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RESEARCH ARTICLE

Good Things that have Come out of the Pandemic: Between Steppingstones and Comfort Zone

Remko van Hoek*¹

¹Sam M Walton College of Business, University of Arkansas

*rvanhoek@uark.edu

ABSTRACT

The risk scenarios supply chain managers encountered during the COVID19 pandemic were unique and provides many opportunities for learning and the development of more robust risk management approaches and strategies. In this reflection we offer five lessons that provide stepping stones for supply chain managers seeking to create more resilient supply chains. These lessons are: (1) the need to move from relational to social contracting, (2) the need to move from compliance to a force for good, (3) the need to move from planned optimization to agile resiliency, (4) the need to move from ERP and reporting the past to visibility into realtime and (5) the need to resist tendency to revert back to comfort zones. In this paper we reflect upon these lessons aiming to inspire progress in industry and research.

Keywords: Risk management, lessons learned, COVID19

Introduction

The massive disruptions that the COVID19 pandemic caused in supply chains challenge risk management capability of companies in a non-textbook manner. Typical risk scenarios that managers are advised to prepare for include natural disasters, strikes, delivery delays, supplier bankruptcies¹. These risks are of temporal nature, relatively unidimensional and unidirectional in impact and typically geographically specific. The risk scenarios that the pandemic caused were everything but that. Risks were longer lasting, multidimensional, dynamic and globally in reach²³. Research showed that companies responded by pulling out all typically recommended risk management techniques at the same time and managing against all types of risk typically considered⁴⁵. In a report by SAP covered on CNBC the impact of the pandemic on supply chains is still felt today and more than half of the 400 respondents to their survey indicates that their supply chain needs serious to massive improvements⁶.

The pandemic also provided a unique intersection between supply chains and public health. The rapid development and roll out of vaccines were critically enabled by supply chain management. Pfizer built a capacity multiple times the size of its pre-pandemic capacity, it also enabled global cold chains and achieved flexible manufacturing units to enable scaling up and down with demand. Businesses such as Rolls Royce also supported public health efforts by implementing ventilator production in very compressed time windows. Public health organizations also found themselves competing for scarce sanitization products with peers and businesses. This reinforces the need for learning from the pandemic and approaches taken in industry to improve the ability to manage situations of urgent needs in the face of scarcity in the future. Coming out of the pandemic there are lessons to learn about supply chain risk management and implications to draw for the further improvement and the future management of supply chains. These lessons can provide stepping stones for progress and further capability development in supply chains.

These lessons include:

- 1) The need to move from relational to social contracting
- 2) The need to move from a focus on compliance to becoming a force for good
- 3) The need to move from planned optimization to agile resiliency
- 4) The need to move from ERP (Enterprise Resource Planning) and reporting the past to visibility in the (near) realtime

- 5) The need to resist tendency to revert back to comfort zones

The objective of this paper is to consider these lessons learned as pathways for managers to develop more resilient supply chains and for researchers to continue to advance the science and practice of supply chain management in support of public health.

Method

This paper offers analytical reflection based upon empirical research with a number of companies throughout the pandemic⁷⁸⁹ as well as several workshops with supply chain managers over the past two years. We hope this can inspire further perspective among researchers and (public health) managers.

Results

The need to move from relational to social contracting
The response to pandemic risk has been largely collaborative towards suppliers¹⁰. This is partially explained by the fact that in times of scarcity being a “customer of choice” means greater likelihood of receiving supplier priority. However, there are limits to the ability to collaboratively solve business problems. Rolls Royce found that in the face of last substantial revenue shortfalls it experienced reduced needs for supplies. Initially the company continued to order, willing to build some inventory, so that its suppliers could continue to ship product. Next the company asked to delay shipment to avoid too much inventory build up. But as some point the company needed to start cancelling orders and the ability to relate to suppliers and to work together beyond the scope of the contract became crucial for the continuity of the relationship¹¹. This form of social contracting takes relationship management skills to a higher level, puts existing relationships to the test and can enable an enriched performance compact into the supply chain.

For public health organizations this notion may be hard to embed in regulatory and policy context. But the dynamics during the pandemic clearly illustrate that dynamics may reduce the value of written and increase the value on non-written performance-compact. This prompts the need to supplement proper contracting with a focus on developing relational and social context with key suppliers, in addition to the scope of regulatory and policy requirements.

The need to move from a focus on compliance to a focus on being a force for good

The appreciation of the cruciality of supply chain management has increased during the pandemic. Once seen as a backroom function, and often operating as the silent enabler of competitiveness,

managers developed an enriched perspective of the business-critical nature of supply chain management, including in ESG (Environmental Social and Governance). While initially the expectation may have been that the focus on ESG would decrease due to the pandemic¹², the opposite happened. Supply chains became a major focus in the efforts to ensure medical suppliers and enable vaccine roll out at rapid pace. With that the focus on ESG in supply chains moved from one on compliance and reputational risks towards one more focused on value and progress. Coming out of the pandemic there is an opportunity to reset carbon roadmaps and social sustainability efforts. With the focus on visibility in the supply chain, hybrid working models and reduced business travel and commuting, companies can accelerate on their roadmap, only further growing supply chain management's contribution to progress.

For public health organizations this tendency represents a positive outcome; many companies have proven to be highly willing to support public health organizations in times of needs. This reduced the need for public health organizations to develop capability in-house and grows their reach into supply chain capabilities in industry.

The need to move from planned optimization to agile resiliency

For generations optimization of supply chains based upon forecasted demand has been a widely sought competitive advantage, lean and forecasting techniques have been widely used to support these efforts. For some time, agile thinking has supplemented this approach, recognizing the needs for responsiveness to unplanned events¹³. The pandemic grew the relevance of agility with an enriched agenda of resiliency, not just of responding to changes in demand but also to supply and transportation issues for example.

For public health organizations this might mean the need to continue to mature supply chain organizations to be able to navigate dynamic scenarios and to be able to not just follow procedure but navigate how to enact procedure in the face of dynamics and scarcity. It also implies the need to not solely rely on planning and forecasting to ensure supply of goods and services. The ability to scale supply up and down with medical needs improves efficiency of the health system, as well as improves the ability to serve in times of need.

The need to move from ERP and reporting the past to visibility into realtime

An agile and resilient company can rely less on traditional enterprise resource planning and reporting on the recent past reporting cycle. Instead, it has greater ability to respond to changes

and visibility into supply chain dynamics in (close to) real time. A large focus on in responses to pandemic risks was on improving visibility into the supply-base to inform agile efforts¹⁴. This visibility can be taken forward to improve ESG efforts, as visibility improves the ability to ban poor social and environmental practice from the supply chain. And thereby improves the supply chain's resiliency for the long term. It can also improve business intelligence and social contracting efforts. Suppliers often experience risks before their downstream customers do so proactive sharing downstream can improve social capital of the supplier with the customer. Agility in coping with the forthcoming risk can improve social capital of the customer with the supplier. There may be opportunities in the (near) future to attach AI and ML to this visibility to support automation of agility.

From a public health perspective this implies the need to not solely focus on reports about past usage of supplies of goods and services to drive ordering and availability. Early warning signs about fluctuations in demand can be highly value inputs if combined with a response system that helps adjust plans in close to real-time.

The need to resist tendency to revert back to comfort zones

The accelerated learning and progress with supply chain improvement programs in ESG, digitization and agility that occurred during the pandemic will need to be seen through to full implementation and benefits capture and this will take some time¹⁵. With that there is a risk of the natural tendency to revert back to old comfort zones and actually not seeing the change through¹⁶. The well known knowing-doing gap plays a role here. None of the risk mitigation techniques widely considered during the pandemic were new on their own, managers knew about them but had just not implemented them. Some of the factors favoring local sourcing as an alternative to global sourcing¹⁷ such as transportation costs and shortage of supply may be losing some of their respective importance. And with it comes the risk of slipping back to more uni-dimensional strategies such as global sourcing for factor cost minimization. But having managed incredible risk scenarios, leading to the greater recognition of supply chain management as a driver of business value and ESG capability, supply chain managers owe it to themselves to build upon the momentum and the lessons learned coming out of the pandemic.

For public health organizations this implies the value of continued industry collaboration to enrich resourcing and complement capabilities. It also implies the need to consider approaches that

reduce the risk of public health organizations competing against each other for scarce resources. Coordination and sharing of needs might enable bundling of demand to improve priority with suppliers, as opposed to competing against peers in the face of rising prices and increased scarcity.

Conclusion – the role of managers and researchers

The lessons learned during two of the hardest and most risky years in supply chain management, certainly of a generation, if not more, are worthy of capturing as a basis for further progress. Supply chain management comes out of the pandemic having made progress as a business partner, a source of business value creation and business continuity. Supply chain managers have accelerated against long term strategic goals of ESG and digitization. And supply chain managers face a unique challenge; continue to charge or revert to a comfort zone from a past that is no more. Researchers have been active to study the pandemic and a flurry of research has been

published and continues into today. Just like managers researchers face a choice: to continue to grow societal value of research by addressing real world problems in as close to real time as possible or to go back to the lab for research for the sake of research and academic careers. The below table captures implications for managers in public health and supply chain management and opportunities for researchers to support further progress in industry and science. These opportunities include considering the role of technologies such as digital twins and control towers to enable dynamic optimization and enable predictive decision making based upon AI and ML and the opportunity to develop social contracting mechanisms that maintain contracting compliance and change incentives without a burning platform.

In the words of Churchill: never waste a good crisis!

Conflict of Interest Statement

There are no conflict of interest to declare.

	Implications for managers	Opportunities for researchers
From relational to social contracting	How to comply with contracting policies and regulatory requirements while focusing on social, non-written collaborative aspects	Methods for enhancing collaboration with social mechanisms, outside of formal contacting frameworks, while avoiding contracting non-compliance risks
From a focus on compliance to becoming a force for good	Greater engagement in supporting public health through supply chain management and ability for public health managers to externalize more	How to support a transition from ESG for compliance towards wholehearted ESG engagement?
From planned optimization to agile resiliency	Planning for the need to scale up and down and for the ability to cope with uncertainty, over optimization in a vacuum	How can digital twins and digital control towers support agile resilience over static optimization?
From reporting the past to visibility in the (near) real time	Accelerating decision making to be closer to real time events and allowing for buffers where needed	How can AI and ML support predictive decision making?
Resisting tendencies to revert back to old comfort zones	Seeing changes and innovation through, even when the immediate risk drivers may have (temporarily) resided	How to incent continued structural change without a burning platform?

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