

Preface

In 2012, President Barack Obama launched the National Strategy on Global Supply Chain Security. In addition, the US National Academies of Science, through the Transportation Research Board, created a working group of the same name. The National Strategy includes two goals:

- *To Promote Efficient and Secure Movement of Goods*
This first goal is to promote the timely and efficient flow of legitimate commerce while protecting and securing the supply chain from exploitation and reducing its vulnerability to disruption.
- *To Foster a Resilient Supply Chain*
The second goal is to foster a global supply chain system that is prepared for and can withstand evolving threats and hazards and that can recover rapidly from disruptions.

The global supply chain encompasses all the links connecting a manufacturer to the end users of its products. These links may take the form of manufacturing plants, supplier warehouses, vendor facilities, ports or hubs, retail warehouses or facilities, and outbound shipping centers. They also implicate all the methods and mechanisms that goods are transported: by truck, ship, airplane, or railcar. Since the inception of transportation networks, security has continuously played a role, albeit mostly a tertiary one, in the planning and execution of increased efficiencies and cost reduction.

On September 12, 2001, leaders of organizations the world over woke up to a new set of realities, more formidable and unexpected than they had ever faced. Some of the realities were subtle and even necessary: government agencies increasingly scrutinized the content of telecommunications and financial transactions. Others were stark and in-your-face: mind-numbing security lines at airports and new import/export regulations. In spite of those traumatizing events, the global economy continued to grow with even more goods, services, and people moving through the global supply chain, increasing the necessity for better understanding and security.

As the post-9/11 era is evolving, it is clear that this newly acquired friction will be part of the new supply chain reality. Organizations that had been accustomed to a steady devolution of the non-revenue-generating aspects of their enterprise like security row were now thrust into the need to somehow deal with these realities. And, while the 9/11 attacks were undoubtedly a dramatic event, they also brought security to the forefront.

When trying to secure something as vast and dynamic as the global supply chain, a lot can go wrong, including systematic mismanagement and inefficiency, criminal activity, or terrorism – to name just a few. On the other side of the ledger, government regulation, industry or association oversight, and security agencies – both public and private – remind us that there is just too much at stake to let problems languish or stagnate. It estimated, for example, that thieves now steal \$80 billion in goods each year from various points along the supply chain. What's more, problems grow in magnitude when goods cross national borders, as they do with increasing frequency in the global economy.

Meanwhile, governments continue to expand security mandates deeper into global supply chains. This continues to alter the ways supply chain security is viewed by policymakers, industry, and researchers around the world. Protecting the physical infrastructure of the supply chain – along with cargo, passengers, and personnel – is now held as both a national security priority and organizational necessity. Melding two very different objectives – security for the nation and efficiency for stakeholders – poses a new challenge to those who seek to understand the changing dynamics of the global supply chain. In the United States, for example, the creation by the Federal Government of the Transportation Security Administration in 2002 threw down the gauntlet as to the importance of the issue from both a public policy and management point of view. New governmental method mandates and compliance requirements for supply chain security must become a priority for all firms, whether they agree with it or not.

Globalization, stricter security regimes, the threat of terrorism, and increasingly sophisticated criminal activity have made cross-border cargo movements more complex, putting the integrity of supply chains at much greater risk. As an executive from a global electronics manufacturer that operates in more than 150 countries put it recently, “We can have the most incredible manufacturing, but without effective global supply chain security, our products die as soon as they hit the border.”

Further, in the hypersensitive media-obsessed world of today, international and even domestic terrorists recognize the impact an attack against the global supply chain can have. As a result, much of the action around global supply chain security is being driven by the actions of those who seek to harm the system. These individuals and groups have shown remarkable resilience and no sign of backing away from the multiple targets of opportunity they perceive that the supply chain provides them. Finally, as globalization makes more inroads, the exponential expansion of the supply chain in the coming decades will ensure that the security component remains front and center.

So where do policymakers, students, scholars, and practitioners from around the world go to learn about global supply chain security? There are very few volumes

that exist in a global-centric fashion for those interested in learning more about this vital commercial component. This single volume is designed to help fill that gap and provide support to the President's National Strategy and the work of the National Academies of Science. It is our sincere hope that this work, which is written from a truly global point of view, will be one of many works going forward on this most important topic.

The chapters in this book explore the context of global supply chain security and serve as a basis for understanding the unique aspects of the innovative practices that are also found here.

In Chap. 1, Erik Hoffer, who for many years served as Chairman of Education for the International Cargo Security Counsel and later helped to develop the curriculum for the graduate program for cargo security professionals at the United States Merchant Marine Academy (USMMA), sets the stage. In Chap. 2, Captain Jon Helmick, a professor at USMMA, takes a deep dive into the evolution of maritime piracy and how it is playing out today within the global supply chain.

Then, to remind us of the multifaceted nature of our subject matter, Dr. John Harrison provides insight into how the nature of political risk shapes public policy, while Dr. Mark Beaudry details how corporate security and supply chain management can work better together.

The next four chapters further turn up the resolution. Jon Loffi, Ryan Wallace, and Edward Harris examine global supply chain security through the lens of grid and group theory. Mohammad Karimbocus rings the bell that the prism of organizational behavior must be well understood in any human endeavor. Professor Jim Bradley creatively looks at how firms might structure their capacity and inventory in ways that reduce the negative impacts of supply chain events. Charlotte Franklin and Kiersten Todt, both national leaders in emergency management and risk assessment, provide an innovative approach to making responses to supply chain events as effective as possible.

Next, Paul Alexander and David Forbes give us a fascinating look at the seafood supply chain and analyze how deliberate security breaches play a role.

As the development of the Suez Canal continues, A. O. Abd El Halim and Hussein Abbas consider its significance. And, finally, Wade Rose and Steven Murphy help us to remember Mike Tyson's adage that "Everyone has a plan 'till they get punched in the mouth." Developing a successful strategy for global supply chain security requires much more than simple planning.

On behalf of the contributors, the publisher, and ourselves, we thank you for taking a look at this volume. Please feel free to share any ideas or recommendations you may have in the spirit of collaboration with which this publication was assembled.

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