of supply chain, Search can identify in safe working conditions in an organization, that can cause reputation, or damage to consumer products, and the class of action that can be taken as a result of this companies and organization need greater visibility into the damage, to address the concerns of investors in supply chain.

Regulation: Regulation involved can begin to search and unearth inadequate functions in supply chain, and to ensure that efforts are not wasted, and are made to renew and bring beneficial to supply chain organization.

Financial: Search can bring out the critical analysis using conventional credit systems, which is a threat to financial risk, and it extends to product failure, pending litigation in distribution, pricing violation, that can disrupt supply chain activities, and lead to financial and reputational damage.

Strategic: Search in supply chain can bring out the strategic risk by emerging opportunities in improving awareness into factors that disrupt progress, toward

strategic goals, and these risks include work shortage, natural disasters in a supply chain.

Search can improve risk monitoring in supply chain, since being accessible to comprehensive, and credible information on its suppliers, credit risk, and the need to expand the monitoring to which their suppliers, operate. Traditional search engines allow companies to search a range of sources for means of its suppliers, but this is not timely reliable, and comprehensive. Technology, allows risk-based approach to monitor, in search in supply chain as this allows to improvement to technology to monitor resources more effectively in a supply chain.

Search will use Artificial Intelligence in supply chain which will be functionally necessary to wield vast number of connected things on-line, and will be even more important in making sense for almost endless data from these devices. Artificial Intelligence search in the area of computer that deals with giving machines the ability to seem like they behave like human beings.

Search will be the network of physical internet of things, objects that contain embedded technology to communicate and sense or interact into internal and external environments in a supply chain.

Search in machine learning in supply chain, which is a method of data analysis that automates analytic model building and search in supply chain will help machine learning which allows computers to find hidden insights without being explicitly programmed.

Search has identified various chemicals used in manufacture in food products that have been harmful to human bodies, and have caused damage which is beneficial to supply chain.

Search has affected the operational success of a supply chain in the speed of information flow through supply chain, by breaking down functional barriers in an attempt to allow a smooth, and timely flow of information, and it is the use of internets, and also the extranets, which offer the opportunity to make step changes, and improvement in the area of supply chain, although current internet attention is normally focused on the role of electronic commerce (e-commerce), but where Search is being undertaken for alternative issues in supply chain.

Search can also be aware of the customer order promised cycle time as this cycle time performances, measures and tells the expected time a customer order is place to the time of delivery, in which cycle time will remain constant in limited customer lead time in a supply chain. Search is also embodied to know the customer order actual cycle time if the cycle time is needed to capture the time, when a customer places

an order, unlike the product is delivered the actual cycle time performances includes all the complete stages in fulfillment picking from warehouse to shipping time in supply chain.

Search in supply chain analytics, relates to the use of data, the complexity, in supply chain. In supply chain search in much organization, are unable to use supply chain analytics, to improve operating margin, inventory cycles in supply chain.

Supply chain analytics, is today having the difficulty for search, in the complexity, challenging, delayed shipments, inefficient plants, inconsistent suppliers, increasing supply chain costs, in supply chain, is also facing the difficulty for the lack of visibility of global supply chain, logistic process, managing demand, volatility, cost fluctuation in supply chain.

Search in supply chain analytics', planning, overcome the challenges, holding great potential for innovation, competitive advantage, for business analytics, improved significantly, during the last decade, offering decisions support for critical, tactical strategy, supply chain activities, helping organization, reduce cost, activities, helping organization to reduce cost.

Supply chain search, can find a suitable, to significantly to bring the impact on key financial, working capital, the cost of goods sold, cash flow, with constant, improvement in financial performance in supply chain, able to handle large amount of inventories in supply chain.

Search in supply chain can give preference to materials purchase, decision, with better practices price negotiation, zero inventories, in supply chain. Search in supply with fluctuating demand, practices, expanding the base of the suppliers, logistics, have driven many organization, continuously with logistic network, so as to realize the return on investment, improvements through analytics, playing, route optimization, load planning, fleet management, freight cost in supply chain.

Search in supply chain sourcing has to be extended to the new volatile market, diversification activities, with multitude of suppliers, as a challenge in supply chain. Search in supply chain, has to include cost, when new suppliers are added, so as to able to achieve the best possible price, with the balance of sourcing, related to the operation controls, with sophisticated analysis progress to generate real-time, supply performance management data, with supply chain to improve sourcing, strategy, with proper data sourcing by providing analysis form sourcing to risk management in supply chain.

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NO DIVERSION OF GST CESS: GOVT AFTER CAG REPORT

In its latest report, the Comptroller and Auditor General of India had said that during 2017-18 and 2018-19, there was "short crediting" of compensation cess of around Rs 47,000 crore, which resulted in over-statement of the Centre's revenue receipts and understatement of fiscal deficit.

NEW DELHI: The government has dismissed suggestions of diverting GST compensation cess into its books and said that the money was temporarily lying in the Consolidated Fund of India, pending reconciliation. In its latest report, the Comptroller and Auditor General of India had said that during 2017-18 and 2018-19, there was "short crediting" of compensation cess of around Rs 47,000 crore, which resulted in over-statement of the Centre's revenue receipts and understatement of fiscal deficit.

The finance ministry chose to respond to political criticism from Kerala finance minister Thomas Isaac, who had alleged "diversion" of funds. Denying the charge, a government source said: "...whatsoever was the compensation due to the states for the year 2017-18 and 2018-19 were fully paid and the time taken in reconciliation of compensation receipts can't be termed as diversion of GST Cess Fund when the dues were fully released by the central government."

Finance ministry officials said the compensation receipt in the CFI was subject to reconciliation in the coming months in the subsequent financial year. "If for that reason the amount remained in the Consolidated Fund of India, how can that be treated as 'diversion'? Even the CAG in its report has not said so," a source said. Officials said in line with the Constitutional provisions, receipts — including taxes and cess — collected by the Centre need to be first credited into CFI before being transferred to another fund through a budget head. In case of the GST compensation cess, officials said since the final accounts are known only after the end of the financial year, usually around June-end, the excess amount temporarily stays in CFI.

"After reconciliation, the amount is transferred to Compensation Fund and from that Fund to states as per their compensation formula," a source said. During 2017-18, Rs 62,611 crore was collected as compensation cess and Rs 41,146 crore was paid to states. In 2018-19, against collections of Rs 95,081 crore, Rs 69,275 crore was paid. While Rs 47,271 crore did remain unutilised for reconciliation after payment of all the dues, the money has been used up subsequently. "Therefore, it can't be said that this Rs 47,721 crore was diverted for other uses," said a source.

Source : ET Retail

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WTO UPDATE

DDG WOLFF: TRADE IS THE BEST OPTION FOR ENSURING SUPPLY OF ESSENTIAL GOODS

In remarks delivered to the 2020 Havencongres Rotterdam on 29 September, Deputy Director-General Alan Wolff said relying on international trade is the most efficient and economical choice for governments seeking to ensure access to essential supplies in a crisis. The COVID-19 pandemic has exposed some of the fragilities inherent to value chains and economic interdependence, DDG Wolff said, but it has also shown that trade plays a central role in maintaining the availability of goods and services. His remarks are below.

I am pleased to join you to look at how the Covid-19 pandemic is affecting the future of trade. It is fitting that the Dutch trade community has organized this debate. Dutch sailors and merchants have been at the forefront of global trade for centuries. My father imported goods from the Netherlands into the United States over 50 years ago. As long as there is someone looking for goods to move from one part of the world for the benefit of both the producer and the consumer, you will do.

Over the millennia, the ways goods, services, ideas and people have crossed borders has changed almost beyond recognition. One recent example: I am currently speaking to you from Switzerland via an internet platform that few of us were familiar with when this year began.

But the Netherlands has kept up with the times. Rotterdam's port is an example of that adaptability. Having first emerged as a major transshipment hub in the 17th century, it ranked as Europe's largest freight port in 2018⁽¹⁾, and is among the top 12 globally⁽²⁾.

The forces transforming the global economy have also transformed the port of Rotterdam. It was an early adopter of containerization and automation — with benefits for this entire continent and those that lie beyond the oceans.. In the face of climate change, the port has set for itself the target of carbon neutrality — while putting into place state-of-the-art storm surge barriers against the threat of rising sea levels.

Like the rest of the global economy, the port has also been affected by Covid-19. Rotterdam's throughput in the first six months of 2020 was 9.1% less than in the first half of 2019⁽³⁾. This is in line with new WTO data suggesting that global merchandise trade volumes in the second quarter of 2020 were 14.3% lower than a

year before.

COVID-19 AND THE GLOBAL ECONOMY : As you are well aware, the outlook for the global economy over the next two years remains uncertain. Much will depend upon how the pandemic evolves, what measures governments and businesses will need to take, and how quickly countries can rebound from the economic damage.

The International Monetary Fund in April estimated that global economic output would shrink by 3%. By June, it downgraded this expectation to a 4.9% decline. This month, the OECD projected that the contraction would be around 4.5%. Estimates may vary, but one thing is clear: the world economy is in the steepest downturn of our lifetimes, on a scale unseen since the 1930s.⁽⁴⁾ The ongoing contraction in global merchandise trade is substantially worse than during the global financial crisis in 2008-2009. Services trade has also declined, though less sharply.

While trade volumes have also been affected, it could have been much worse. In April, WTO economists projected that depending on the pandemic's impact and the policy response, global merchandise trade volumes could fall by 13% to 32%.

We are on track to be at the better end of that spectrum. Fiscal and monetary measures have cushioned the shock to demand. Many supply chains have overcome the initial disruptions to travel, transport, and border clearance. Container shipping has held up relatively well — in no small part thanks to the thousands of seafarers who have been unable to return home on schedule. Policy-induced trade restrictions have thus far been confined to a relatively limited number of goods and trading relationships.

Our task today is to think about the economy and trade after COVID-19. Trade policy choices do have a direct role in the medical response to the pandemic, since they affect countries' ability to import key medical supplies — as well as eventual treatments and vaccines.

Trade will also matter for the wider post-COVID economy. A robust and inclusive economic recovery would be best served by open and predictable international markets. Open trade, underpinned by the rules-based system, enables the productivity gains that come with increased specialisation and scale, and a freer

exchange of goods, services, and ideas.

For over seventy years since it was founded in the wake of the Great Depression and the Second World War, the multilateral trading system has fostered greater economic integration and prosperity. In recent years, improved information and communications technologies combined with predictable market conditions to give rise to the global value chains that now dominate manufacturing production and trade.

It became feasible for companies to locate investment across multiple locations at home and abroad, sourcing inputs and services from the most cost-effective locations. This boosted profitability for firms while lowering prices for consumers — as attested to by the incredibly powerful yet affordable digitally enabled devices most of us are currently carrying around with us. COVID-19, however, reinforced the call by many for onshoring.

Under the surface, the factors affecting value chain choices were shifting even before this year. Increased automation was reducing the importance of labour-cost arbitrage. More frequent natural disasters linked to climate change were repeatedly disrupting production and shipping, forcing companies to think again about how best to build more resilient supply networks. COVID-19 accelerated ongoing trends such as the shift to e-commerce. And it caused a new kind of supply shock.

COVID-19 AND GLOBAL SUPPLY CHAINS : When the pandemic first hit, medical equipment, from simple hand sanitizer and masks to more sophisticated protective garments and ventilators were suddenly in short supply. Domestic manufacturing could not immediately respond. In many places, the immediate response from governments, which were taken by surprise, was to unilaterally restrict exports to shore up the availability of supplies at home.

The WTO's monitoring exercise documented an increase in trade-restricting measures in March and April, primarily for exports of medical supplies and agricultural products.

WTO rules permit measures to relieve domestic shortages of essential products. But the fact is that export restrictions can cut off import-dependent countries — especially poorer ones — from urgently needed supplies. And by blunting incentives to ramp up production, they can even lead to higher prices at home than might otherwise have been the case.

We should note that many of the COVID-19 specific trade restrictions have already been reversed, though the momentum of the removal of emergency measures is beginning to slow. Shortages of certain medical supplies persist, even in countries with substantial manufacturing capacity.

The news on this front is not entirely grim. Countries' trade-facilitating measures in fact outnumbered

restrictions. Global trade in products such as personal protective equipment, hand sanitizer and ventilators grew by close to 30% in the first half of the year compared to 2019, pointing to how increased production and trade are helping meet demand for essential supplies.

It will now be important for governments to identify and unwind continuing trade restrictions once they are no longer necessary.

The experience of shortages in a relatively few, but essential, product lines, and of being unable to rely on international markets, has injected new urgency into the debate over on-shoring and near-shoring supply chains.

While it is understandable that governments would be keen to avoid a repeat of these circumstances, moving value chains closer to home is not straightforward, is sometimes impractical and in many cases would carry major opportunity costs.

First, it is not simple to replicate all the links in a value chain domestically, especially when a sector is capital- or knowledge-intensive, or tied to natural resources. According to some estimates, a single multinational can have more than 10,000 independent suppliers. It is one thing to convert clothing factories to making masks and aprons, or to switch from manufacturing perfume to hand sanitizer — both of which are alcohol-based. It is quite another to replicate at home the 600 globally sourced parts needed to make a ventilator.

Second, some businesses have strong economies of scale, taking advantage of ecosystems that have developed in specific locations, with unique suppliers and specialized talent. You cannot reproduce that overnight, if at all.

Third, this strategy may offer a false sense of security. Concentrating production in a single territory exposes the country to locally concentrated shocks: natural disasters or domestic economic or political crises. Deep international markets are more resilient in the face of such shocks.

And finally, when it comes to global supply chains, the economics of running businesses often provides effective limits to government policies favouring self-sufficiency. Using policy to maintain uncompetitive or obsolete productive structures is a recipe for higher costs and lower productivity. For a finite handful of products, this price may be worth paying to ensure domestic supplies — but even here there will be limits, especially where governments will emerge from the pandemic without excess funds for expenditure on projects of limited benefit. As a general policy, however, onshoring across too broad a swath of the economy would leave citizens significantly poorer than they otherwise would have been.

The pandemic has exposed some of the fragilities inherent to value chains and economic

interdependence. But it has also shown that trade plays a central role in maintaining the availability of goods and services.

Global value chains evolved because of economic forces. They are driven mainly by the need of businesses of any size: whether a single entrepreneur selling products through the web, or a major multinational, businesses require a return on investment.

I do not believe that global value chains are a relic of the recent past. I do think, however, think we can expect what I call Global Value Change.

I think we will see more flexibility in these networks, moving towards more diversity in sourcing and increases in inventory. Trade will still be a most important source for most of what industries and individuals consume. A shift from “just-in-time” to “just-in-case” manufacturing does not mean that all components can or should be made next door.

McKinsey Global Institute² recently estimated that 16 to 26 percent of exports, worth \$2.9 trillion to \$4.6 trillion in 2018, has the potential to shift to new locations — whether that involves reverting to domestic production, nearshoring, or new rounds of offshoring to new locations. This estimate was due to all causes. For example, the primary cause of shifts in supply chains in agriculture is due to climate events, but also to local outbreaks of animal infections. In agriculture, on-shoring and near-shoring is not the most likely or even possible answer. The answer lies in diversifying or temporarily shifting sources of supply.

These shifts need to be backed by a functioning trade system that provides transparency and predictability to cross-border trade. There are other implications here for companies and for governments.

New technological tools can help build supply chain resilience. For example, early in the pandemic, a well-known footwear maker³ used predictive analytics software to reroute products from physical stores to e-commerce sales, cushioning the impact on sales.

Companies will have to deploy resources more creatively and nimbly. The FT⁴ recently described how shipping companies have reduced losses and even in some cases even increased profits — by cutting capacity and shifting towards shorter routes, smaller vessels, and new lines of business such as substituting for air freight.

For governments concerned about access to essential products currently and in future crises of whatever nature, there are three principal routes to assuring supply: stockpiling, investment in domestic manufacturing capacity and trade. In practice, countries with the financial and technological wherewithal to do so will likely opt for a mix of all three within limits.

Each option has its shortcomings. Public stockpiling is expensive, and recent experience provides clear

evidence that the commitment to maintaining stockpiles erodes over time. Moreover, a serious enough crisis might overwhelm stockpiles, or demand products that were not foreseen.

Attempting to build up a reserve of spare or easily diverted manufacturing capacity would be expensive, and demand resources that could have been deployed elsewhere. Relying on international trade is the most efficient and economical choice of the three — provided that there is reasonable security of supply.

Governments can act at the WTO to help make trade a more reliable mechanism for assuring access to essential supplies. In fact, several different WTO members have called for supply lines to be kept open, particularly for food and medical products. The European Union has informally broached the idea of new rules to ensure the free flow of trade in essential goods, with tariff cuts and disciplines on export controls.

CHALLENGES IN THE TRADING SYSTEM : The WTO continues to provide enormous value to the global economy. The lion's share of world trade continues to occur under WTO rules and principles. Bilateral and regional trade agreements rest on the multilateral architecture. The world weathered the financial crisis a decade ago far better than we otherwise might have done because the WTO exists. This is also true now for the pandemic.

But the WTO's contribution to post-COVID recovery would be substantially enhanced if members take forward the ongoing process of systemic reform. This would mean restoring the WTO to its intended role as a venue:

- where agreements are successfully negotiated to address pressing problems;
- where disputes are settled within a binding and universally accepted structure;
- and where members are actively served by a strong, dedicated, professional Secretariat.

Last week under the leadership of Saudi Arabia, G20 trade ministers reiterated their commitment to supporting reforms to improve the functioning of the WTO. For the WTO to remain fit for purpose, its rulebook must be responsive to a changing global economy.

On the current agenda, concluding ongoing multilateral negotiations on fisheries subsidies would be a valuable step in demonstrating in practical terms the shared commitment indicated by declarations in support of the multilateral trading system and sustainable development. Of broader importance to the world economy would be the successful conclusion of an agreement on digital trade among a group of WTO Members accounting for over 90% of global trade including the European Union, China, and the United

States.

Geopolitical rivalry does not rule out making progress on sustainable development, while doing more to protect the environment.

CONCLUSION : In conclusion, it is safe to say that trade will continue to be transformed — as it always has — by a multitude of factors: demographic and technological change, political choices, environmental stresses, and, from time to time, by the spread of disease that has always gone hand-in-hand with human mobility.

The Port of Rotterdam has witnessed many such changes: from the pioneering 16th century Dutch cargo vessels (fluyts) to the rise of refrigerated steamships and containerization, from being cut off from British trade by the Napoleonic blockade to the utter devastation of the Second World War and subsequent rebirth of a global economy. We can expect the Port to see many more changes in the years ahead — including, hopefully, a greater share in world trade with Africa spurred by the new African Continental Free Trade Area.

The foundation for world trade is the WTO — its rules, its processes, its services to Members. The flow of trade around the world, like the movement of cargo vessels and tankers, relies on protocols, on lane markings, on radar and sonar (which in the case of trade consists of the transparency that comes from monitoring and notifications), on the stability offered by the trading system, the equivalent of GPS.

The job of the WTO Secretariat and of the delegations of the WTO's 164 Members is to provide the framework, to allow the world to continue to prosper from world trade.

WTO Members will have an opportunity to work with the new Director-General to place the multilateral

trading system, and global trade, on an even better foundation for the future. I believe that our 164 Members and the 23 countries seeking to join the WTO have strong common interests in a robust, effective and improved global trading system. They presently need to find the will to work constructively with each other. I believe that in the long term they will certainly do so.

We are not by any means at the end of the journey across millennia to enjoy the benefits of world trade. Land traffic will expand, new modes of manufacture will be put into place, but oceans and ports will remain of immense continuing importance. Of that Rotterdam can be sure.

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Source: WTO website

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COMMODITY INDEX

Commodities	Days's Index	Prev. Index	Week Ago	Month Ago
Index	3038.6	3048.8	3050.6	3110.9
Bullion	7328.2	7394.3	7328.2	7637.7
Cement	2397.3	2397.3	2397.3	2547.5
Chemicals	1460.8	1460.8	1469.4	1520.1
Edible Oil	2154.4	2158.8	2235.2	2138.3
Foodgrains	2272.0	2273.0	2268.5	2230.7
Fuel	2894.7	2894.7	2911.4	2982.3
Indl Metals	1919.1	1919.1	1919.1	1919.1
Other Agricom	2312.9	2312.9	2356.9	2358.3
Plastics	1581.6	1581.6	1581.6	1631.0

Source: ETIG Database dated 30th September, 2020

'GREENING' THE SUPPLY CHAIN

In the desire to make the post-COVID-19 world better and address the threat caused by climate change, is 'greening' the supply chain the answer? The latest government consultation on illegal deforestation seeks to address this.

The UK government seems to think supply chains have a part to play in the fight against climate change, as it has published a consultation seeking views on whether to introduce a new law designed to prevent forests and other natural areas from being illegally changed into agricultural land.

The thrust of the proposed legislation would be to make it illegal for larger businesses to use forest risk commodities that have not been produced following relevant local laws, and they would need to undertake due diligence to show that they have taken proportionate action to ensure this is the case.

In some respects, the proposed approach is similar to the requirement under the UK's Modern Slavery Act 2015 for some commercial organisations to demonstrate the steps they have taken to identify and mitigate the risk of slavery and human trafficking in their supply chains. In this instance, however, the threat is reputational damage rather than fines or imprisonment.

The current consultation arose from a government-commissioned taskforce, the Global Resource Initiative (GRI) that considered actions the UK could take to make international supply chains greener and leave a lighter footprint on the global environment.

As the consultation document points out, the UK consumes significant amounts of commodities such as beef, cocoa, palm oil, pulp and paper, timber, rubber and soya, whose production is associated with deforestation. Although the current consultation focuses on forests and land conversation, the GRI has said this is only the first step. The impact of commodity production and trade on the environment, human rights and working conditions as a whole will have to be addressed if any real progress is to be made.

But what do we mean by 'greening' the supply chain?

In essence, it is quite simple. Any organisation that produces or supplies goods or services needs to review its supply chain to assess the risk that any element within that supply chain is not following best practice regarding sustainable production.

So a clothes retailer, for example, must decide not only from whom it buys its garments and at what price (as a commercial decision) but also understand the supply chain from start to finish ie how are those garments made, from what, how they are transported and

assess the risks within that supply chain of non-compliance with required standards.

Having assessed the risk, the clothes retailer must then decide how it will mitigate any risks identified within the supply chain. One choice could be to do nothing, another could be to end or not enter into contracts with non-compliant suppliers. But neither of these solves the problem and, of course, in the case of the former could run the risk of fines, reputational damage or even imprisonment for directors or top management.

Rather the garment retailer, in this case, should work with suppliers, producers and governments to improve production methods, change the raw materials used or seek out the most sustainable way to transport the garments from source to market. In doing so, the supply chain is 'greened'.

It does not necessarily mean stopping production of a particular item. Instead, the aim is to seek the best way to produce goods with a lighter footprint. In the same way, it is not designed to reduce trade, nor is it anti-consumerism, although many organisations are concerned that unless there is a 'level playing field' some may increase their competitiveness at the expense of those who do adhere to stricter standards.

Although the concept is simple, it is not so easy in practice to implement or enforce. As the section 54 Transparency in Supply Chains published in accordance with the UK's Modern Slavery Act has revealed, many organisations find it difficult to go beyond their tier 1 suppliers or monitor the working conditions in supplier factories in the UK, let alone in far-flung locales.

The GRI's report acknowledges that governments can only 'enable change' by making it commercially viable for producers and retailers to effect change. They cannot drive demand in the same way as consumers or investors. Even so, other governments and institutions such as the EU are also looking to enable or even enforce behavioural and commercial change either through legal penalties, trade sanctions, reputational damage or moral pressure.

We can, therefore, expect many more such consultations and legislative changes that will aim to 'green' the supply chains. It would be wise for commercial organisations of whatever size to be prepared to review and reconfigure their supply chains to meet the increased demand of government, consumers, investors and employees. You could say our, and their, futures depend upon it.

Source:icaew.com

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START PREPARING FOR WHEN THE ‘NEW NORMAL’ BECOMES THE ‘NEXT NORMAL’

KATHERINE ROSS

Supply chains should take advantage of being in the eye of the storm, a moment of calm before the winds pick back up.

This is a contributed op-ed written by Katherine Ross, managing director of Stone Cliff Consulting and the former world wide vice president of customer and logistics services for Johnson & Johnson. Opinions are the author's own.

When the pandemic first hit, it brought an onslaught of crises — supplier shutdowns, wild demand swings, transport interruptions — all while supply chain executives ran war rooms virtually, on spreadsheets, perhaps from a spare bedroom.

Supply chain leaders are accustomed to managing disruption.

Running scenario drills and creating backup plans in the event of weather-related catastrophes, labor stoppages, tariff barriers and other challenges is part of the DNA. But facing COVID-19 has been beyond our experience or imagination.

Currently, it may feel like things are slowly coming back under control, and teams have adjusted to the “new normal.” Just a couple more months and everything will be fine, right?

Wrong. Until supply chains restabilize, which will likely take years, the muscle memory that our networks have relied on to anticipate and resolve problems between different nodes of our supply chains is gone.

Now is the time for organizations to prepare for the next phase. This period is like the eye of the storm, a temporary moment of calm where savvy supply chain leaders are rebalancing their organization's skill sets for the “next normal,” before the winds pick back up.

Over the past five years, the supply chain industry has literally

spent billions of dollars on planning capability. The

next five years will be all about investing in execution to manage and eliminate disruption, and focus should be on incident management, operational agility and peak-season readiness.

Putting in place a robust supply chain incident-management process should be a priority, if an organization has not already done so. It is a foundational capability that is woefully absent in many firms.

Operating on a much faster drumbeat than the typical sales and operations planning process, it allows companies to swiftly identify emerging risks, allocate resources and stifle issues before they have a chance to gather steam.

This period is like the eye of the storm, a temporary moment of calm where savvy supply chain leaders are rebalancing their organization's skill sets for the “next normal,” before the winds pick back up.

Supply chain managers will also need a tool (not Excel) that is supply-chain centric and acts as the single source of truth for the organization, providing both visibility and accountability.

Elementum, a pioneer in supply chain service management platforms, has seen a rapid acceleration in demand for its “Virtual War Room” capability, which centralizes incident collaboration, provides clear accountability of tasks, enables cross-ecosystem execution and delivers the power to manage and resolve day-to-day operational challenges with unprecedented speed.

Efficiently execute operational volumes

The pandemic has yielded some hair-raising spikes in demand — toilet paper and bread flour, as two examples. Interestingly, people weren't using more toilet paper or eating more bread. But the demand had shifted across channels. So, at the same time there was no toilet paper or bread flour in grocery stores, there were warehouses bulging with institutional toilet paper rolls and 50-pound sacks

of bread flour.

As stay-at-home orders have changed, historical demand patterns and classical planning systems are of little use. Each channel and region of the country have responded differently.

The ability to efficiently flex operational volumes will be of critical importance in capturing revenue while effectively managing costs.

Rapidly onboarding new staff in warehouse environments is an example of a key differentiator in responding to demand surges.

Voxware, a leader in voice-based warehouse systems, reported some companies have cut new employee learning curves from three or four weeks down to one shift, with a focus on intuitive user interface design. Operational agility will make or break profitability over the next few years.

Prepare for holiday demand

Let's also not forget the holiday season is almost here — and there's no historical demand pattern on which to base supply forecasts.

Will demand be muted, due to economic conditions and limited retail opportunities? Or will there be an explosion of e-commerce orders, as families seek to bring the holiday season to their doors? Will companies know in time to respond?

Demand-sensing technologies (Google searches as a predictor of flu demand, for example) and inventory strategies that position products for rapid redeployment to demand hotspots will provide the opportunity to maximize order fulfillment.

The ability to efficiently flex operational volumes will be of critical importance in capturing revenue while effectively managing costs.

In this landscape with no historical guideposts, a company's speed of sensing and reacting to new demand signals will drive the top line the rest of this year. It's time to graduate from Excel spreadsheets and mass Zoom meetings to processes and tool sets that will help shock-proof supply chains for the coming months and years. It is smart to act now and prepare, while in the calm eye of the storm.

This story was first published in our weekly newsletter, Supply Chain Dive: Operations.

Source : Supply Chain Dive

ACID REFLUX MEDICINES MAY RAISE DIABETES RISK: STUDY

Researchers have found that regular use of acid reflux drugs, known as proton pump inhibitors (PPIs), is linked to a heightened risk of developing type 2 diabetes.

The longer these drugs are taken, the greater the risk seems to be, the findings, published in the journal *Gut* show, prompting the researchers to advise that people taking these drugs for two or more years should have regular blood glucose check-ups to screen for diabetes. PPIs are used to treat acid reflux, peptic ulcers, and indigestion. They are among the top 10 most commonly used drugs worldwide. "Long-term use has been linked to an increased risk of bone fractures, chronic kidney disease, gut infections and stomach cancer," said study authors from the Seventh Affiliated Hospital in China.

In 2014, the global prevalence of type 2 diabetes was 8.5 percent, and the researchers wanted to find out if the widespread use of PPIs and the high prevalence of diabetes might be linked. They drew on information supplied by 204,689 participants (176,050 women and 28,639 men) aged 25 to 75. According to the researchers, participants were also asked whether they had used PPIs regularly in the preceding 2 years: regular use was defined as 2 or more times a week.

During the average tracking period of around 9 to 12 years across all three groups, 10,105 participants were diagnosed with type 2 diabetes. After taking account of potentially influential factors, including high blood pressure, high cholesterol, physical inactivity and use of other medication, those who regularly used PPIs were 24 percent more likely to develop type 2 diabetes than those who didn't. And the longer these drugs were taken, the greater was the risk of developing diabetes: use for up to 2 years was associated with a five percent increased risk; use for more than 2 years was associated with a 26 percent increased risk.

Further analysis showed that diabetes risk among PPI users wasn't affected by sex, age, family history of diabetes, smoking, alcohol intake, diet, physical activity, high cholesterol or regular use of anti-inflammatory drugs. But it was higher among participants who weren't overweight or who had normal blood pressure. For comparison, the researchers also looked at the potential impact of H2 blockers, another type of drug used to curb excess stomach acid production. Regular use of these drugs was associated with a 14 percent increased risk. Similarly, longer-term use was associated with a higher risk while longer time since stopping was associated with a lower risk, the study noted.

Source: IANS Sep 30, 2020



SUPPLY CHAIN RESILIENCE IN A VUCA WORLD

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VUCA – Volatility, Uncertainty, Complexity, Ambiguity – may well be old as a thought, but the acronym is more apt than ever in describing today's world.



In fact, the above four elements have become intrinsic in today's business environment.

- **Volatility** implies frequent and unexpected changes: For instance, Globalization is the driving force of demand volatility.
- **Uncertainty** in business is a situation in which the degree of risk, the magnitude of events and situations, conditions and consequences are not known or unpredictable.
- **Complexity** - caused by a range of factors often the result of rising customer expectations for faster lead times, expanded products and services and tailored experiences.
- **Ambiguity** - arises from not having the appropriate processes and systems in place to respond "as required" to actual demand.

"The old mind-set sees things are calculable, 'predictable'. But that analysis seems to come up with the incorrect answers so often now – on Trump, Brexit or the recent outbreak of corona virus, for instance."

It has become apparent that the management skills set and mind sets needed to cope with this new world are quite different from those that sufficed in the past.

Charles Darwin once said: **"It is not the strongest of the species which survive nor the most intelligent, but the species most responsive to change."** Today, if we don't respond to change, we will fade away. Clearly, responding to change by building resilience is important to survive and thrive in this VUCA world.

Nowhere is that truer than in Supply Chain. Being at the forefront of the supply chain, sourcing and procurement professionals play a key role in managing VUCA related Supply Chain risks- by building a **"Resilient Supply Chain"**.

What is Supply Chain Resilience?



Resilience is the "Shockproof" protection our supply chains need. Supply chain resilience is "the ability of a supply chain to both resist disruptions and recover operational capability after disruptions occur."

As mentioned above, resilience consists of two critical but complementary system components: the capacity for resistance and the capacity for recovery.

- **Resistance capacity** is the ability of a system to minimize the impact of a disruption by evading it entirely (avoidance) or by minimizing the time between disruption onset and the start of recovery from that disruption (containment).
- **Recovery capacity** is the ability of a system to return to functionality once a disruption has occurred. The process of system recovery is characterized by a stabilization phase after which a return to a steady state of performance can be pursued. The final achieved steady-state performance may or may not reacquire original performance levels and is dependent on many factors.

Why Supply Chain Resilience?

Normally, Supply chain disruptions have adverse effect on both revenue, time and costs. Resilient supply chains incorporate event readiness, can provide an efficient response, and often can recover to their original state or even better post the disruptive event in a short span.

Many times, Supply chain Resilience may turn **"Risk into opportunity"**.

Supply Chain Resilience provides opportunity, as a company's ability to adapt in difficult circumstances is a true source of competitive advantage and precisely defines a winning approach to risk responsiveness.

In Short, as Sachin Tendulkar told in one of the interviews **"It's just being a step ahead of your opposition"**.

Even, the risks and disasters that we (India) face, because of the recent Black Swan event "COVID-19" can be turned into an opportunity, if we have (build) the resilient supply chains in our systems.

Covid-19 demands new lines of production, from Drug industry to automotive and Freight agencies & data analytics for meeting assorted scenarios across the world.

Building resilient supply chains in our system will not only help us to tide over the crisis, but also help us to turn "Adversity to our advantage".

How to build a resilient supply chain?

A good supply chain resilience strategy has four elements:

Culture, People, Process & Technology.

Culture: It is the organizational culture that plays a vital role in developing and adopting any strategy.

Culture, must be aligned with strategy. Cultural change is difficult, but not impossible. Some new behaviours are easily accepted and some may not be accepted at all. People love freedom, and consensus removes accountability, in many cases. But accountability is critical for achieving the desired results. The various behaviours are all interlinked and all the behaviours cannot be developed at a time. Culture often has unwritten rules, is predicated on shared behaviour and develops over time as a result of how people respond to events.

There are several issues that will crop up whenever there is a change. **Resistance** will be especially strong if the organization/ team features a **history of success**.

If employees love their organizational culture and feel being appreciated, they would go extra mile without being asked. **Flatter organizations** enable leaders to be closer to the action.

Leaders take the initiative to speak vision to the team, build trust & enable action and are primarily responsible for the way people respond and handling changes. Hence, the **leaders' behaviours** greatly influence the organizational culture, that embrace change and in building **agile organisations**.

People: Organizations need **“not enough manpower, but enough skilled manpower”** for establishing resilient supply chains to tackle “VUCA” situations.

Supply chain professionals should be exposed to curated learning opportunities.

Sourcing & Procurement professionals shall be grouped into **“Tactical Sourcing”** professionals & **“Strategic Sourcing”** professionals.

“Tactical sourcing” team focus on short-term goals and should be experts in their specific commodities markets. This means they are constantly responsive to new products, supply chain developments, pricing changes and other market activities. Such awareness can help mitigate issues related to cost increases and material shortages.

“Strategic Sourcing” work with a long-term view, roadmap & goal. This team will not handle price negotiations or the short-term business of their “tactical sourcing” parallels. This team's focus will be on building relationships with suppliers at the top level by understanding their core business strategies and proactively approaching these partners with opportunities for mutual reward.

Further, organisations should boost **“Collective Intelligence”**.

Having diversified teams, with high collective intelligence will help to cover organisation's bases.

Process:

“What gets measured gets managed”.

Majority of the organizations measure the efficiency of procurement (only) on cost savings & not on supplier

performance, sourcing strategy etc. Hence it is ingrained in each & every procurement professional to minimize & manage costs and at the end of the day, they do not manage their suppliers well.

The coronavirus break out has taught us — once again — that a robust supplier-monitoring system that maps sub-tier suppliers is need of the hour for today's supply chain and sourcing professionals. Now, companies worldwide scramble to identify which of their “invisible” lower-tier suppliers — those with whom they don't directly deal — are based in the affected regions of China.

Many companies are probably also regretting their decision to rely on a single company for items they directly purchase. Though, purchase managers know the risks of single sourcing, they do it anyway in order to secure their supply or meet a cost target. Often, they have only limited options to choose from, and in majority of the cases, those options are only in China.

Takeaways

- Stay away from single-source relationships and work to expand supply network.
- Companies should implement Supplier Relationship & Performance Management.
- Companies should invest in monitoring of their global suppliers, including second- and third-tier suppliers.
- Maintaining good working relations with the supplier and following “Collaborative Planning Forecasting and Replenishment (CPFR)” approach will help to manage VUCA related risks.

Technology: Technology can help organizations complete these processes more easily and accurately.

New technologies, such as artificial intelligence and natural-language processing, have made extensive supplier monitoring affordable and readily accessible. Real-time analytics and decision support tools, including enterprise resources planning and electronic data interchange platforms, can help provide baseline data which, in turn, justifies investments in spend, supplier and commodity analysis. Together, these provide enriched accurate data sets that can help managers to better understand the dynamics of the procurement process; make decisions related to needs, production schedules, logistics, and delivery requirements; anticipate issues & threats, including shortages and respond quickly to disruptions.

Conclusion: Inevitably, things will go wrong. However, it's how we respond to hitches and uncertainties in our supply chain- that will keep it evolving. Capture any lessons learnt on the risks that occurred and how we responded & tackled them, to create that database of best practices. These learning are to be fed into supply chain management strategy, driving chances of future success.

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SUPPLY CHAIN DIGITAL TRANSFORMATION

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Introduction:- Supply chain management is becoming increasingly more complex as logistics operations span across greater distances and extended partner networks, while consumer expectations become increasingly demanding and innovative competitors squeeze profit margins for more established players. To address these issues, technology solutions are playing a more and more critical role in enabling organisations to optimise supply chains, increasing efficiency, productivity and of course, revenue and profit.

Supply chains must invest in advanced technology solutions and automation techniques if they are to survive and grow in the modern world of commerce. The most important capabilities that we will focus on in this paper – and are currently the areas of greatest challenge for many businesses – will include:

The Evolution of Technology in the Supply Chain

Visibility – the ability to view and monitor in real-time all aspects of the supply chain, such as inventory management, goods movement, partner performance and quality of service.

Predictive Capabilities – being able to accurately forecast supply and demand in support of lean, agile and demand-driven delivery methods.

Unified Control – superior management of the extended supply chain network across multiple sites, geographies and external partnerships.

Collaboration – enabling effective communication and collaboration across the supply chain network as a whole to gain greater efficiencies than are possible from focusing only on individual operations.

Speed & Quality of Service – increasing customer satisfaction and reducing cost-to-serve by ensuring goods and services are delivered in the fastest and most efficient way.

Agility – designing a flexible supply chain that is ready and able to adapt to the accelerated pace of change by ensuring new technology integration is as easy and seamless as possible.

For the logistics industry, this provided the means and the opportunity to put previously theoretical operational models into practice, setting the stage for improved planning and optimisation. Various models were developed during this period, including the Toyota Manufacturing Program. In 1983, Oliver Wight expanded on Orlicky's work and developed Manufacturing Resource Planning (MRP II), bringing concepts such as master scheduling, rough-cut

capacity planning and sales & operations planning into the classical MRP practices.

This enabled vast improvements in logistics planning and execution and helped to raise executive awareness of the potential for logistics optimization. With the right investments in trained professionals and innovative technology, there was clearly an opportunity to drastically improve company profitability – a fact that still hasn't changed today.

This shift in perception is reflected in the fact that by 1989, approximately one-third of the entire software industry at the time was MRP II solutions sold to American industry (\$1.2 billion of software).

Moving into the 1990s, this decade was characterised by two major changes – the introduction of Enterprise Resource Planning (ERP) systems and the rapid globalisation of the supply chain (particularly due to the growth of offshore manufacturing).

ERP systems built on the success of MRP systems, but extended functionality to integrate the multiple disconnected databases that existed in almost every business. Despite some significant struggles with the initial installation and configuration of these systems, the result of ERP adoption was a massive increase in the availability and accuracy of data for planning.

As we entered the new millennium, the 2000's and beyond became an era of heightened connectivity. The explosion of the internet and a dramatic reduction in the cost of transferring information opened the door for new technologies, platforms and services to further revolutionise supply chains.

One prominent example from this period was the catalysation of Radio-Frequency Identification (RFID) technology. Just prior to the turn of the century in 1999, MIT launched their Auto-ID Centre to further the development of low-cost RFID tags and applications and in 2002, completed the first successful move of an RFID-tagged pallet from a Unilever to a Walmart distribution centre. Although the popularity of RFID technology saw a dip towards the end of the decade it has seen a resurgence in more recent years, largely attributable to the project having led to not only the creation of Electronic Product Codes (EPCs), but crucially, forming the foundation of what would come to be known as the Internet of Things (IoT).

Digital Technology in the Supply Chain

CLOUD COMPUTING : "The Cloud" has revolutionised the approach to enterprise IT in almost every industry. It provides the ability to harness essentially unlimited on-

demand resources and services in a cost-effective, easy-to-manage and dynamically scalable way. There are two models that are most commonly used to consume cloud-based services.

Infrastructure-as-a-Service (IaaS) : IaaS involves the provision of base infrastructure, primarily computational power and data storage. It enables organisations to “rent” IT capability as required, either instead of or in addition to, owning and maintaining an on-premises data centre.

Software-as-a-Service (SaaS) : SaaS is the provision of a complete encapsulated application or service, typically licensed per number of users. The SaaS provider hosts the software in a secure private cloud, allowing multiple users and entities secure access via a web browser to deliver a uniform experience across the board. Both models offer a huge range of benefits for organisations that include, but are not limited to, the following areas.

Global Connectivity, Communication & Collaboration : Cloud-based technologies offer an unparalleled way to connect people, processes and partners across the supply chain network. By providing a single instance of an application with global accessibility, previously siloed operations across multiple sites can be integrated to provide a uniform experience across the entire business, with significantly increased visibility.

The flexible yet secure method of delivery also provides the opportunity to give external partners access to selected shared systems and information, increasing collaboration and efficiency across the supply chain network. This allows organisations to work together to focus on optimising the supply chain as a whole, rather than the individual parts.

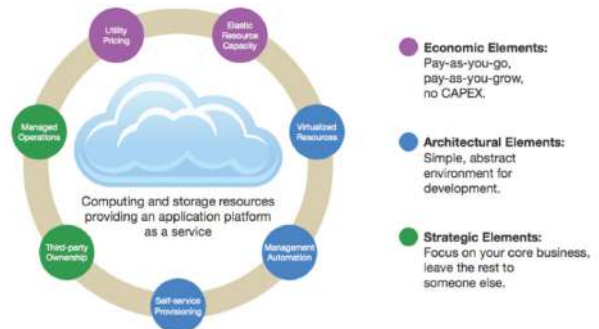
Flexible, Scalable, On-Demand Infrastructure : On-premises infrastructure, particularly at enterprise scale, is often extremely rigid. As businesses grow organically, additional resources are generally bolted-on, rather than truly integrated. As they grow through mergers and acquisitions, the disparate hardware acquired can result in siloed operations and redundant equipment. Fluctuations in demand mean that at least some hardware usually sits idle and unused, waiting “just-in-case” demand rises.

The “pay-as-you-go” model of the cloud enables organisations to dynamically scale environments and resource availability up or down as required, to achieve the best balance of cost and performance. With nothing more than a credit card, virtual machine instances can be spun up in moments, or additional storage buckets can be made instantly accessible to the business.

Reducing the Total Cost of Ownership : Adopting cloud services can have a dramatic impact to business expenditure. Many companies are looking to leverage the cloud as a way to reduce the physical footprint of on-premises data centres and their associated costs. Aside from the huge upfront investment, the day-to-day running costs of a data centre – power, lighting, cooling, security, monitoring and maintenance, upgrades, etc. – must be accounted for as well.

With both IaaS and SaaS models, these burdens are all shifted to the Cloud Service Provider (CSP), who will operate and maintain the equipment, ensuring the company has

access to the latest and greatest technologies. Because CSPs typically provide these services on a “pay-as-you-go” basis, organisations will only pay for the resources they are actually using. This creates an extremely cost-effective solution that allows IT budgets to shift from large CAPEX models to predictable OPEX models.



THE INTERNET OF THINGS

The Internet of Things (IoT - in business, also referred to as the “Industrial Internet of Things”, or IIoT) encompasses a network of smart, interconnected objects that can provide real-time visibility and detailed information on the surrounding environment.

This is achieved through the use of a range of sensors able to provide information on objects and the surroundings, integrated with microcontrollers (MCUs) for embedded processing power and RFID technology that enables communication with the wider network.

These smart objects constantly feed data to a central management system, enabling the integration of all relevant information across the supply chain to help businesses to understand the interdependencies within individual operations, as well as across the wider network.

This means IoT enabled supply chains can eliminate visibility gaps, as data from hundreds, thousands, or even millions of connected smart objects can be used to continuously monitor processes and operations across multiple sites, regions and service partnerships, all in real-time.

IoT enabled devices can also sense constraints or exceptions that may impact service levels. When used in conjunction with other technologies such as advanced analytics and machine learning, autonomous control systems can then automate certain decision-making processes and initiate suitable adjustments and resolutions instantly, without the need for manual intervention.

Some of the key areas where IoT can provide the transparency needed to gain the further insights businesses require for optimising the supply chain are:

Asset tracking – Using tracking technologies to determine the real-time location of shipments, equipment and assets.

Fleet management – Using tracking technologies to connect all fleets and collect real-time data about their mileage and performance.

Inventory and warehouse management – Monitoring data

from long-range networks to determine the activity level within the warehouse facility.

Vendor management – Using data gathered from asset tracking tools to gauge the performance of vendors.

Predictive maintenance – Equipping machinery with sensors to determine if they need to be fixed ahead of time.

VIRTUAL & AUGMENTED REALITY

Although Virtual Reality (VR) and Augmented Reality (AR) technologies are more commonly associated with the gaming industry, we have begun to see a wider adoption of them in commercial situations for their ability to supplement the visual experience of users.

Although similar, the two technologies differ somewhat in their applications. VR involves providing a completely simulated environment that the user can engage with using a linked controller or a range of gestures. AR however involves overlaying images, objects or text on to the user's view of their own surroundings.

Virtual Reality : Virtual reality technology is currently used most heavily at the customer end of the supply chain. This may be due to how the user interacts with the technology, most often making use of a wearable headset with a self-contained screen that delivers an immersive experience.

More recently, the advances in the power of smartphones have also been leveraged in an effort to make the technology more accessible to consumers. Users can simply 'plug' their smartphone into a compatible headset for the full VR experience at a considerably cheaper price than before.

Of course, this approach does severely limit the user's ability to interact with their surrounding physical environment. This may play a part in restricting the use of VR technology to certain situations, such as providing immersive shopping experiences to consumers wanting to browse from the comfort of their own home.

By recreating an entire store in a virtual world, customers can navigate up and down the aisles, browsing the selection of products on display and even interacting with them on the shelves. Replicating the live shopping experience in this way not only provides something special for the customer, but the data gathered from monitoring their behaviour can provide useful insights that can be applied across both the virtual and physical realms.

Augmented Reality : Augmented reality technology has an arguably wider-ranging set of applications within commercial activity than virtual reality, quite possibly due to the way that we operate and interact with the technology.

Similar to VR, users most frequently interact with AR through wearable "smart-glasses". These smart-glasses however contain transparent lenses on which a digital display can be overlaid to supplement the user's field-of-vision. This means the user can interact with the world around them and the AR device simultaneously. Most smart-glasses incorporate additional scanning or imaging hardware to further enhance the device's ability to engage with the surrounding environment and deliver valuable information to the user.

Smart-glasses have seen particular efficacy in warehousing and distribution. Equipping the workforce with these devices can drastically increase efficiency and productivity, while also reducing training cycles for new employees.

ADVANCED ROBOTICS : Although robotics has been around for some time and has seen a high degree of usage within manufacturing, use of the technology lower down the supply chain has been limited. With the newer breeds of robotics becoming more commonplace however, this has started to change. More advanced robotics are enabling some of the most futuristic-seeming capabilities of the modern supply chain.

Autonomous Vehicles : Recent years have seen significant advances in autonomous vehicles and self-driving capabilities. While the technology still has a way to go before we see wide adoption of it (including overcoming all the regulatory hurdles such a paradigm shift entails), it won't be long before fully autonomous vehicles are a regular feature of our roads.

Perhaps the first commercial iteration we are likely to see will be semi-autonomous convoys of trucks – a road train, if you will. With a single driver controlling the lead vehicle, each additional truck behind will be linked remotely and follow the example set by the human controller – accelerating, braking, steering all under autonomous control. These convoys will allow businesses to make significant cost savings from reduced labour and increased fuel efficiency, while also contributing to reduced congestion on our road networks.

Drones in the Air : Inevitably when we talk of drones these days, the mind leaps to images of flying vehicles, from the basic hobbyist's quadcopter to the military's advanced UAVs. Drone technology is certainly well beyond its infancy, however we are still yet to see widespread commercial adoption of the technology.

For businesses to view the technology as a viable and profitable solution, drones will need to be operated autonomously in much the same way as self-driving vehicles. Regulation and perfecting the technology to ensure it operates safely are the main hurdles to overcome, but trials are already well underway to overcome these challenges. Once the technology has matured, its potential to revolutionise the transportation of small goods will be significant. This was recognised by some of the earliest adopters and developers of the technology, who include some of the largest ecommerce giants on the planet.

Drone delivery will drastically reduce transportation costs (labour, fuel, vehicle maintenance, road/toll charges) and environmental impact (CO2 emissions, traffic congestion), while enabling almost instant gratification for consumers with delivery times of 30 minutes or less. It will also enable (and indeed, already has enabled) greater and easier access to remote areas, allowing vital goods such as medical supplies to be delivered to distant communities or disaster-hit areas.

Drones on the Ground : Even though airborne drones are perhaps more prevalent in the public eye, drones on the ground can also offer significant value. Without the regulatory issues facing flying objects, they can also be implemented immediately – indeed many organisations

already make use of these types of drones, particularly in warehousing and distribution.

Drones in warehousing are currently used for the movement and basic handling of goods. They typically operate and access the stored goods from either above or underneath, depending on the type. A major benefit of accessing goods in this way is the elimination of walkways between racks, enabling greater utilisation of floor space and optimisation of inventory. Drones operating from underneath will move around the warehouse floor along designated paths or programmed routes, with sensors for object detection and collision avoidance. To this end, they may also communicate with each other to some extent.

Drones operating from above will move around via a fixed grid of tracks that align with the stock layout beneath. These drones tend to go beyond being simply communicative and become collaborative, effectively replicating a swarm within a hive. They will work together to access select goods buried deep in layers of racking and enable more selective picking than can be achieved with floor-based drones.

BIG DATA & ANALYTICS

Advanced analytical capabilities are quite simply a “must-have” for effective modern supply chain management. They are the cornerstone of successful optimisation strategies in both localised operations and across the wider supply chain network. In many respects, analytics is a fundamental capability for the further application of many of the other technologies described here.

The applications of analytics throughout the supply chain are vast and as such, must be approached with specific objectives in mind. It is crucial to define the strategic business objectives first, then to identify what insights will help drive those objectives, before defining the best analytical models to use and selecting the data sets required. These objectives can (and often should) be part of a larger goal and strategy, but without clear direction companies will run the risk of “paralysis by analysis”. A recent report by The Hackett Group identified four main areas that are the focus of efforts to utilise analytics across the supply chain.

- Reduce Costs
- Optimise production and sourcing to reduce total landed costs
- Analyse product cost variances
- Assess the impact of commodity prices on the supply chain
- Analyse customer or channel “cost to serve”
- Improve Quality
- Identify and resolve quality defect trends and root causes
- Improve visibility to inventory across the enterprise
- Analyse product returns
- Track and analyse product traceability
- Improve Service
- Measure and analyse transportation performance
- Measure and improve distribution performance
- Analyse customer service level performance
- Optimise Inventory
- Optimise inventory levels to balance working capital investment with service levels

- Analyse demand patterns and create forecasts using internal and external data
- Analyse forecast accuracy performance

To achieve these goals, there are several accompanying areas of technological focus for organisations at every stage of the supply chain. The overall trends we see here are;

The extension of collaborative functionality to enable analytics across wider geographies, business units and partners – including enhancing core Enterprise Resource Planning (ERP) functionality and deploying virtual collaboration platforms for internal and external use.

The integration of multiple disparate systems to enhance end-to-end visibility throughout the supply chain – including platforms to better manage omnichannel planning and fulfilment, improve transaction flows with customers and suppliers, in addition to leveraging data available from machines for analytics.

The use of more sophisticated supply chain models and tools to reduce costs through process optimisation and improved service – including deploying cognitive and artificial intelligence, as well as demand sensing software to improve agility.

MEASURING ANALYTICS MATURITY



BLOCKCHAIN : Blockchain is perhaps the most forward-looking technology discussed in this paper. While blockchain has gained considerable traction in the last few years, most notably due to the rise in prominence of Bitcoin, the technology is still maturing as its applications across various industries outside of financial services are better understood.

The blockchain (protocol) is a distributed, shared digital ledger that records data such as transactions or events in a series of sequential blocks. Multiple copies of this ledger exist across multiple computers (or nodes), each updated and validated in real-time by network participants.

Users can access and view information on the blockchain at any time but are restricted from editing or deleting information. Every new block in the chain is linked back to all of the previous blocks, enabling a secure record of every touch-point and interaction that is directly attributable to individual contributors.

This makes it practically impossible to interfere with information in the blockchain as a permanent, immutable record of every transaction or event is stored in the ledger and visible to every other participant.





CRISIS MANAGEMENT – SUPPLY CHAIN PLANNING DURING COVID 19

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SCM Mangers might be at the process of catching up with the “way fwd actions need to be taken” ,once we all overcome this COVID19 , the time line of which is unknown / not in anybody’s control, as no mathematical proportions are working up. Hence, first let all our SCM domain concentrate on day to needs by deciding upon “ Supply Chain Planning during this COVID19, as crisis management.

The onset and the spread of the coronavirus shall lead to alterations to run supply chains and businesses . This is a truly, an unseen combined humanitarian and an economic crisis.

It is in this light that a function/profession hitherto taken for granted has come into the limelight. Logistics and supply chains keep the world economy and global trade humming. However, given the massive lockdowns and the socio-economic costs of these decisions, supply chains are coming under severe stress. Moreover, no risk model could have predicted this nature of shocks and effects that this virus would bring with it.

So, in this scenario, what can we do as demand planners, logisticians, sourcing, and supply chain professionals? As we all know, there is no easy and clear answers. However , it is a good time to revisit the 3Vs known to SCM domain ie – Visibility, Velocity and Variability., which all gets divided in to : Strategic and Tactical responses.

Any endeavor and immediate thought at this stage should be towards controlling variability and increasing system wide visibility and velocity. Therefore, we see the following as “ some thoughts and suggestions” that may help. As brought above , these have been divided into “Strategic Response” and “Tactical Response”.

Strategic Response

Supply Chain Design: It is a must and worthwhile , that we go back to the respective planning boards

and take a quick in depth look at the existing supply and distribution networks and all the connects/ links across the SCM

Vital and Key areas to focus on:

- o Demand planning
- o Demand aggregation
- o Number of product groups
- o Product and Inventory classification
- o Customer segments
- o Warehousing and physical distribution coupled with logistics infrastructure

Any supply chain these days is designed to be responsive, agile and flexible – whether on the supply side or the demand side. Moreover, customer fulfilment / order management is primarily governed by a combined Push-Pull strategy. In most industries (other than those operating in Make-To-Order and Engineer-To-Order environments) use Push-Pull based strategies.

Given that the current scenario is highly uncertain it is necessary to focus on customer as well as product segmentation based on “Push” and “Pull”.

Products with a steady demand can be stocked based on forecasts. However, for products with uncertain demand, we need to use a consumption-driven approach. It is here that this kind of pure “Pull” based strategy might work very well for companies.

Operations Excellence Philosophies/ thoughts : Pull-based systems such as Lean and TOC (Theory of Constraints) could be implemented. Daily distribution requirement plans (DRP) could be generated for movement of products through the primary supply chain modes/ methods , keeping in view the time lines . Inventory norms or buffers would need to be calculated for the relevant Stock Keeping Units, as

we all , generally follow . It is essential to ensure product availability in the primary chain through efficient replenishment/ stocks rebuilding , planning.

At this time, it is essential for the planner to devise inventory rationing/allocation based on defined crisis management business rules. This will surely enable optimized allocation and distribution of critical products to the key distributors or retailers in the chain. This approach is particularly effective for essential needs like CPG, food, health care and pharmaceutical companies where availability of essential items is of utmost importance.

Omnichannel Distribution:

From a distribution standpoint, it is recommended to adopt an omnichannel approach where a mix of online and physical distribution can be used to reach the end customer/consumer. Most companies are using online channels but brick and mortar stores continue to play a major role.

Tactical Response

The demand planner needs to focus on two key metrics: Availability % and OTIF % (On Time & In Full-delivery (or Product Fill Rates). These metrics need to be efficiently monitored on a daily basis. Close coordination with the transportation teams is very important. Given the daily consumption and distribution patterns, there could be a higher proportion of LTL (Less Than Truck Loads).(In crisis management this LTL is very important ,though unit transportation cost vary)

As mentioned earlier, for demand side management and order fulfillment, it is essential that production systems and strategic suppliers are to be more and more flexible. Lean production systems can facilitate this . (thanks to shorter operational lead times and quick changeovers.)

Tools & Techniques:

Given the current uncertain and evolving situation, demand planners need a system that aids in dynamic planning through the use of scenario analysis and “What-If” analysis. A flexible planning approach is needed and even short term forecasts need to be reviewed and to get on to planning boards to implement .

S&OP (Sales & Operational Planning) /IBP (Integrated Business Planning):

These meetings need to take place often – daily or weekly basis. This will help to get a grip on pipeline and channel inventories, service levels and product availability and its movement.

Risk Management Tools:

This is the right time to invest in a risk management tool or system (as thought to be fit to match with needs) that can model the impact of potential risks across the supply chain. The output from this system can be used as an input for integrated supply chain planning and also very importantly the Logistics planning.

Summary/Coclusion

At the stage of concurring the crisis , we all know by virtue of SCM domain knowledge/ SCM systems , there is no magic bullet/ trump cards for demand planners and supply chain professionals to solve current problems. But what to do and what we can do is review the supply chain design and associated strategies in addition to the planning and distribution systems in the light of the push-pull boundary.

- o Daily visibility into consumer/customer consumption is essential. Focus on two key metrics: Fill Rates/OTIF % and Availability %
- o S&OP/IBP meetings need to be more frequent. It is good idea to invest in risk management tools and systems.
- o The aim should be to minimize variability and increase system-wide velocity and visibility. Transportation and distribution operations are the key differentiators.
- o Inventory allocation and rationing needs to be adopted based on segmented products and customer profiles.
- o Last but not least planners need tools to enable dynamic planning. These tools include “What-If” and “Scenario Planning”.

All said and done / to be done, all will need to wait and watch how this crisis evolves over the next two to three months and measure and calibrate our supply chain strategies accordingly. Approach will differ based on once own industry type.

CARE AND NEED : TO BE @HOME for to be SAFE against COVID19.

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AUSTRALIA-INDIA-JAPAN MINISTERS' MEETING ON SUPPLY CHAINS RESILIENCE HELD

Ministers support free, fair, inclusive, non-discriminatory, transparent, and stable trade and investment environment;

Shri Piyush Goyal says India wholeheartedly endorses the concept of working towards ensuring a trustworthy, dependable and reliable supply chain in the Indo-Pacific region;

Role played by India during the COVID crisis with the supply of critical medical products indicates India's credibility and reliability as a partner: Shri Goyal India's Minister of Commerce and Industry, Shri Piyush Goyal, Australia's Minister for Trade, Tourism and Investment, Senator Mr Simon Birmingham, and Japan's Minister of Economy, Trade and Industry, Mr Kajiyama Hiroshi held a ministerial videoconference today.

The Ministers reaffirmed their determination to take a lead in delivering a free, fair, inclusive, non-discriminatory, transparent, predictable and stable trade and investment environment and in keeping their markets open. In light of the COVID-19 crisis and the recent global-scale changes in the economic and technological landscape, the Ministers underscored the necessity and potential to enhance the resiliency of supply chains in the Indo-Pacific region.

Recognizing the pressing need for regional cooperation on supply chain resilience in the Indo-Pacific, the Ministers shared their intention to work toward the launch of a new initiative to achieve the objective through cooperation. They instructed their officials to promptly work out the details of the new initiative for its launch later this year. The Ministers noted the important role of business and academia in realizing the objective. The Ministers called for other countries in the region, which share the afore-mentioned views, to participate in the initiative.

Addressing the Trilateral meeting, Shri Piyush Goyal said that the initiative could not have come at a more opportune time in the post COVID scenario when there is a likelihood of recharging of supply chains in the Indo-Pacific region and it is incumbent upon us to take the initiative. He said that in May 2020, Hon'ble Prime Minister of India had stressed that it is the need of the hour that India should play a big role in the supply chains.

On the initiative itself, Shri Goyal said "India wholeheartedly endorses the broad concept of working towards ensuring a trustworthy, dependable and reliable supply chain in the Indo-Pacific region. The diversification of supply chain is critical for managing the risks associated with supply of inputs including disciplining price volatility. We could provide the core pathway for linking value chains in the region by creating a network of reliable long term supplies and appropriate capacities."

The Minister said that the initiative also dwells on improving the competitiveness of sectors. "For this, we may need to identify the manufacturing and services sectors which contribute most to the domestic value addition in the region.

We support the need for specific activities listed for enhancing the resilience of the supply chains which include those related to promotion and facilitating trade and investment as well as diversification of production base." He said that the digitization of trade procedures is a very important step for facilitating trade and thereby maintaining resilience in supply chains. This was clearly exemplified during the COVID crisis when many of the regulatory agencies were not functioning physically. "It is important that all of us maintain this momentum on facilitation through adoption of electronic documents, commensurate with our capacities," he added.

In terms of participation by interested countries, Shri Goyal said that it is important that we look at countries with similar line of thinking in terms of being reliable and dependable suppliers for ensuring resiliency in the supply chains of the region. Some of the other key parameters that could be looked at are the market oriented policies, demography, growth potential, fiscal state of play including existing debt burdens and geo-political strategy.

Describing Australia, India and Japan as crucial players in the region, Shri Goyal said that during 2019, the cumulative GDP was \$ 9.3 trillion while cumulative merchandise goods and services trade were \$ 2.7 trillion and

\$0.9 trillion respectively. "With such a strong baseline, it is important that we use this opportunity to work towards enhancing the share of our trade and investment in the region", the Minister said.

Stressing on the need to expand trade between these countries, Shri Goyal however pointed out that with Japan, it is seen that in many specific products, despite our global exports and Japanese global imports being high with zero preferential tariffs, the procurement from India was limited. This cuts across many sectors such as steel, marine products, processed agriculture, agro-chemicals, plastics, carpets, clothing, footwear etc. He expressed the hope that the proposed initiative must clearly try to bridge this and work towards enhancing mutual trade.

Talking about India's economic expansion being now premised on the policy of being Atmanirbhar or self-reliant, Shri Goyal said that the policy seeks to make India economically stronger with enhanced capacities ensuring resiliency of supply chains. He said that India, in its tradition of treating the world as a family, played a crucial role during the COVID crisis with the export measures for supply of critical medical products put in place only to ensure equitable distribution. "All these measures indicate our credibility and reliability as a partner and I am sure this is an important parameter as we venture into this new initiative for ensuring resiliency of supply chains. Transparency and trust have to be the hallmark of our initiative if we seek to expand its footprint. We firmly believe that Australia and Japan are key partners for us in our joint endeavor", Shri Goyal said.

Source : PIB

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BRANCH NEWS

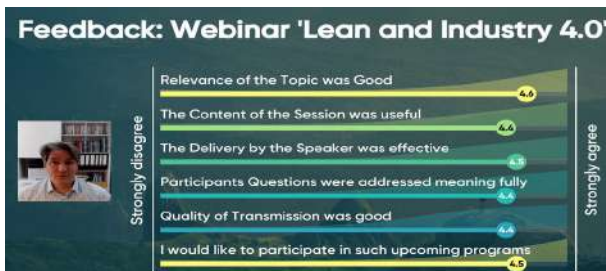
■ BANGALORE BRANCH

■ LUCKNOW BRANCH

BANGALORE BRANCH

Webinar on 'Lean and Industry 4.0' : IIMM, Bangalore and World Trade Centre, Bengaluru, Kochi, and Chennai jointly organised a Webinar on MS Teams on 'Lean and Industry 4.0' by one of the most eminent International Lean Experts, Professor. Dr. Christoph Roser, University of Applied Sciences, Karlsruhe, Germany, and the author of the book "Faster, Cheaper, Better" in the History of Manufacturing, on 18th September 2020.

Dr. Christoph Roser explained lucidly where Industry 4.0 is worth investing in and when to go with Lean and the differences between the two approaches.



Lean and Industry 4.0 Differences	
Lean	Industry 4.0
Focus on people, their needs and how they interact	Focus on computer, automation, and robotics, vision is to get rid of people (Lights out factories)
Often easy and quick fix solutions	Hardware and Software-heavy
Flexibility in changing the production system	Reduces flexibility, difficult to change Production System
Continuous improvement involving the workers	One-Stop implementation that is hard to improve
Can include computers	Must include computers

1. The first practical talk on i4.0 - the message of caution and that many industries did not benefit from going after i4.0
 2. The wide range of applications covered through the presentation and while answering the questions, were very useful
 3. i4.0 as a subset of lean - my vote too. To do more with people's skills and support with automation where stress or strain or mistake proofing is required.

It was Great experience. Appreciate efforts from IIMM . In-Depth Knowledge sharing by Dr.Christoph Roser on Lean as well as Industry 4.0 was particularly good , based on simple examples that we can relate to. Thanks

Dr. Chris was frank, forthright on the positives and risks with Lean and i4.0 event though leaning a bit more on lean! ... The caution on application of i4.0 especially for SMEs is deservedly appreciated since most people donot talk about the downsides of a latest global buzz topic in the industrial business world ... an hour and 45 minutes packed with food for thought with a new clarity

Lean Vs. Industry 4.0 Participants' Comments

We had an overwhelming response with close to 200 Supply Chain Professionals, students and academicians attending the Webinar.

More than 75 participants have participated in the feedback survey and we have received excellent ratings as well as encouraging comments on how Dr. Christoph Roser explained, in very simple and easy to understand manner, how to address the dilemma – 'Lean or Industry 4.0?'

We have also received the following feedback from Prof. Dr. Christoph Roser on his experience:

"It was a very nice Webinar. Interestingly, the questions were more hands-on (how can I 4.0 help me) whereas in Europe the questions are more abstract"

Online Certification Workshop on 'Foreign Trade and Policy & Procedures' : IIMM, Bangalore with World Trade Centre, Bengaluru, Kochi, and Chennai jointly organised an **Online Certification Workshop on "Foreign Trade Policy & Procedures" on 5th and 12th September 2020**. The workshop was attended by 53 delegates

The **Inaugural Address** was delivered by **Mr. K.M. Harilal, Joint Director General of Foreign Trade, Kochi, Government of India**.



K.M Harilal, Mr. H.R Gowrishankar, Dr. Bose K. Nair, Mr. B. Jayaraman



The workshop was conducted on Microsoft Teams App

Mr. H. R Gowrishankar, Advocate and Tax Consultant, G.S Associates and Senior Faculty, IIMM, Bangalore Branch conducted the Workshop in 4 sessions. The highlight of the workshop was the highly interactive Q & A sessions post each session where many issues related to practical, real-life situations were discussed and addressed.

We have received excellent feedback from the participants about the program.

LUCKNOW BRANCH

Minutes of the Annual General Body Meeting of Lucknow Branch held on Saturday 26/09/2020 at 7pm at IIMM Conference room along with following the rules of covid 19.



Sri Brijesh Singh secretary welcomed all members and informed about today's agenda points. First of all he read the minutes of the last year AGM. The minutes approved unanimously.



Mr ML Mangal gave his powerpoint presentation for three years balance sheet i.e. 2017,2018,2019-2020. All members appreciated it.

Mr Pramod Ranjan Treasurer of Lucknow Branch presented the balance sheet through powerpoint and requested the August body to adopt the accounts.

Sri Laxmi Narayan proposed for adoption of the accounts and Sri GD Garg seconded. Thus the accounts were adopted.

The meeting concluded with dinner.

The program was anchored by Mr PK Bajpai.



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EXECUTIVE HEALTH

WORLD HEALTH DAY 2020: INDIA'S TOP NUTRITIONISTS SHARE DIET TIPS TO FOLLOW DAILY FOR A HEALTHY LIFESTYLE

World Health Day is celebrated every year on April 7th. Here are seven staple routines you should be following every single day to enjoy the best of health.

Highlights

- You should start and end your day right. Be watchful of what you eat
- Get your daily dose of Vitamin C this World Health Day
- Carbs and proteins both are important. Balance is the key

There is so much speculation around health and food that it often tends to cloud our minds and makes us forget the basics. Everything from the new-age specialty diets to super foods and super nutrients may be good for you, but that's not a reason to give up on our ancestral wisdom. Keeping this in mind, and on the occasion of World Health Day, we spoke to a few top nutritionists in the country to chalk out some important diet guidelines about food and nutrition that you must follow daily for a healthy lifestyle. These are basic guidelines that can be adhered to irrespective of your dietary habits and fitness regime.

World Health Day is celebrated every year on April 7th. It is a day dedicated to global health awareness which was launched by the World Health Organisation. Every year, they throw the spotlight on a health subject of great importance. This year, they are focusing on mental health, their theme being 'Depression: Let's Talk'. Depression is becoming increasingly common yet it is poorly understood. It is also important you realize that the kind of food you give your body daily can greatly impact your mind and how your brain functions.

Giving your body the right nutrients has shown a promising possibility of improving mental health. But remember, there is no shortcut to good health. In his book, '100 Million Years of Food', Stephen Lee introduces the concept of short-term and long-term health. He explains, 'a diet that makes a person taller, a weight-lifter stronger, and a woman more fertile is healthy to a degree, but generally not a diet that would make a person live longer.' The point he is trying to make here is that your daily diet principles which you've been following since a child determine your long-term health (what we should be trying to achieve) and not the episodic bouts of healthy eating.

Therefore, the little efforts you make on a day to day basis can really help you in the long run. Here are eight staple routines you should be following every single day to enjoy the best of health.

1. Eat seasonal. The best guide to a healthy lifestyle is Mother Nature. Choose seasonal, locally-grown foods that take less time to reach you and therefore, are more nutritious. Summers are a great time to indulge in a lot of fresh fruits like melons, mangoes and pineapple and vegetables like bottle gourd, ridge gourd, round gourd and pumpkin. – Dr. Rupali Datta, Clinical Nutritionist, New Delhi

2. You should start and end your day right. You must pay attention to the first thing you have when you wake up and the last thing you take before going to sleep. Ayurveda suggests that you start your day by drinking at a litre of

water stored in a copper vessel overnight. Before sleeping, it is recommended to have a glass of warm milk but not for those who are lactose-intolerant. – Dr. Ashutosh Gautam, Clinical Operations and Coordination Manager, Baidyanath, New Delhi

3. Use the right cooking oil. There are a lot of fad diets doing the rounds these days, but I'll tell you to turn back and look at what our ancestors did. It is healthiest to rely on indigenous cooking oils. Indian cooking requires high heat oils. You can use mustard oil for frying and sautéing purposes and desighee for tempering. Coconut oil is a good native option for salads instead of olive oil. – Dr. Shilpa Arora, Naturopathic Doctor and Macrobiotic Health Coach, New Delhi

4. Carbs are most important. Good carbs, also known as the complex carbs, should comprise of at least 60 per cent of your daily meals. These can come from lentils, brown rice and even some fruits and vegetables like bananas and beans. – Celebrity Nutritionist Pooja Makhija., Mumbai

5. Get your daily dose of Vitamin C. While focusing on the macro-nutrients, we often tend to miss the important of micro-nutrients. Vitamin deficiencies, seasonal allergies and infections have become so common these days. Therefore, it is really important that you get a sufficient dose of Vitamin C. Vitamin C is not produced or stored in the body, so you have to derive it from the food you eat on a daily basis. Start your day with fresh amla juice or amla murabba had on an empty stomach. You can even sip on a glass of Nimbu Paani made with the juice of 1 lime daily to keep yourself hydrated and get your recommended dose of Vitamin C. – Dr. Tapasya Mundhra, New Delhi

6. Never neglect protein. A lot of Indians may be, unknowingly, suffering from protein deficiency. I encourage people to have a protein-rich diet. Try and sneak in more of lentils and pulses and good quality proteins in your daily diet. The amount of protein required varies from person to person. It is calculated as 0.8 to 1 grams per kilogram of the ideal body weight. – Dr. Ritika Samaddar, Max Healthcare, New Delhi

7. Balance is the key. You need to strike a balance between all the important nutrients that you need in a day. Focus on proteins for breakfast and carbs for lunch. Dinner should be light. Fats should be distributed through the day. 50 per cent of it should come from visible fats like oil, butter and ghee and the other half from fatty foods like avocados, dairy, nuts and seeds. – Dr. Anju Sood, Bangalore

8. Drink more water. We often tend to ignore this basic advice but you must drink lots of water. It contains most of the important micro-nutrients you require on a daily basis for good health, good skin and even good sleep. – Dr. Anshul Jai Bharat. This World Health Day 2020, promise yourself that you'll pay a little more attention to what you put on your plate. After all, your health is in your hands. Don't just eat to fill yourself up, a healthy diet can be your biggest preventive measure. Get your daily doses, maintain a balance and opt for homemade meals whenever possible and you'll be leading a happy, healthy life.

Source: food.ndtv.com



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